



# Cultural continuity in late bronze-early iron age Palestine, ceramic typology and settlement patterns : tomb 1 of Tell Dothan

Ghassan Sa'Id Nagagreh

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Membre de l'université Paris Lumières

## **Ghassan Sa'id Nagagreh**

Cultural Continuity in Late Bronze-Early Iron Age Palestine. Ceramic Typology and Settlement Patterns: tomb 1 of Tell Dothan

Continuité culturelle à la fin du l'âge du bronze et au début de l'âge du fer en Palestine, typologie de la céramique et typologies cramiques et des modes d'occupation: la tombe 1 de Tell Dothan

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Nanterre

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et de M. François Villeneuve (Paris 1 Panthéon-Sorbonne)

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CULTURAL CONTINUITY IN LATE BRONZE-EARLY IRON AGE PALESTINE.  
CERAMIC TYPOLOGY AND SETTLEMENT PATTERNS: TOMB 1 OF TELL  
DOTHAN

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L'ÂGE DU FER EN PALESTINE. TYPOLOGIE DE LA CÉRAMIQUE ET DES  
MODES D'OCCUPATION : LA TOMBE 1 DE TELL DOTHAN

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Janvier 2021



*To my beloved parents, Ibtisam and Sa'id*

*I dedicate this work...*

## Abstract

The study of ceramics is one of the most important topics to understand the Bronze and Iron ages in Palestine, combined with settlement patterns, which both have helped and will help draw a chapter in the history of the region. To this end, the decision to study the pottery of tomb 1 at Tell Dothan was made to contribute to the debate over the archaeology of Canaan during the Late Bronze and the Iron Ages, Tell Dothan provides a very important and unique pottery collection which spans throughout the later phase of the Late Bronze and the beginning of the Iron Age with clear evidence of continuity of the pottery pattern, in addition to that, the Late Bronze Age in the highlands is a period believed to be poor and with very few sites, which requires investigating this assumption, for this reason, the study was conducted to examine the continuity in the pottery in the Late Bronze Age with its collapse as well as during the dawn of the subsequent Age. Studying the pottery of Tell Dothan will contribute to the understanding of two histo-archaeological issues; the Tell Dothan tomb 1 unique pottery collection and on the other hand, the Late Bronze, Iron age and the transition in the highlands as well as, the region Canaan in general. Throughout this study, I try to join archaeology and/ with a historical reflection.

Tell Dothan, Late Bronze Age, Iron Age, Canaan, Pottery Typology, Settlement Patterns

## Résumé

L'étude de la céramique est l'un des domaines les plus importants pour traiter des âges du bronze et du fer en Palestine, combinés aux modèles de peuplement, qui ont l'un et l'autre aidé et aideront à dessiner un chapitre sur l'histoire de la région. À cette fin, la décision d'étudier la poterie de la tombe 1 à Tell Dothan a été prise pour contribuer à répondre au débat sur l'archéologie de Canaan à la fin du bronze et à l'âge du fer. Tell Dothan fournit une collection de céramique d'un grand intérêt et unique qui s'étend tout au long la phase ultérieure du bronze tardif et le début de l'âge du fer. Elle témoigne des phénomènes de continuité dans le domaine de la production et l'utilisation de la céramique. En outre, l'âge du bronze tardif dans les hautes terres est une période considérée comme mal ou peu documentée, le nombre de sites étant relativement faible. Il s'agissait donc de vérifier cette hypothèse et, pour cette raison, l'étude a été menée pour examiner la continuité de la céramique à la fin de l'âge du bronze ainsi qu'à l'aube de l'âge suivant. L'étude de la poterie de Tell Dothan est donc destinée à répondre à des problématiques historiques et archéologiques : la tombe 1 de Tell Dothan, et l'étude de son équipement, suivant les grandes phases de son occupation, et d'autre part, l'évolution du bronze tardif, la période de transition et l'âge du fer dans les hauts plateaux ainsi que la région de Canaan en général. Tout au long de cette étude, j'essaye de mettre en correspondance l'archéologie et les réflexions historiques qui découlent de son analyse.

Tell Dothan, âge du bronze récent, âge du fer, Canaan, typologie de la céramique, modèles de d'occupation.

## ملخص

تعد دراسة الخزف من أهم الموضوعات لفهم العصر البرونزي والحديدي في فلسطين ، جنباً إلى جنب مع أنماط السكن ، والتي ساعدت وستساعد في رسم فصل في تاريخ المنطقة. تحقيقاً لهذه الغاية ، تم اتخاذ قرار دراسة الفخار في القبر 1 في تل دوثنان للمساهمة في النقاش حول علم الآثار في كنعان خلال أواخر العصر البرونزي والعصر الحديدي. يوفر تل دوثنان مجموعة فخار مهمة للغاية وفريدة من نوعها تمتد على طول المرحلة المتأخرة من العصر البرونزي المتأخر وبداية العصر الحديدي بدليل واضح على استمرارية النمط الفخاري ، بالإضافة إلى أن العصر البرونزي المتأخر في المرتفعات هو فترة يُعتقد أنها فقيرة وذات مواقع قليلة جداً ، إذ يتطلب التحقيق في هذا الافتراض ، ولهذا السبب أجريت الدراسة لفحص استمرارية الفخار في العصر البرونزي المتأخر وخلال فترة انهياره، وكذلك في بداية العصر اللاحق.

دراسة الفخار في تل دوثنان ستسهم في فهم قضيتين تاريخيتين - أثريتين؛ مجموعة الفخار تيل دوثنان مقبرة 1 الفريدة، ومن ناحية أخرى المرحلة الانتقالية بين العصر البرونزي المتأخر والعصر الحديدي في منطقة المرتفعات الفلسطينية وكذلك المناطق الجغرافية المحيطة بالمرتفعات بشكل عام. خلال هذه الدراسة، أحاول الدمج بين علم الآثار و / مع التفكير والانعكاس التاريخي عليه.

تل دوثنان، العصر البرونزي المتأخر، بداية العصر الحديدي، كنعان، تصنيف الفخار، أنماط السكن

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## **Introduction**

The archaeology of the Land of Canaan during the Late Bronze and Iron Ages, is the subject of the present thesis. The typology of ceramics, is the cornerstone of this study assisted by the study of settlement patterns, to understand and contribute to the knowledge of the region. The present study is focused on Tell Dothan, a site in the highlands of Palestine, which was excavated about 70 years ago and which dates to Chalcolithic, Bronze, Iron Ages, Hellenistic, up until the Mamluks in the later Islamic periods.

The site has produced among other things, the western cemetery in the north-west of the tell, the cemetery consists of three tombs (tomb 1, tomb 2, and tomb 3) dated to the Late Bronze and Iron Ages, the biggest among them is tomb 1, which is also the most important, with a great wealth of finds and which is dated to the Late Bronze and Iron Ages including the transition between both periods. Moreover, the tomb has both archaeological and historical importance. archaeologically, the tomb has 5 different levels expanding supposedly from the Late Bronze Age IIA, IIB, IIB/Iron I, and Iron I. i.e. a continuous sequence from the Late Bronze to the Iron Age, which reflects on the historical importance of the site during this period, both, in the surrounding area of Tell Dothan and the greater picture of the region including the high and lowlands during the Late Bronze and the Iron Ages.

The phenomenon of continuity/discontinuity will be the focal point of this study. This will be examined throughout typology (type, shape, and techniques) of the pottery which related to Late Bronze/ Iron Age I, by looking at certain features in the ceramic types, such as bowls, cooking pots, kraters, jars, jugs, juglets, pyxides, flasks, chalices, and oil lamps at Tell Dothan which was excavated in the second part of the twentieth century by Joseph Free. This will be supported by a comparison study with several sites in the highlands and the other regions of Palestine.

This study of the tomb1 will be an attempt to understand two procedures, first, attempting to understand tomb 1 and the site inductively throughout the review of the whole region archeologically and history with settlement patterns burial practices and relations, secondly, an attempt to understand the region throughout the study of the

tomb by looking at the tomb construction and the pottery collection which reflects on the site Tell Dothan and therefor on the region.

By studying the pottery collection of tomb 1, I hope to shed the light on several issues, such as the nature of the pottery collection in the site in terms of typology, chronology and connecting that to the sites in the different regions of Canaan, bearing in mind that the highlands during the Late Bronze is not well documented due to theories of which considers the highlands a very poor populated region in the Late Bronze which witnessed a sudden increase in sites in the Iron Age.

The case of Tell Dothan will shed the lights as well on the continuity and discontinuity during the Late Bronze and the Iron ages equally. Other purposes of the study are to create a pottery typology for the region and to draw attention to other unexcavated or unpublished site during the Late Bronze and the connection to that when the Iron Age started and the aftermath.

The Late Bronze Age also witnessed several historical events; the active economy, throughout trade and relations, affected by politics, and climate and climate change which evidence appeared recently in the archaeology dissections. Subsequently the collapse of the Late Bronze and the emerging of the Iron Age, and the reflections of all that on the pottery production and settlement patterns in all the regions of Canaan. Those all given issues forms the period and we find reviewing all those issues is vital to the understanding the history and archaeology behind the Late Bronze and Iron Ages, and to connect that to the History of Tell Dothan and the surrounding.

To accomplish that, chapter 1 is deducted to the history and archaeology of the period, with its chronology, settlement patterns, and communities with its material culture, which forms the background to the understanding of Tell Dothan and tomb 1 in the general context, the importance of the chapter is to create a general overview about the region before dealing with the site and its pottery. The decision to include this chapter at the beginning of the theses is to be an introduction to the Late Bronze and Iron Ages and the one site that I study, not as a conclusion.

Chapter 2 is the place where Tell Dothan is presented in terms of archaeology, history and geography and the environment. Chapter 3 is the archaeological report of

the excavation of tomb 1, including all related field reports, stratigraphy, finds, tomb date, type and construction.

Chapter 4 is the focus of studying the pottery collection from tomb 1 including the nature of the collection, several treats of it, in terms of technology, fabric, coloring, surface treatment, decoration, description, seriation and typology of the pottery by type and level, in addition to that a catalog of the drawn pottery which goes a long way with the typology section. Chapter 5 is a dissection about the pottery typology, chronology and dating associated with other sites, to understand the nature of the pottery of this phase and to place the tomb 1 pottery in the correct archaeological and historical phasing of the period. Moreover, to conclude a relatively accurate reconstruction for the context of tomb 1 culturally and to better understand the Late Bronze and the Iron Age opening a new window relying on pottery understanding. In the following, I present each chapter with some details. The comparative study with the other sites will be by citing as many published pottery for sites in the region without including any published drawings

The results of this study will be given within each chapter as well as, in the conclusion section, where I put together and draw archaeological and historical remarks helps in bringing new knowledge to the field of Archaeology of the Levant during Late Bronze and Iron Ages.

## Chapter I

# Archaeology and history of the Late Bronze and Iron Ages in Canaan

In this chapter, I will be focusing on three different issues; the problematic of my research will be the first matter that I will shed the light on, with a historical and archaeological background which will be applied to understand the archaeological and historical context of Tell Dothan during the Late Bronze and Iron Ages. In order to accomplish that, two important issues will be dealt with in this chapter; archaeology and history review which paves the way to better understand the connection between the site and the context that has been uncovered in the tomb 1. The archaeological part will depend on several factors including pottery and the settlement which will be indicated by excavations and surveys in the regions of Palestine. This will lead to the ability to draw some historical conclusions about the people who created what we call the archaeology of the past. In addition to that, the highlighting of the historical and archaeological introduction is essential to understand the Late Bronze and Iron ages to look at Tell Dothan in terms of events and discovers.

## **I. Archaeology and history of the Late Bronze and Iron Ages in Canaan**

### **I.I. Introduction**

Ceramics studying factor and settlement patterns are very important aspects of the process of understanding the archaeology of any given archaeological site or geographical region (Trigger 1968, 1978: 167-170, 2006: 377, 403; Knappett, Malafouris and Tomkins 2010: 588-598; Garrigós and Fernández 2017: 19-30). In the Southern Levant, it is the core of identifying the site/ region history, through certain characteristics, which could be highlighted through Pottery Typology – the science which classifies pottery systemically according to type, shape, and prominent distinctive features – which gives relative dates and stratigraphy (Sinopli 1991: 49-53); which helps in determining in Palestine, for example, the start and end of any given period, the transitional periods as well (Wood 1990: 11-14). As it's known, Sir Flinders Petrie was the archaeologist who started this scientific revolution in classifying pottery according to shape and other criteria at the site of Tell el-Hesi (Sparks 2007: 2-3), a good illustration of this process can be found in (Dunan, Petrie, and Starky 1930).

Settlement pattern on the other hand – studies the settlement mechanisms throughout the size, spread and expansion of sites and people –, shows the processes

in which the region has been inhabited and all changes and effects influenced the settlement of sites or regions (Rouse 1972: 95-107). Ceramics and settlement pattern both can be a good tool for identifying the community's culture, as well as, the economy, movement, abandon and settling of the sites within regions in which all elements of the living of the communities can be affected by for example; environment and environmental change in the Levant.

The Late Bronze Age came to an end with certain hypotheses explaining the collapse of it; one of these, a theory by Israel Finkelstein indicates that new people have replaced preceding communities, creating new cultural horizons, accompanied by settlement patterns changes in all areas. For example, the highlands areas witnessed a settlement of a very few numbers of sites in Late Bronze, while a significant number of sites had appeared in MB II and the Iron Age I (Stager 1985: 3; Finkelstein 1988, Zertal 2004; for latest update on the history of the issue, see Dever 2017: 119-248). Other theories indicated several scenarios for the shape of the Late Bronze and the Iron Age after the supposedly collapsing of the Late Bronze. The majority of the theories (peaceful infiltration, conquest, social revolution, semi-nomadic, and the mixed multitude) that have been in the focus in the last century, focused on the gradually collapsing and the decay of the Canaanite society of the Late Bronze through the Iron Ages. The continuity in the material culture in the Late Bronze to the Iron Age is neglected in the sites such as Tell Dothan and other sites in the highlands in the Late Bronze Age, as well as, the neglected connections between the high and lowlands during the Late Bronze and the Iron Ages. Did this continuity existed?

The example of Tell Dothan will be highlighted in this study to bring new insights through tomb 1 in the Western Cemetery – Tell Dothan through the continues habitation and location represent a good example for an archaeological Tell, the tomb 1 includes 5 different levels that extends through Late Bronze II, the transition period and the beginning of the Iron Age – this fact a study to be conducted to examine pottery types that have been found in the tomb, this will help us understand the nature of settlement at Tell Dothan in the Late Bronze and Iron Age as well as the transition between the two Ages.

The research in light of that will focus on the pottery typology as the ultimate goal, assisted by settlement patterns, to examine the phenomenon of the continuity, in Tell Dothan, located in the north to the city of Nablus area environs. The two goals of the current study will be highlighted through several elements, below, in addition to the dating problems of the tomb which will be a major goal of the study, I will mention several problematical issues that will be discussed throughout the chapters of this study.

The example of Tell Dothan and the phenomenon of continuity of the pottery assemblage in tomb 1 have certain implications and reflections on the history and culture of Palestine in the Late Bronze and the Iron Age as well as the transition. In the following, we will concentrate on some important themes regarding the archaeological situation in this period and what would be the connection to the case of Tell Dothan to the larger picture and the archaeological interpretation in the milieu.

The chronology of the Late Bronze and Iron Ages with the transitional period and the problems connected to it, the settlement, material culture, historical events connected to the inhabitants of Canaan during this period, the economy of Palestine, the relations with Egypt and the Aegean world, the burial practices, and the climate during these Ages will be used as possible to meet the goals which have been set above, and in the chapter the purposes of giving an overview of the period in which Tell Dothan and the rest of the sites in Canaan have been influenced by will be considered.

### **I.I.1. Research problem**

The main question of this study is the examination of continuity and discontinuity of the pottery assemblage at Tell Dothan in the highlands, which has a great reflection on the culture not only in the highland but also on the lowlands of Palestine. Moreover, bringing the Tell Dothan pottery to the light will give the field of the transitional period from Late Bronze to the Iron Ages an opportunity for more understanding of the nature of this period, especially because a few sites have been published in the highlands, while a massive number of sites have been excavated and published in this very period in the lowlands<sup>1</sup>. An issue is very important to attempt at

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<sup>1</sup> For the names, location and excavated strata of the sites see table 2: pp. 35.

bringing more material culture from the Late Bronze highlands to examine if the highlands were really empty during the period which has been indicated in the previous surveys. In light of this, it will be an attempt to better understand the highlands and the collapse of the Late Bronze, its causes and the aftermath through the examination of Tell Dothan pottery collection as an example, which connects not only Tell Dothan but the whole highlands to the rest of the geographical regions of Canaan.

The connection between the pottery study of Tell Dothan and the settlement pattern of Canaan is vital to the reconstruction of the Late Bronze Age in the highlands which still needs more focused research. Bearing in mind that we hypothesize the highlands region was not empty during the Late Bronze Age, we suggest the contrary, some 4 sites (Tell Dothan, Tell Ta'annek, Tell el-Far'ah (N) and Tell Abu ez-Zarad to the south which was excavated for one season) that have been excavated with Late Bronze phases have not been published, the study and publication of those sites as well as Tell Dothan, will change the understanding of the Late Bronze and the Iron Ages in the region which according to previous research are considered poor and almost empty, that reflected in the Iron Age that is considered to be the period when the highlands have witnessed an unprecedented settlement. In order to understand these issues, I will mention different sub-problems below<sup>2</sup>.

### **I.I.2. Sub-problems:**

In light of the research problem, the attempt in the present chapter is to examine the nature of the settlement patterns in the Late Bronze and Iron Ages in the low and highlands, depending on the expected data and results of the surveys and the relative dating of the pottery that has been collected in different missions, which will shed the light on the characteristics of this period, as well as finding the elements of the concept of the continuity or discontinuity during the transition. In this regard, the focus will be to question the continuity pattern characteristics and this will lead to connect different regions of Canaan to the same horizon from the Late Bronze to the Iron Age. Both pottery study and settlement patterns as a goal to this study will depend on each other to see the highlands in the Late Bronze and the transition to the Iron Ages.

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<sup>2</sup> For the major sites mentioned in the text, see the map in fig. 9: pp.88.



The historical events in the ancient Levant also have played a major role in the formation of the Late Bronze and Iron Age settlement and culture. Therefore, to understand settlement patterns in the regions of Canaan with the pottery production and continuity or discontinuity, we need to understand Canaan of the local and regional scale, Egypt relations, the north of the Levant, The Canaanites, the Sea Peoples, the economy, the environment, the climate, the climate change, the collapse of the Late Bronze and the reflection on the beginning of the Iron Age in terms of settlement patterns and the material culture at Tell Dothan and the region. Those archaeological and historical elements are essential to review in order to put Tell Dothan in its archaeological and historical context, and to study the pottery collection which is an example of the cultural horizon in the highlands, and which is similar to other unpublished sites in the region.

The study of the different types of pottery at Tell Dothan collection will give an opportunity to find out which types have been continued to be used, and which on the other hand disappeared or reoriented/modified, and how this process influenced the continuity/discontinuity. Finally, we get a better picture of the changes that have taken place in pottery shapes, forms and technology, as well as, some general details about the settlement. Moreover, to find similarities with other sites which were dated to the same transitional period.

In light of the above commentaries, the study will consist of two branches, archaeological/pottery topology part and connects it to a historical background.

### **I.I.3. Archaeological/pottery topology**

I will study the phenomenon of continuity/discontinuity throughout typology (type, shape, and techniques) of the pottery which related to Late Bronze/ Iron Age I, by looking at certain features in the ceramic types, such as cooking pots, jars, *pithoi*, jugs, juglets, bowls, oil lamps, scoops (if found), chalices, goblets, kraters, amphorae, pyxides, and flasks at Tell Dothan which was excavated. Part of it was published (Cooley, and Pratico 1995), but the largest collection is in St. George and The Rockefeller Museum is to be studied. An introduction will be given about the history and history of archaeological work on the site.

#### **I.I.4. Historical background**

By studying the pottery collection of Tell Dothan, I hope to have a chance to examine some archaeological problems in the field which have been mentioned in the literature and which will be reviewed elsewhere in this chapter 1. The historical – theoretical- formwork is including the ceramic study and the settlement patterns in the Highlands, and specifically in Tell Dothan surroundings in terms of the pottery resources and distribution and similarity to the other published pottery in the region.

The main goal of the historical part, which will be highly likely in the conclusions, is to meet the general purposes of this study and to be supported with this historical part.

Since we deal here with a Late Bronze and Early Iron Age pottery, we will introduce the historical and archaeological issues of both Ages, as well as the transition.

### **I.II. Archaeology of Palestine in the Late Bronze and Iron Ages**

This section is to illustrate the archaeological issues in this period including, pottery, chronology and archaeological sequence, and settlement patterns in order to place Tell Dothan in its archaeological context and by that, I will be able later to apply the history of the site in its historical context before talking in detail about the archaeology and history of the site itself in the later chapters.

#### **I.II.1. Literature review of the pottery studying according to the problematic**

Here I provide a literature review that touch on the most problematic issues concerning the transition period between the Late Bronze and Iron Ages and the results of those studies. It gives a good idea about a variety of subjects which are connected to the ceramic study and the consequences to the understanding the pottery and the cultures, as well as giving a framework of where my whole study belonging and the influence on it and also the influence of my study on the older works in the field.

The literature here below reviewed in chronological order, from the older to the newer research, the purpose of this order is to follow up with the development of the research of the concept of examining continuity and discontinuity in the culture of Late Bronze and Iron Ages.

Continuity and discontinuity is one of the main issues in the transition period between the Late Bronze and Iron Ages, one of the main tools to examine the issue relies greatly on the pottery and the pottery typology. To this end, William G. Dever highlighted the pottery typology relation to the cultural continuity and discontinuity pointing out the lack of such research in two articles related to the culture in the transition between Late Bronze and Iron I Ages. The first was published by Dever in 1993 entitled “Cultural Continuity, Ethnicity, in the Archaeological Record and the Question of Israelite Origins” in *Eretz-Israel*. The second article was published in *The Biblical Archaeologist* entitled “Ceramics, Ethnicity, and the Question of Israel's Origins” Dever 1995. In both articles, Dever made it clear that more studies on pottery comparisons should be made in the region and he assumed continuity in the pottery from the lowlands to the highlands. Moreover, he pointed out of the similarities between the Tell el-Jazari (Gezer) pottery repertoire and that of ‘Ezbit Şarṭah (Dever 1993). Both of the sites are located in the transition between the low and highlands, in addition ‘Ezbit Şarṭah is relatively situated not far from Tell Dothan which has a reflection of the similarity and continuity of the pottery in the greater region, as well as the Tell Dothan surrounding sites where we can draw geographical and cultural connection.

Ann E. Killebrew conducted a study on the ceramic technology entitled “*Ceramic Craft and Technology during the Late Bronze and Early Iron Ages: the Relationship between Pottery Technology, Style, and Cultural Diversity*” published in 1999. Killebrew attempted at offering a vision for the use of technology and the cultural diversity in the pottery pattern during the Late Bronze and Early Iron Ages, from the following sites: Khirbet el-Muqanna' (Tel Miqna-Ekron), Deir el-Balah, Tell el-Huşn (Beth Shean), and BietJala (Giloh), using different types of ceramics. The study is very useful for the subject concerned by our thesis. It gives careful insights into the technology of manufacturing pottery in four different areas in Palestine, but on the other hand, it was limited to four sites in relatively close regions. The

dissertation highlighted cultural diversity, instead of unity, which emphasis the discontinuity thesis which we want to examine.

Killebrew emphasized the theory of cultural diversity in a later published book entitled *“Biblical Peoples and Ethnicity: An Archaeological Study of Egyptians, Canaanites, Philistines, and Early Israel, 1300-1100 B.C.E”* published in 2005.

Another study of the pottery has been done by John S. Jorgensen from Duke University. With dissertation title *“A Typology of the Late Bronze II and Iron Age Pottery from Tel ‘EinZippori, Galilee: Persistence and Change across an Archaeological Horizon”*. Jorgensen has made a typology of pottery types at Tel ‘EinZippori- Galilee, including jars, stands, juglets, pithoi, bowls, chalices, krater, and cooking pots.

S. Jorgensen compared his study on Tel ‘Ein Zippori, with other sites in the area around, such as Tell el-Ḥuṣn (Beth Shean), Tell al-Mutesellim (Megiddo), Tell Keisan, Tell el-Qedah/Tell Waqqas (Hazor), and other sites in the area. But in general, the study was limited to a small area of Canaan. It is an important work, which helps scholars to create a primary image of the transition period.

The study of Nava Panitz-Cohen of 2005 entitled *“Processes of Ceramic Change and Continuity: Tel Batash in the Second Millennium BCE as a Test Case”* where she highlighted similar work to the above, Panitz-Cohen focused on one site which is Tel Batash (Timnah) in the south, the site was published in 1997, dated from the Middle Bronze to the Iron Ages. She dealt with the hypothetical background about the continuity and discontinuity of ceramic production in the site across about 600 years of the habitation. She also made a historical background of the region where Tel Batash (Timnah) is located, a petrographic and regional examination of the pottery materials with statistics were included.

Although Panitz-Cohen didn't include pottery drawings, the study is very important in particular, the recommendations that she provided, pointing to more studies need to be conducted in the matter of cultural continuity and discontinuity in the region of Palestine; as she mentioned "This study is only a beginning and future research should proceed in a number of directions. A cardinal effort must focus on expanding the regional aspect" (Panitz-Cohen 2006: 324).

A. Mazar has written the first chapter of Iron Age pottery in Palestine in 2015 “Iron Age I: Northern Coastal Plain, Galilee, Samaria, Jezreel Valley, Judah, and Negev Pp. (5-70)” in a book edited by Seymour Gitin “*The Ancient Pottery of Israel and its Neighbors from the Iron Age through the Hellenistic Period*” In the chapter, Mazar didn't mention any information about sites which we will be studied in this research, for this reason, we need to do a comparative study of the sites which mentioned in my proposal and those in Mazar's chapter. It is helpful in the larger picture; it brings new data to the field.

Throughout pottery, we will be able to have a deep insight into the very common types and the distinctiveness of pottery in the Late Bronze/Iron Age I assemblages, similarities, differences and probably the natural local development of manufacturing pottery.

Another study has appeared lately by Robert A. Mullins and Eli Yannai in Seymour Gitin's edited book 2019 (Chapter 3: Late Bronze Age I-II) in “*The Ancient Pottery of Israel and Its Neighbors from the Middle Bronze Age through the Late Bronze Age, volume 3*”. The authors have focused on the local pottery production in Canaan during the Late Bronze Age, and the Early Iron Age according to the classic chronology. The study has included sites from all over Canaan regions, but very few examples from the highlands were included which keeps the problem unsolved regarding the nature of the Late Bronze in this area during this period. However, the study covered almost all the known types during this period which is useful and which will be used to connect it to the pottery of Tell Dothan in the current study. In the same volume by Gitin, another two articles have been written by Michal Artzy 2019 a and b, about the imported pottery from Cyprus and Anatolia, which covers the pottery that have been imported to Canaan, as well as, the distribution over the land.

On the other hand, it's worth mentioning that some excavated sites in the highlands do include Late Bronze strata but have never been published like the case of tomb 1 at Tell Dothan. Those sites when published will contribute to our understanding of the Late Bronze and the transition to the Iron Age in the highland, those sites are not far away from Tell Dothan and I see them as one large block that existed site to site. The sites are Tell Ta'annek 13 km north of Tell Dothan, with evidence of the existence of Late Bronze Age and Early Iron Age in the site (Rast

1978; Zertal and Mirkam 2016), Khirbat Bal'ameh in Jenin, which is about 6 km to the east of Tell Dothan, it has an Early Iron Age stratum which has not been published (van der Kooij and Taha 1990, Zertal 2004), Tell el-Far'ah (N) about 17 km south-east of Tell Dothan, with Late Bronze and Iron Age strata, though, the Late Bronze have not been published yet (Chamon 1984; Mallet 1988; Zertal 2008), Tell Abu Zarad about 34 km south of Tell Dothan, which has been excavated for one season and revealed Late Bronze and Iron age strata (Nigro et al. 2015; Finkelstein and Lederman 1997). The last site which has been published lately and which can be the cornerstone for the typology of Tell Dothan is Tell Balatah (Shechem) about 21 km south of Tell Dothan with both Late Bronze and Iron Age strata (Campbell 1991, 2002; Uff 2015). Another site Khirbet Seilūn (Shiloh) of rich Middle and Late Bronze and Iron Ages is located in the center of the highlands (Finkelstein 1988: 205-234; Finkelstein and Lederman 1993: 35-48) about 40 km south of Tell Dothan, the site has published pottery that will be compared to Tell Dothan collection.

### **I.II.2. History-chronological background of the Late Bronze and Iron Ages**

Late Bronze Age is the final stage of the Bronze Age in Southern Levant. This period which extends from circa 1550 to 1200 B.C. has witnessed certain historical events and that made it as a connecting period between the Middle Bronze and the Early Iron Age. This period is known to have several patterns of settlement according to the geographical zones of Palestine, including the high and lowlands, the Jordan valley, the fertile inland valleys, and the desert to the south. Each of those geographical zones has a distinctive environmental nature which shaped its history throughout the Bronze and the Iron Ages. In these conditions of geography diversity, some areas have witnessed certain historical events, while other areas affected by other events. The range of lifestyles during this period has been shaped by many factors.

The beginning of the Late Bronze had started under certain conditions of the period, namely, politics, wars, trade, power domination, Egyptian presence in some sites in Canaan, changes in material culture, manufacturing technologies including pottery, houses, fortifications, burials and burial customs, and finally the climate and its influences and had the major role on the lives of the people in this period who were known as the Canaanites. We will shed the light briefly in this study on each of these

historical and archaeological themes through the archaeological nature of Tell Dothan in particular because of Tell Dothan according to the pottery and the skeletal remains in tomb 1 had shown the means of continuity in its material. The continuity in Tell Dothan extended from the Late Bronze Age to the beginning of the Iron Age. In the following, we will discuss first the dating of the Late Bronze and the Iron Ages including the low and high chronology that will be succeeded by the major known historical events that labeled the Late Bronze, the beginning of the Iron Age, and the transition.

### **I.II.2.1. Dating of the Late Bronze and Iron Ages**

The Middle Bronze Age ended throughout Canaan by evidence of destruction and abandonment of several sites across the land (Bunimovitz 2019: 266; Grabbe 2016: 11) followed by the Late Bronze Age which date was established according to several criteria, first and foremost, the Egyptian chronology, second is the end of the Middle Bronze Age which is linked to the expulsion of the Hyksos from Egypt (Shaw 2017: 71-73). The Late Bronze Age witnessed development in the trade and the connections to the different parts of the Ancient Levant and Egypt. The dating of the Late Bronze and Iron Ages has been under a debate since the beginning of the systematic archaeological excavations and the pottery typology in Palestine. Three archaeological schools (British, French and American) all in 1921 have drawn up a dating and chronology of the Late Bronze and the Iron Ages, its phases and stratigraphy, the dating according to Albright relied greatly on the excavations that have been conducted since the early 20th century in Palestine, namely, at Tell el-Jazari (Gezer), Tell Abu Hawam, Tell BeitMirsim, Tel el-Ful and Tell al-Mutesellim (Megiddo). So the Late Bronze Age was dated according to Albright as follows: LB IA, LB IB, LB IIA, and LB IIB. The first coined terms for the Iron Age has been given by Albright as Iron I, Iron II, and Iron III, to make a distinction between the several divisions (Albright 1949: 84, 99, 111-112) in the period which extended in the point of view of a number of archaeologists working in the field.

The general dating of the Iron Age and its divisions have not changed greatly in the last 60 years since it was included in the *“Encyclopedia of Archaeological Excavations in the Holy Land”* which was published in 1975 by Avi-Yonah. Ever since, the dating has been the same - but of the low and high chronology - for not only

the Iron Age but also of the Late Bronze Age. “*The New Encyclopedia of Archaeological Excavations in the Holy Land: 5 The Supplementary Volume*”, 2008, edited by E. Stern, included the same dating of both the Late Bronze and the Iron Age. In the following **Table 1.** we show the dating of the Late Bronze and Iron Ages to illustrate the extent and limit of each period, as well as, the transition between both of them.

The Period	The dating
Late Bronze Age I	1550-1400 B.C
Late bronze Age IIA	1400-1300 B.C
Late Bronze IIB	1300-1200 B.C
Iron Age IA	1200-1150 B.C
Iron Age IB	1150-1000 B.C
Iron Age IIA	1000-900 B.C
Iron Age IIB	900-800/700 B.C
Iron Age IIC	800/700-586 B.C

Table 1. General chronology of the Late Bronze and Iron Ages, after (Avi-Yonah 1975: 340; Stern 2008: 2126)

The above chronology is the classical standardized dating of the two periods. However, detailed chronologies have appeared due to several discoveries that have been made in the last 50 years in the field, including studying the stratigraphy, ceramic typology, finds at key sites, and historical considerations (Finkelstein and Piasezky 2011: 50). In light of this, some scholars have put this issue in the focus, they have debated the concept of the low, middle, and high chronology in the Iron Age connected to the appearance and settlement of the Philistines in Canaan, which was reflected by the material culture, namely, the styles of the pottery such as the Bichrome and Monochrome and the difference between them is the appearance and the reflection on the settlement (Finkelstein 1995: 216-218).

Since 1995 and on, Israel Finkelstein and AmahiMazar have published lengthy articles arguing the chronology of the Late Bronze and Iron Ages (Finkelstein 1995, 1996, 2005; Mazar 1997, 2005; Finkelstein and Mazar 2007). Each of the two scholars are defending a dating; Finkelstein claimed in an article in 1995 a new chronology for the end of the Late Bronze and the beginning of the Iron Age as well



as the dating of the beginning of the Iron Age II, calling it the Low Chronology, he relied for this upon several archaeological debated issues, namely, the end of the Egyptian control over and the settlement of the Philistines in Canaan at the end of the Late Bronze Age and their material culture. Finkelstein by using the low chronology is dating the beginning of the Iron Age a hundred years later than the traditional dating which is 1200 B.C. thus, the beginning of the Iron Age starts according to him circa. 1100/1120 B.C. during the last years of the reign of Pharaoh Ramses VI at the end of the 12<sup>th</sup> century (Finkelstein 1995: 224).

The lowering of the beginning of the Iron Age as I mentioned above was built mainly on the Egyptian chronology in which shows that during the 20th dynasty (1186-1070 B.C.) of Egypt, during this period, the Egyptians were threatened by the newcomers “Sea Peoples” to Egypt. The Egyptians had to fight and expel them to another land, namely, Canaan. According to Finkelstein, the material culture of those newcomers can decide the dating of their settlement in Canaan by the finding of for example ceramics in certain phases or strata in the archaeological sites across Canaan. Namely, ceramic types such as the Monochrome (Mycenaean IIIC: 1b) pottery which is labeled to be an imported or imitated form of pottery from the Mycenaean world.

We are going to consider the traditional chronology (the high chronology) for tomb 1 at Tell Dothan, for the reasons that imported pottery has been found in the levels 2, 3, 4, and 5,<sup>3</sup> this type of pottery is absent in level 1 of the tomb (the Iron Age level). This leads us to assume that probably during the beginning of the Iron Age there has been no connection between the coastal areas where the Philistines have supposed to be settled and the mountainous areas where Tell Dothan is located. In addition to that, the complete absence of the Egyptian pottery in the entire tomb before and during the Iron Age is also a considerable observation when the Late Bronze is known to be a famous era of the Egyptian domination over Canaan. These issues and the leaning towards the traditional chronology raise questions regarding the position of Tell Dothan in both the Late Bronze and the Iron Ages within the course of archaeology and history of the period. In order to understand the nature of Tell Dothan in this period, we need to look at the issues that matter in shaping the Late Bronze, its zenith, collapse and the beginning of the Iron Age. Late Bronze Age was

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<sup>3</sup> The dating of the tomb will be discussed in chapter 3: 128-132.

divided into sub-periods or phases, each phase was characterized by certain components such as pottery, historical events and related social and political aspects that defined the course of this period and its aftermath.

In this section, we will review the main historical and archaeological features of the Late Bronze and Iron Ages and the transitional phase between. We will focus on the divisions of this period from the earliest to the latest with an emphasis on the highlands and very particularly Tell Dothan environs.

### **I.II.2.2. Late Bronze I (LB I)**

Started at about 1550 until 1400 B.C. or for another dating it was divided into Late Bronze IA (1500-1479) and IB (1479-1375) (Pantiz-Cohen 2014: 542; Bunimovitz 2019: 266). The period is considered to be the transition between the Middle and Late Bronze, and at some point it has continuity from the Middle Bronze Age, with smaller urban centers, which indicated a balance between urbanism and rural style of life (Grabbe 2016: 11). It is characterized by several features, the most prominent character of this period is that it's a transitional phase between the Middle Bronze and the flourishing Late Bronze, the beginning of the Late Bronze is a continuation of the later phase of the previous period, where commerce, trade, economy and foreign relations are the main features in this period (Burke 2014: 410-411; Pfoh 2016: 13) as well as the domination of the Egyptians on the land of Canaan, which also sat the chronology of the period until the end (Panitz-Cohen 2014: 541).

The domination of the Egyptians over Canaan was accomplished by several pharaohs as early as Ahmose and Thothmes III throughout military invasions to Canaan which was probably limited without affecting deeply the life in the land. Moreover, no long-term Egyptian governmental and administrative control have been established at that period, only Tell el-'Ajjul in the south which revealed Egyptian pottery types according to (Bunimovitz 2019: 266). It is assumed that the areas and sites that have been important to the Egyptians have indeed thrived, while the areas that have not been in the Egyptian interest and remote from action centers were less developed and maybe less flourishing during the period (Van der Steen 2016: 160-161) which probably has been the case of Tell Dothan in that particular period and later on. The Egyptian role in Canaan was much prominent in the later phases of the Late Bronze Age which we will talk about in the following pages.

The picture of the history and archaeology in Canaan in terms of the locality is much affected by the Late Bronze general atmosphere, though, there are some specific characteristics for the local course of history in Canaan during the Late Bronze Age I. It was marked by being a Canaanite culture populated in each part of the land the coastal plain, the highlands, the northern an-Naqab (Negev) and the Jordan Valley, as well as the Jordanian highlands east of the river (Fischer 2014: 562; Panitz-Cohen 2014: 544). It appears that Palestine was not largely affected by the Egyptians during the beginning of the Late Bronze Age, though Tell el-'Ajjul, as mentioned elsewhere, is probably the only example of its type to show an Egyptian expectance by the pottery and some architectural elements (Massafra 2016: 71-73).

In this period Tell Dothan had shown some continuity between the Middle and Late Bronze, it's not clear how big the size of the site in this period, but no Egyptian pottery had been recovered. Master *et al* 2005. had talked about this period and combined it with the middle Bronze II and compared this phase to that which is similar at Tell el-Mutesellim (Megiddo). In the pottery catalogue of Tell Dothan Master *et al* 2005, it appeared that Late Bronze I remains have been found in the areas A, D in phases 7, 6 and 5, area D phase 2, and in area K phase 2 of the excavation, the pottery types have the character of the Middle Bronze and the Late Bronze. In addition to the carinated bowls which originated in the Middle bronze, two distinctive Late Bronze Age base ring have been included in the catalogue, a bowl with one wishbone handle (fig 7.14: 8) and a Cypriot Bilbil jug (fig. 7.15: 5) which indicated the early Cypriot imports to Tell Dothan as well as being a good indicator for an occupation phase at the Late Bronze Age I. Moreover, some Chocolate on White ware pottery shards (Master et al. 2005: 49-64) which was very common in that phase of the Late Bronze in Canaan (Fischer 1999: 1-29). Due to the limited information and the documentation of the excavation, it's hard to know the size and the whole picture of the Late Bronze Age at Tell Dothan to the full extent. The end of the Late Bronze I was not due to the end of the 18<sup>th</sup> Egyptian new kingdom dynasty, but it was for the distinctive Amarna period and all the related historical Egyptian issues towards Canaan which we will talk about in the following.

### **I.II.2.3. Late Bronze II A and B (LB IIA and B)**

The Late Bronze II (1400-1200 B.C.) is divided into two phases, Late Bronze IIA and IIB. Late Bronze IIA (1400-1300 B.C.) and Late Bronze IIB (1300-1200 B.C.), or it ends according to Gonen in 1150 which she called it as the Late Bronze Age III (Gonen 1992: 216; Leonard 2003: 353). The division of the phases of the Late Bronze Age is influenced by the Egyptian chronology as mentioned before, which mainly in Palestine parallels the beginning and end of each Egyptian dynasties. The Late Bronze IIA had witnessed the Egyptian actual domination which was very clear throughout the documentation of the Amarna letters during the reign of pharaohs Amenhotep III (1382-1344 B.C.) and his son Amenhotep IV (1327-1318 B.C.) (Benz 2016: 4) as well as the later Pharaohs. During this period Palestine has been flourishing with full domination and control of the Egyptians, along with some clashes between them and Hatti (Pfoh 2016: 13-14) which probably had a strong effect on the way and weight of the Egyptian presence in Canaan in that period. It was a phase of the Late Bronze Age when Canaan had a considerable economy and relations with Egypt and the world, it was evident by the Amarna letters which were sent from the kings of the "Canaanite cities" to the Pharaohs in the later part of the 18<sup>th</sup> dynasty as well as letters that were sent from one city to the other (Izre'el 1997: 2; Rainey 2015: 14-31; Grabbe 2017: 70; Cohen 2019: 252), there are some letters as well reflect larger scale relations in that period connects Egypt to civilizations in the north of Canaan in the 14<sup>th</sup> century (Matthews 2003: 357-358; Mayes 2016: 157-158).

The second phase of the Late Bronze is dated to circa. 1300 to 1200 B.C. was characterized by the end of the Amarna Age and the beginning of the end of the Late Bronze Age. This phase of the Late Bronze is described to be of more Egyptian concentration in Canaan with the later Pharaohs of the 18th dynasty (Bunimovitz 2019: 268). This period as well as a complex phase, witnessed a crisis and the collapse of the entire Bronze Age in the Ancient Levant. The Egyptians were fully in charge of the land, and the Canaanite cities have suffered, in addition to the clashes and wars between civilizations north and south of Canaan, the cities inside the land had also some kind of internal wars in a system called the "city-state" pattern in which the heads of these city-states have requested help from the Egyptians (Killebrew 2005: 32-33). This period actually witnessed the collapse of the Egyptian control on Canaan which came after several Egyptian battles and military campaigns such as the

battle of Qadesh between the Hittites and the Egyptians c. 1274 B.C. (Cline 2014: 80), Merneptah's 1213-1203 B.C. campaign to Canaan (Singer 1988: 1) and Ramesses III 1184-1153 B.C. wars in the Canaanite land (Redford 2018: 134-151). Those are inductions of the unsettled circumstances, which led to the collapse and on the other hand left the Canaanites at this point to more freedom and self-control which subsequently made them flourish in many different ways. Moreover, the appearance of the group called "Sea Peoples" in the coastal plain of Canaan (Dever 1992a: 99-106) which played a role in the shaping of the Iron Age in Canaan.

According to Master *et al* 2005, excavations at Tell Dothan, have not revealed any structural elements on the tell open-air squares, they have been unable to define any substantial ceramic assemblages or any architectural remains that might be dated to the Late Bronze Age IIA and B. However, Master *et al* 2005 mentioned in the report that in parts of areas K, L and A have indicated a good number of painted sherds that have the character of the Late Bronze Age pottery types. In addition to that, Late Bronze II phases have indicated imported pottery such as Mycenaean IIA2, Mycenaean IIIB, White Slip II, and Cypriot Base Ring II which was found in secondary contexts throughout the Iron Age Levels in area A. Moreover, Master *et al* 2005 proposed that possibility a Late Bronze II stratum have been missed by the excavator of the tell, and that there is a probability that remains of the period have existed but not enough (Master *et al* 2005: 65). Nevertheless, tomb 1 represented solid evidence of the period.

#### **I.II.2.4. Early Iron Age I**

The Early Iron Age in Palestine dates circa. 1200-1000 B.C., is divided into two phases Iron Age IA (1200-1150 B.C.) and Iron Age IB (1150-1000 B.C.). The beginning of the Iron Age was a result of the collapse of the Bronze Age civilization in Canaan and other parts of the Ancient Levant accompanied with destructions, and abandonment of sites, as well as, the relocation of peoples across the Ancient Levant (Lipiński 2006: 23-24; Cline 2014: 102, 137). Several theories have attempted to understand and explain the cause of the collapse of the Late Bronze Age and the beginning of the Iron Age. Classic biblical texts, epigraphy, intensive excavations, new archaeology, anthropological and environmental approaches have been applied to

determine the beginning of the Iron Age, as well as the end of the previous period (Bunimovitz and Lederman 2014: 252).

The Iron Age I is a period marked by movement, resettlement, and migrations (Younker 2003: 367). In the shadow of these events, the Iron Age is considered to be according to many scholars, a new dawn of history in Canaan, the Egyptian control withdrew, the Canaanites culture declined, and new "ethnic" groups emerged in every part of Palestine, it influenced the material culture with significant changes including pottery styles, settlement patterns, burial customs, and architecture which is according to those scholars is a reflection of the new ethnic groups (Mazar 1990: 295, 1992: 258; Dever 1992b: 18; Dothan and Dothan 1992: 87-88; Ahlström 1993: 334-370; Finkelstein 1994: 150-151; Stager 1995: 332; Younker 2003: 367-372; Golden 2004: 60-65, Barako 2007: 509). Nevertheless, Dever has expressed the continuity of the material culture between the two ages (Dever 1992a: 99). To this end, those scholars considered the Early Iron Age to be an age of different features in material culture and history.

In this phase in the Iron Age, the main questions of which highlights the nature of this period, as well as the previous one, are mainly focused on the people who lived during the Late Bronze and their destiny towards and through the Iron Age. As mentioned above, Ancient Palestine has gone through many historical events started as far as the settlement of humans in it, continued through modern-day life. The Late Bronze/Iron Ages phase is one of those periods where it is hard to fully understand and historically difficult to imagine and reconstruct; it is no doubt a phase of dramatic historical, political, economic and environmental changes. The fact that Canaan is located in the heart of the Ancient Levant made it affected by all those dramatics, especially playing the role of bridging the distance between Egypt in the South, the Aegean and Mycenaean worlds in the west, and the civilizations of the Northern Levant (Syria and Lebanon), as well as, the Mesopotamians in the east and northeast. Moreover, Canaan is well known since the early days of archaeology as a science, and the early explorations of Palestine which highlighted it was inhabited with a group of people named the Canaanites, which have been living in the land across the Bronze Age (Kenyon 1966: 1-5) with many references mentioning them in the second millennium B.C. (Lemche 1991: 25-30).

In this period, the archaeological evidence from Tell Dothan, although limited but showed that the site has been occupied during the Iron Age I and II. In area A on the tell, the Four-room house was excavated with pottery found typical of the beginning of the Iron Age, the pottery assemblage has continued the Late Bronze Age traditions at some extent along with the uncovering of some collared-rim jars that reflects the period. The pottery of Area A phases 3-4 is similar to the pottery of level VI at Tell al-Mutesellim (Megiddo) (Master *et al.* 2005: 68-77), on the other hand, the pottery in (Master *et al.* 2005) figs. 9.23, 9.24, and 9.26) are showing the same features of the pottery that comes from level 1 in tomb 1 at the site. In area L and K, more Iron Age remains have been excavated by Free. The expedition team has excavated a large area there including 14 houses, a fortification, installations and tombs. The pottery repertoire in Master *et al.* 2005 figs. (10.53, 54, 55, 56, 57, 58, and 59) shows probably a later dating than the pottery in Area A (Master *et al.* 2005: 117, 119, 121, 123, 125, 127, 129). This means that the settlement at Tell Dothan continued during the second phase of the early Iron Age, namely, Iron Age IB (1150-1000 B.C.) and during the Iron Age II.

#### **I.II.2.5. Iron Age IB (1150-1000 B.C.)**

In the Iron Age IB, the land has been going through different transformations, since after the Egyptians withdraw, the local people of Canaan had the ability to reorganize, it seems very much that at this point, the Canaanites once freed from the Egyptians had the ability to use the whole land by moving and expanding everywhere as well as establishing new sites, gaining access to natural sources and developing new ways of living. Continuity of the material culture, in this period, is evident in the pottery. Nevertheless, when looking at the pottery of tomb 1 at Tell Dothan, we can notice that some of the pottery types have continued, some have disappeared, and new types have been created and developed, quick look at the pottery of Tell Dothan pottery such as pyxides, lamps, kraters, bowls (at some extent), flasks, showed continuity, while imported/imitated pottery have disappeared in this phase, although in the opinion of number of history and archaeology scholars who considers that the Canaanite culture declined at the end of the Late Bronze Age and was limited after that to specific regions and limited material culture, along with the appearance of new populations that forced the Canaanites to shrink (Mazar 1990: 334-335; Redford 1992: 280; Dever 2001: 110; Younger 2003: 372-374; Killebrew 2005: 149-150;

Yasur-Landau 2010: 216-220; Bunimovitz and Lederman 2014: 253; Maeir 2019: 311-313).

It was described as "The collapse of the Canaanite society" which was like a cut at the end of the Late Bronze Age, which gave the opportunity to other populations to flourish (Dever 1992a: 106-107) and probably have changed to a different population to become the Israelites (Faust 2006: 186-187). More recently, scholars are asking the question of what influences us to accept the ethnic distinctiveness and boundaries during this period, as probably to avoid the generalization of the declining and vanishing hypothesis of the Canaanites, and instead of that the calling to rely more upon the systematic archaeology than the texts (Ilan 2019: 297-298). The Late Bronze and the Early Iron Age have more problematic issues in history, which are the Canaanites, the nature of the settlement, the Egyptians, the Sea Peoples, the nature of the inhabitants in the highlands and its background, and the actions and interactions within and out of Canaan. In the following, we will review those problematic briefly and highlight important features of each issue.

### **I.II.3. Settlement of Canaan during Late Bronze and Iron Ages: An introduction**

We will highlight the settlement patterns in different parts of the land of Canaan during the Late Bronze Age by looking at different geographical regions, review the distribution, spread, number and size of these sites in each area. In light of this, I will try to understand the active areas through the density of the sites, which will lead us to explain why some areas are heavily populated and scarcity in some others. The Late Bronze Age is a period that witnessed different shapes of settlement in Canaan, it started with the end of the Hyksos rule in Egypt when the Egyptians have reentered the area, controlled it for economic and military purposes during most of the Late Bronze stages namely, the 18th, Amarna, 19th and 20th dynasties. Finally, with the general collapse in the period. Whether the Egyptian presence was economic or not, it had influenced the settlement pattern in the land, and has created differences between the areas of settlement; some areas have been densely populated, while other areas were isolated or scarce. **Fig 1.** illustrates the geographical regions of ancient Palestine.

To understand the settlement patterns in Canaan during the Late Bronze Age, we need to look at different variables, those variables which played important roles



in the forming of the sites and have decided the distribution over the different parts of the land. The number of sites, the areas where it belongs, the natural settings of those areas, and the reflection of the density of the sites in one area than the other will be the aim of the following discussion; which will lead us to see the land of Canaan in the general picture of the history of the greater area of the Levant. Moreover, this will give us an insight into the beginning of the Iron Age after the collapse of the Late Bronze Age and might help us understand why the Egyptians had been interested in some areas while other areas were neglected.

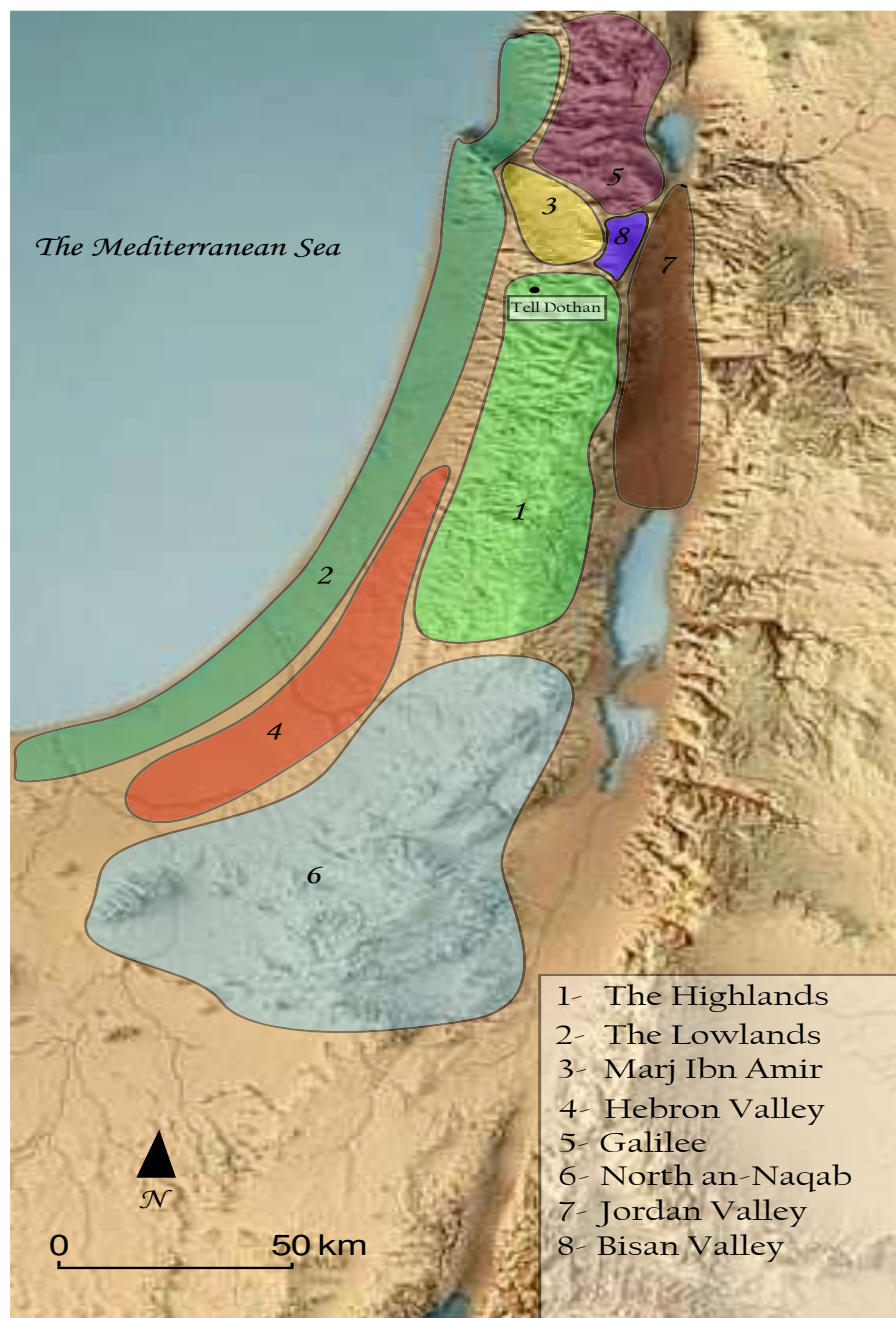


Fig 1. Geographical regions of ancient Palestine (G.Nagagreh)

### **I.II.3.1. Literature review of the settlement patterns in the low and highlands**

Settlement patterns in the Late Bronze Age have been subject to several investigations, one of the main studies dealing with settlement patterns in the Late Bronze Age is done by Thomas L. Thompson 1975; in which he has attempted to create a big image of the settlement patterns in the Bronze Age in general. Thompson gathered a huge number of sites analyzed them with all possible information to be gleaned from the geology, morphology, hydrology, soil and climate, to establish the economic and geographical circumstances for settlement. The study is one of the very important theoretical (no field excavations or surveys) works. Although the survey is scanty in the information when it's collected by the author, it sheds some light on the number and distribution of the sites in Canaan during the Bronze Age in general, and the Late Bronze Age, in particular, the survey included all geographical zones of Palestine; the Coastal Plain, the Beer es-Saba' (Beersheba) area, the Hebron-Jerusalem Eastern desert (The Judean Desert), the Dead Sea Basin, the Jordan Rift from Hula Basin to the Lake Tiberias, and from northern to southern Jordan Valley to Marj Ibn Āmir (Jezreel Valley) to Wadi el-Farah, Upper and Lower Galilee, Carmel Range, Ramallah-Nablus hills, Sinai and an-Naqab (Negev), as well as, the Jordanian areas from the south in Wadi el-Hasa to the north near Yarmuk river.

The number of sites that have been surveyed by Thomson are relative. It was collected relying on old surveys by different archaeologists as well as maps of Palestine and Jordan. It was divided into different periods, each period represents the number of inhabited sites. The presence of the periods in the sites are varied, some sites revealed a very small number of pottery shards which makes it a poor phase, while other sites had a rich phase indicated throughout the high number of pottery sherds which dated to the period, the size of the sites also varies from small (less than 3 dunams) moderate (more than 3 dunams but less than 10), large sites (10 or more dunams but less than 20), very large sites (more than 20 dunams). The main two periods which we are interested in are the Middle Bronze Age II, the number of sites during this period reached approximately 700 sites in all the zones of Canaan including the Jordanian land. The second period is the Late Bronze Age with a number of approximately 630 sites. Although the number and dating of the sites are relative and probably not very accurate, it draws attention to the minimum fact about

the density of settlement during the two-periods, which seems to be very close in number (Thomson 1975, 1979; Kallai 1981: 261-262).

While Thomson works is very important and provides the big picture of the settlement during the period, but most of the work was derived from books, literature and surveys that have been done by other scholars, which at some extent is not very accurate at the time, another scholar Rivka Gonen, conducted another type for the study the settlement of the Late Bronze, in which she highlighted and surveyed the region and concluded much more accurate results as the following.

Rivka Gonen 1984 has conducted a survey, in which she examined the different areas of Canaan by counting the number and size of the settlements in each geographical region, and the distribution of the sites on the time frame of the Late Bronze Age, beginning with the early until the last phase of the period. Gonen made a link between the type of the settlement patterns in the Late Bronze and the Egyptian expansion activities in Canaan during the New Kingdom time. She also looked at the continuity of the occupation of the sites from the Middle to the Late Bronze Ages, then the new settlements that have appeared in the Late Bronze, with regards to the distinctive features of those; such as fortified and unfortified sites during the same period. She concluded that settlement in Late Bronze Canaan has never recovered from the heavy blow it received from Egypt at the end of Middle Bronze Age, there were some new settlements in the 14<sup>th</sup> and 13<sup>th</sup> centuries B.C., these sites according to Gonen are small, adding relatively a minor extension to the urban landscape, in addition to a number of sites in the coastal plain which have probably functioned as harbors, and also served the Egyptians as garrisons (Gonen 1984: 61-70) in her opinion the Late Bronze was not densely populated era.

Gonen 1984 has emphasized in light of the excavated sites, that the urban system of Canaan underwent a drastic change in the transition from Middle to Late Bronze; many sites were destroyed and most were not soon reinhabited. The destructed sites and the cause of the destruction are not clear but it ascribed to the Egyptian conquest of Canaan.

According to Gonen study 1984, during the Late Bronze II, the number of sites doubled. Some old sites were reinhabited, and some new sites have been established at previously uninhabited sites. The new sites were largely clustered along the coast;

the balance of the total settled area remained stable throughout the Late Bronze Age. According to Gonen the calculation of the total area of the Late Bronze I sites around 184 hectares, while the total area in the Late Bronze II is calculated at about 204 hectares. The same situation in the Late Bronze II can be applied to the beginning of the Iron Age. She also pointed out that the size of the sites is small. There are also small sites added which represents the Egyptian fortresses. The total number of the sites in the Late Bronze Age according to Gonen was about 100 sites, which reflects in her opinion a large decrease compared to the Middle Bronze which was 270 sites. The sites were all over Canaan in several parts such as the Coastal Plain, Sinai, Carmel, Hebron Valley (Shephelah), the valleys of Marj Ibn Āmir (Jezreel), Bisān (Beth Shean) and Upper Jordan. However, those sites as mentioned above are small sites. A few sites are inhabited in the highland area in Galilee Hills, Nablus Hills, Jerusalem and Hebron (Gonen 1992a: 216- 17).

To conclude the works of Thompson and Gonen, it appears that the Middle Bronze and the Late Bronze in particular has much more sites distributed on the different regions of Palestine, although the number of sites that Thompson has provided is probably huge and not realistic but it can lead to the conclusion that the Late Bronze Age is a rich period of sites as we mentioned above, moreover, the study of Gonen can be as a prop to understand Thompson's work, if we see Gonen's work as a sample for some sites of Thompson work, if the results of both researchers are relatively accurate, this will shed some light on the transition period which followed by the Iron Age with the appearance of the hundreds of the sites in the highlands, which probably will minimize idea of new sites in the Iron Age, because if so, all those sites have been there distributed in a different patterns in the Middle and Late Bronze Age than the Iron Age.

Moreover, to strengthen the point in the previous paragraph Mazar believes that during the Late Bronze Age, the population and the density of settlement in Canaan declined in comparison to the Middle Bronze Age (Mazar 1990). He pointed out that some sites have remained to be centered as the previous period, on the other hand, some other continued flourishing throughout the Late Bronze Age such as Tell ed-Duweir (Lachish), Ashdod, Tell el-Jazari (Gezer), Tell al-Mutesellim (Megiddo), Tell el-Ḥuṣn (Beth-Shean), and Tell el Qedah/Tell Waqqas (Hazor), and also the coastal

sites that have been emerged during the Late Bronze, which Mazar related them to the international marine trade in this period which was active (Mazar 1990: 239-40).

A PhD dissertation has been written by Shlomo Bunimovitz in 1989 "*The Land of Israel in the Late Bronze Age: A Case Study of Socio-Cultural Change in a Complex Society*", discussing the settlement patterns during the Late Bronze Age Canaan. The writer stated that Gonen's study was limited in the database and has methodological drawbacks, such as a lack of rationality and chronological ambiguity. According to Bunimovitz, his study has more detailed analysis based on a larger database and it seems more imperative than the previous study by Gonen. Bunimovitz (1989) had counted the number of the Middle Bronze III/Late Bronze I sites with a total of 550, which were distributed over the different regions of the land, followed by the examination of the phenomenon of the decrease of the sites that occurred in the transition between the Middle and Late Bronze. He was also able to link the natural factor in his study by observing the growth in some sites and the disappearance of some other in the time span of Late bronze. In light of this, Bunimovitz leans toward the improvement of nature along with the proximity to the end of the Late Bronze, this factor in his opinion has influenced the improvement of the settlements, and he disagreed with the idea that says: Late Bronze Age is a period of a dramatic weakening of the urban fabric and a shift from urban centers to dispersed, small rural communities (Bunimovitz 1995: 324).

The Late Bronze Settlement in Bunimovitz's point of view is a different scale of urbanism and the period's settlement data should be viewed in its own set of concepts and cultural criteria, which may help to determine the function of the sites in the larger picture. With the separation of the Middle and Late Bronze settlements and define and sort them into urban and rural, this can demonstrate that despite the dramatic settlement crisis at the end of the Middle Bronze, the settlement instead had kept its relative share within the overall number of sites and the total settled area. Bunimovitz concluded that Canaan also wasn't less urbanized in Late Bronze than the preceding period, but the difference according to him is societal between the Middle and Late Bronze. Thus, while in the Middle Bronze a few large urban centers dominated a wide rural land, it is in the Late Bronze Age that cities have controlled much diminished rural sectors. And it is clear in his opinion that it is hard during most

of the Late Bronze that any rural settlements have existed in the highlands and a few regions of Canaan (Bunimovitz 1995: 324).

Bunimovitz relates the reason why it is heavily populated in the lowland and in the valleys and plains and the tenuous inhabitation in the highland to the environmental factor which made the lowlands and the valleys fertile in which gradually make it attractive to be settled, while in the highlands it is unclear why it is not heavily populated. He rejects the idea that during the Late Bronze Age people from the highland have been sent to Egypt to serve the Pharaohs, and also he compared the high and lowlands and believes that the highlands is not a fertile area as it is the situation in the valleys and plains of the lowlands. Another idea considered the highlands as a frontier zone, in which the crisis in occupation was more obvious acutely than in the Lowlands (Bunimovitz 1994: 187-193).

The above assumption about the reasons behind the differences in the settlement between the low and highlands has been stated by Finkelstein (1994, 1995a) in several places. He assumes that the Late Bronze Age marks the second demographic crisis in the highlands of Canaan, which he believes that the Land of Canaan had witnessed three waves of settlement; started with the Early Bronze, the Middle Bronze and the Iron Age I. Thus, he put the beginning of the Late Bronze as a period between the stages of settlement when the people converted from urbanism to pastoralism, which made the urban centers disappear and caused the abandonment and decrease of the settled sites eventually (Finkelstein 1994; 1995a: 354).

The settlement in the coastal plain has been affected by the Egyptians during and after Thutmose III, the direct control of the Egyptian according to Yuval Gadot has influenced the establishment of urban centers during the Late Bronze Age such as Jaffa, Tell Ras el-'Ain (Tel Aphek), Tell Jerishe (Tel Gerisa). These sites demonstrated the Egyptian dominance over the area of the coastal plain, in Gadot's opinion; the Egyptians decided to annex the area of the coastal plain from the Canaanites control and turn these lands into official estates. He relates the reason behind this situation to the fact that the coastal plain environment is unique; it is a fertile area rich with water and crops (Gadot 2008: 55-69).

In light of this review, it appears that the settlement pattern in Canaan in the Late Bronze Age is very problematic. Two main theses have looked differently at the settlement of the land.

The first one is Gonen's which assumes the crisis in the settlement during the Late Bronze and the way that some sites have decreased in size and uninhabited in others and most of the sites are small. She pointed out that the Coastal Plain had some settlement that represents the Egyptian presence. Her study in Bunimovitz's point of view is lacking for the chronological and methodological frameworks. Bunimovitz proposed on the other hand that the Late Bronze Age settlement has a new shape differs from the Middle Bronze period, and the difference in the Late Bronze is in the system of the way that the central sites have controlled the surrounding areas. He assumes that the Late Bronze Age is an urbanized period in the lowlands and agrees with Finkelstein that the highland is a marginal region.

There are a lot of resources dealing with the question of settlement patterns in the highland of Palestine. Intense archaeological surveys have been conducted in almost all of the highlands geographical areas, among them, Finkelstein's survey of Ramallah and south of Nablus (*Highlands of many cultures: the southern Samaria survey* 1997); survey of Zertal on Nablus and north of the area (*The Manasseh Hill Country Survey* 2004, 2007, 2016, 2017). As well as, other surveys in Jerusalem, Bethlehem, Hebron and the an-Naqab (Nagav) in the south and Lower and Upper Galilee in the north of the central highlands.

In relating to the above mentioned research problems, Israel Finkelstein offered a solution, which affects the concept of "continuity and discontinuity" in the highlands in the transition period between Late Bronze and Iron Age, in which he proposed that people/habitants moved into the eastern marginal parts of Palestine at the end of the Late Bronze Age. Finkelstein offered an explanation to this notion in an article entitled "The Emergence of Israel" A Phase in the cyclic history of Canaan in the Third and Second Millennia BCE" in the published book "*From Nomadism to Monarchy: Archaeological and Historical Aspects of Early Israel*" published in 1994 I. Finkelstein written the following.

"The concentration of sites in the early stage of each wave of settlement in the eastern part of the hill country was dictated by ecological and economic

reasons. In the beginning of each settlement process, when the region was sparsely inhabited and the settlers could freely choose the location of their villages, they opted for areas which were topographically moderate, ecologically convenient and agriculturally promising (the desert fringe, the intermundane valleys and the areas in the central range). Since the volume of population was limited, there was no necessity to struggle with the ecological frontiers of the slopes, with their harsh topography, dense vegetation and rocky terrain. Another advantage of the eastern areas was the possibility to conduct a well-balanced, autarchic economy- herding in the steppe; dry farming in the intermontane valleys, in flat areas of the central range and in cultivable parts of the desert fringe; and horticulture in the ridges and slopes of the valleys" (160-1).

A few questions will be given regarding Finkelstein's point of view. Among them, what if the movement of the highlands people was towards the coastal plain (lowlands) in the west not to the east affected with the Egyptian presence? If people moved to the east, what was the nature of the relationship between them and the people in the lowlands? And obviously, these questions will drive us to raise questions regarding the existence of the Egyptians, the nature of their relations with the low and highlands. Economically, what was the effect of drought on the settlement in the lowlands and how it worked for the Egyptians and relations to the Canaan in general? Which probably was connected to the people settlement, movement, and if moved towards which direction.

In another article published in (1997a) in the journal *Ugarit-Forschungen: Internationales Jahrbuch für die Altertumskunde Syrian-Palastinas* 28), Finkelstein relied on data-driven from biblical sources, the Amarna Letters, and as he put it "the available archaeological data". The whole study is a biblical theoretical reconstruction of what so-called "coastal plain city-states" which will not be very useful for the archaeological reconstruction of the lowlands because we are trying to rely on the archaeological scientific methods. However, it gives a general picture of the settlement patterns problem in lowlands. And it raises the question of the "Biblical Philistia" which also needs special treatment in the transition period.

With that being mentioned, two more articles were published regarding the coastal plain settlement. In 2003, S. Savage and S. Falconer published an article:



“Spatial and Statistical Inferences of Late Bronze Age Politics in the Southern Levant”. The second article was written by Michaël Jasmin under the title “The Political Organization of the City-States in Southwestern Palestine in the Late Bronze Age IIB (13th Century BC)” (2006) the two studies are focusing on the city-states concept in the Late Bronze Age in the lowlands. The question here would be if there are all these city-states in the lowlands during the Late Bronze Age. What would be the reason behind the meager settlement in the highlands in the Late Bronze Age? Where did people go? What the density of settlement in the lowlands means in terms of the "historical cycles"? Those questions will lead to understanding cultural continuity/discontinuity linked to Material culture and its reflection.

In light of the above, I'm planning on examining these problems through the study of Tell Dothan pottery collection, and find intersects with other sites in the region and argue with some of the above-mentioned theories.

### **I.II.3.2. The settlement regions of Canaan**

The settlement in Canaan differs from one region to another during the Late Bronze Age, for this reason, we will review the number of sites in each region and its divisions.

#### **I.II.3.2.1. The highlands**

Regional archaeological excavations and surveys have been conducted in the highlands, which covered different archaeological periods, the excavations and surveys were done in with separation of each area of the highlands.

The Upper and Lower Galilee: the area of the Upper Galilee almost empty during the Late Bronze Age, as have appeared in Gal's survey, it might have two small sites during this period but it's not certain (Gal 1993: 450-51).

The Lower Galilee: The area has revealed 6 to 8 small sites during the Late Bronze Age according to Gal who conducted the survey (Gal 1992: VII, 12-13; 1993: 451; 1994: 36, 39-40).

Nablus, Ramallah, Jerusalem and Hebron (Samaria and Judah): The areas of Nablus, Ramallah, Jerusalem and Hebron have been surveyed by several

archaeologists, and it revealed different numbers of sites in each section of the central highlands.

Nablus area (Samaria) has been divided into two sections, Nablus and northern hills, which have revealed about 57 sites in the Late Bronze Age. The sites of this period according to Zertal who conducted the survey, are small in size (Zertal 1994: 50-54; 2004: 53-56). In Ramallah and the north (Ephraim) the surveys by Finkelstein has revealed about 410 sites date to several periods, thus, about 99 sites classified as Middle Bronze Age, 9 sites dated to the Late Bronze Age, about 131 sites to the Iron Age I and 241 dated to the Iron Age II, he had pointed out that the 9 sites have a continuation from the Middle Bronze age but diminished in the size in Late Bronze Age (Finkelstein 1993: 1313; 2008: 553-555; Finkelstein *et al.* 1997). Millar has added two sites to the list in his later survey in the area (Miller 2000: 157, 161, 166), this makes the number of sites in the Late Bronze in this area about 9 small sites. The very sharp decrease in the sites in Finkelstein's survey from 99 sites in the Middle bronze to 9 sites in the Late Bronze is problematic in which the results are extremely sharp in the number. In addition to that, the area which Zertal surveyed had produced 5 double the number of Finkelstein's survey which is also raises a question mark about those variations in the numbers of the sites.

In Jerusalem-Bethlehem-Hebron area (Judah) the surveys that have been conducted under the direction of Avi Ofer revealed 7 sites belongs to the Late Bronze Age, which he related his opinion, that the area is not densely populated all over the archaeological history of the area (Ofer 1993: 815-816; 1994: 95-97,100, 102, 104-105).

In the Northern an-Naqab (Negev) highlands, the area is unclear because, while some archaeologists assume that there were no Late Bronze Age sites (Mazar 1990: 336-337; 1992: 286; Cohen 1993: 1123, 1126). Other scholars emphasized the existence of one site which is Khirbet el-Meshash (Tel Masos) (Herzog 1994: 128, 145). In sum, the Northern an-Naqab (Negev) highlands appear to be very poor during Late Bronze Age.

It appears that the highlands of Canaan were populated during the Late Bronze Age with a total number of 81 sites in all the sections. Archaeologists have noted that

the sites in this area seemed to be small in size, and scattered all over, the settlement pattern is not very clear because each of the surveyed areas represents a different style of patterns, but it seems that some areas are more populated than the others, such as the Nablus (Samaria) a region which is located in the center of the highlands, with its proximity to the valleys of the Lowlands. At the same time, the areas of the south are less populated with sharp difference than the north which may be due to the scarcity of natural resources and the morphological nature of these areas which are not very suitable for farming or trade routes. The same, has occurred just north of the Nablus area in the Galilee which is a monotonous land fertile but not suitable for farming. In light of this, we will review the settlement pattern in the lowland for a reflection. **Table 2.** Bellow indicates the sites of which have Late Bronze and Iron Age in the various geographical areas of Canaan.

Site Name	Location	Strata Dating (LB-Iron Age IA)
Dan	N-E Upper Galilee	VII-VI LB, IA
Achzib	N. of Acco in the coast	LB-IA, tombs?
Tel Kedesh	in Upper Galilee	IA
Horvat 'Avot	Upper Galilee	IA
Tel Harashim??	Upper Galilee	?
Hazor	Upper Galilee	LB, Ai: str. 1-a, XIII-XII
Shiqmona	South of Haifa, on the coast	LBII, IA
Tell Abu Hawam	Within Haifa on the coast	LB-IA str. Old:IVa, new: Vc
Tell el-Wawiyat	Lower Galilee	LB-IA str. III
Tel Hadar	N-E. East Shore of Lake Tiberias	LB-IA: str. VI-V
'En Haggit	In the Jezreel Valley	LB-IA
Tel Qashish	Almost in the Jezreel Valley	LB: str. VII-V IA: str. IV-IIB
Jokneam	In the middle way between Mount Carmel and Jezreel Valley	LB: str. XIX-XX IA: XVII-XVIII
Tel Qiri	In the middle way between Mount Carmel and Jezreel Valley	Poor?
Tel 'En Zippori	Lower Galilee	LB: str. V IA: str. IV-III
Tel Kishion	Lower Galilee	IA?
Tell Keisan	Acco coastal Plain	LB: str. XIII-XI IA: 12-9 and the trans: str. 13
Tell Zira'a	Upper Jordan Valley	LB-IA: not pub?
Taanach	Highlands	LB-IA II: str. II
Dothan	Highlands	Level 3: LB IIB Level 2: trans LB IIB-IA I Level 1: IA I
Tel Rehov	Jorand Valley, in Beth-Shean Valley	LB: str. D-8 IA: str. D7
Beth-Shean	Beth-Shean Valley	LB: str. VII-VIII

		IA: VI-VII
Pella	(Jordan Valley) Jordan	Area: III LB. phases III-II- IA. Trans: LBII-IA. And area XI- LB
Tell Abu el-Kharz	(Jordan Valley) Jordan	LB: Phases: VI IA: IX, X, XI, XII?
Tel el-Hayyat	(Jordan Valley) Jordan	LB?
Shechem	Central Highlands	LBIIb: str. XII, IA: str. XI
Mount Ebal	Nablus, Central Highlands	LB: str. 2 IA: str. 1
Tell el-Far'ah (N)	East of the Highlands and Nablus	LB: period: VI, str. 4 IA: period: VIIa, str. 3
Tell el-Hammah	Beth-Shean Valley	LB-IA?
Tell es-Sa'idiyeh	(Jordan Valley) Jordan	LB-IA: str. XII
Tell Mazar	(Jordan Valley) Jordan	Parallel to Dier 'Alla F
Jaffa	Southern Coastal Plain	LBIIb: levels: V-IV, IA: IIIB
Aphek	West of the Highlands in the Coastal Plain	Area A: LBII str. A.9, IA Str. A8 Area X: LBII: str. X12, IA: str. X-II Area D: LBII: str. D.5. IA: str. D.4 Area G: LBII: G.6. IA: G.5
'IzbetSartah	On the West of the Highlands	LB-IA: str. III
Shiloh	Central Highlands	LB: Few, Area: D IA: areas: C, E
Tell Deir 'Alla	(Jordan Valley) Jordan	LB: phase E. IA: phase A-D
Azor	South of Jaffa, in the middle way to Jerusalem	LB-IA: tombs in Areas: B. D
Yavneh-Yam	South Coastal Plain	LB: str. XI (14-13 <sup>th</sup> century) IA no
Gezer*	West of Jerusalem at the foot of the Coastal Plain	LB: str. XIV. IA: str. XIII- XI
Khirbet Raddana	Central Highlands	IA: 13 <sup>th</sup> -12 <sup>th</sup> century
Bethel	Central Highlands	LB-IA
Ai	Central Highlands	IA: str. IX
'EinSamiya (DhahrMirzbna)	Central Highlands	Tombs: IA
Rabbath Ammon (Amman)		LB Temple (Airport) and IA tomb at JabelNuzha
Tell el-'Umeiri	Central Jordanian Highlands	LBIIb- IA
Tel Mor	On the coastal Plain, north to Ashdod	LBIIb: str. 7. Trans: Str. 6. IA: str. 5
Ashdod	On the Coastal plain	LBII: str. XIV. IA: str. XIII-XII
Tel Mique	In the middle between the Coastal Plain and the Highlands	LB: str. VIII. IA: str. VII
Tel Harasim	Between the Coastal Plain and the Shephelah	LBII: str. V
Tel Zafit	Shephelah	LB: str. 9. IA: str. 8
Tel Batash	North Shephelah, west to the Highlands	LB. str. VII-VI. IA: str. V
Beth-Shemesh	20 km West of Jerusalem	LB: str. IV. IA: str. III
Tel Jarmuth	Central Shephelah	LB-IA: str. III
Gibeon	North of Jerusalem	LB-IA
Tell el-Ful	North of Jerusalem	IA: the period pre the Fortress
Jerusalem	Highlands	LBII: str. 16. IA: str. 15

Giloh	South of Jerusalem	IA: One Phase
"Bull" Site	North of Highlands, east of Dothan	Early IA
Ashkelon	South Coastal Plain	LB-IA: str. V-VI
Tel Zippor	South coastal plain, south of Ashkelon	IA: str. III
Tel Zayit	In the Shephelah	LB-IA
Lachish	South of Highlands, near Hebron	LB: level: VII IA: level: VI
Tell el-Hesi	Southeastern Coastal Plain	LB: poor. IA: str. VIII
Tel Nagila	Inner Coastal Plain (South)	LBII: str. V
Tel Gedor	North of Hebron	Poor Str.
Hebron	South Highlands	IA in area 12 and area S
Dibon	Jordan	IA?
Khirbet el-Lehun	Jordan	LB-IA
Gaza	South Coastal Plain	LB-IA
Tell el-Ajjul	South Coastal Plain	LB: str. H2, A, B. IA: H1, A
Deir el-Balah	South Coastal Plain	LBII: str. 6-4 IA: str. 3
Tell Jemmeh	Northwestern Negev Desert	LBII (rich) IA: str. JK
Tel Haror	Western Negev Desert	LBII: str. L2, B7 IA: str. B 7-1
Tel-Sera'	Western Negev Desert	LBIII: str. X, trans: str. IX. IA: str. VIII
Tell BeitMirsim	Between the Highlands and the Shephelah (South)	LB: str. C2 IA: B1- B2
Khirbet Rabud	Hebron Hills, south	LBIIA-IA, 12 <sup>th</sup> century
Tell el-Far'ah (S)	South Coastal Plain	LB-IA (need a look)
Aroer (Jordan)	Jordan	LBII-IA: str. V
Tel Acco	North Coastal Plain	LBII-IA; areas: AB, H, A, B
Tel Nami	South Coastal Plain, South of Haifa	LBII B Tombs
'Afula	Western Jezreel Valley	IA: str. III
Megiddo	Jezreel Valley	LBII: str. VII A-B. Trans: VII. IA: str. VI B, in the areas: K6, k5, F7, F6, M5
Tel Mevorakh	Coastal Plain, near Carmel	LB: str. XIII. IA: VIII-VII
Tell Qasila	Coastal Plain	IA 1B: str. XII (later IA)
Tel Gerisa	Coastal Plain	LB: area C. IA: area: B-D
HorvatGiv'it	The Desert of Central Highlands (East of Nablus)	IA poor
Tell en-Nasbeh	North of Jerusalem	IA: str. 4
Tel Ma'aravim	North Edge of Negev Desert	LBIII-IA
Tel Halif	South of the Highlands over look Shephelah	LBII: str. VIII. IA: str. VII
Tel Yin'am	Eastern Lower Galilee	LBII-IA
Tel Masos	Negev Desert	IA
Tell Jawa	Jordan Highlands	IA: poor
Nahariya	North Coastal Plain	LBIII: str. I
Shuni Cemetery	Southern edge of Carmel	LB-IA Tombs
HorvatShiha	Between Jericho and Nablus	IA: Important location in the East of Shechem
Tel Soreg	Sothern Golan	LB-IA poor
Yotvata	Southern Arabah	IA Fortress
Timna'	Arabah, North of Gulf of Elath	LB-IA
VeredYericho	Jericho area	IA

Tell Sahab	Jordan Highlands	LB-IA cont and the Tomb
Tel Kedesh	Jezreel Valley	LB: str. VIII. IA: str. VII
Tell Abu Zarad	Highlands	LB: period IV IA: period V
Khirbet Bel'ameh	Jenin	IA
Tell Esdar	Negev	IA
Bedhat ash-Sha'ab	Jericho	IA
Kh. El-Hammam	Jenin	IA
El-Ahwat	Jenin	IA

Table 2. Sites with Late Bronze and Iron Age strata derived from “*The New Encyclopedia of Archaeological Excavations in the Holy Land*” 1993, 2008.  
Ephraim Stern (ed.)

### I.II.3.2.2. The lowlands

In this section, we will not geographically divide the lowlands, we will rather count the number of sites according to the studies that have been done mainly by Rivka Gonen. Those sites will include excavated and surveyed sites and also the burial data that have been investigated by Gonen.

Several sites have been inhabited in the Coastal Plain, MarjIbnĀmir (Jezreel Valley) and the Jordan Valley. The total number of sites in the three areas according to the study is about 53 sites most of those are around 200 to 50 dunams; those sites are large sites compared to the highlands sites. The sites were sorted in the three different phases of the Late Bronze Age, 24 sites of them during the 15<sup>th</sup> century, 38 during the 14<sup>th</sup> century, and 43 sites during the 13<sup>th</sup> century (Gonen 1984: 64-65).

Gonen also has examined the burial chronology during the Late Bronze Age; she concluded that the large sites in the lowlands have a lot of burial caves and tombs with several types of burial practices. The differences in the burial practices in her opinion indicate that the area did not have outdoor populations who came into the land; it rather demonstrates the cultural segregation among the autochthonous people in Canaan. The segregation according to her caused by the political and economic domination of the country by Egypt (Gonen 1992: 148).

In light of Gonen's study, it appears that the major sites in the lowlands seem to have gathered/clustered smaller sites that belong to the major site or the city-state in this period. For example, the site of Tell ed-Duweir (Lachish), according to the survey in 1992 results, demonstrated that there were about 15 smaller sites clustered around the site and it seems that the city was central to these 15 settlements around it; those

sites included several tells about 6-8 km distant from Tell ed-Duweir (Lachish) (Dagan 1992:17\*, 27\*). Another example is the site of Lod, in the survey about 4 smaller sites have been recorded around the site of Lod. Several tells are with remains of structures in each one of the sites, one of the sites is a very large one called Haditheh, and some sites have a continuation from the Middle Bronze Age (Gophna and Beit-Arieh 1997: 19\*, 39\*, 52-53\*, 62-63\*).

It appears that in the Coastal Plain major sites have one cluster of smaller sites. This phenomenon is not to be seen in the highlands where the sites are small in number and size. The 81 sites in the highlands represent individual sites small and separated, with no clustering, which means that the area was marginal according to some scholars, and did not have the great attention of the Egyptians as the case in the lowlands; where the situation was different. By looking at the site of Tell ed-Duweir (Lachish), with the small 15 sites clustered around it, it probably indicates that the other major sites that Gonen mentioned had a certain number of sites that belongs to them. Assuming that the 53 major sites in the lowlands each have 15 smaller sites, the number would be 795 sites, a huge number of sites. If we counted the minimal number of sites as in Lod with 4 sites around the city, then the number of the sites around the 53 would be 212 sites, the number 212 of the sites compared to the highlands 81 sites are way bigger, and it has indications that the lowlands during the Late Bronze Age was much populated than the highlands in the same period. Another problem is that if the affiliated sites in the lowland are approximate to the size of the sites in the highlands, this situation leads us to ask: what was the function of the minor sites in the lowlands and also in the highlands? What was the relationship between the minor sites and the sites such as Tell ed-Duweir (Lachish) and Lod? This leads us to question what the relationship between the small sites in the highland and the cities in the lowlands during the Late Bronze Age bearing in mind the possibly that the small sites in the highlands may have been connected economically and in population to the lowlands which contradicts the other possibility that supposed that the movement was to the east.

To conclude in light of Gonen's and Bunimovitz's theories, it illustrated that the Late Bronze Age settlement patterns are not stable in Canaan during this period; both studies demonstrated that there was a difference between the settlements in the highlands and the lowlands. Both have concluded that the lowlands are more

populated than the highland. Gonen's opinion about the crisis in the Late Bronze settlement and the change into a nonurbanized community is not convenient for the lowlands; it might apply for the highlands due to nature of the sites which appeared to be marginal and less populated in light of the number and size. Bunimovitz's theory is more convenient to be the case in the Late Bronze. His idea about the system of the urban centers and the dependence of these centers on rural sites makes it very possible to be the case in sites such as Tell ed-Duweir (Lachish) and Lod. Moreover, the rich environment of the coastal plain and the inland valleys, the proximity to the sea, the plains that are suitable for the trade routes and the relations with Egypt. All of those factors made the lowlands a densely populated area, this is according to the estimated number of small sites that have been clustered around the cities.

Finally, it also appears that Egypt had played a major role in the shape of the settlement patterns in Canaan from the beginning of the Late Bronze Age to the end of the period. The appearance of the Egyptians in the lowlands made the area very attractive to the settlement, which means that urbanism in Canaan during the Late Bronze Age, is represented heavily in the lowlands. This leads us to assume that the settlers of the highlands may have abandoned some parts of the area and resettled in the urbanized region that is with regards to the number of sites that both Zertal and Finkelstein have given, this sheds light on the possibility of the movement of the people from and to the highlands and lowlands.

This situation sheds the light on Tell Dothan which has been settled during this period and probably have not been affected by all the events in the Late Bronze, the transition and the Iron Age. In light of this, we will look at the community that formed this period of the history of Palestine from as early as Middle Bronze to the end of the Iron Age I.

### **I.III. History of the Late Bronze and Iron Ages in Canaan**

In light of the archaeology of this region during the Late Bronze and Iron Ages, I will review a history of the period connected to the people that made the history of Canaan, and also the people that may have been the result of the collapse of the Bronze Age, with key events and key sites in order to see the history of Tell Dothan in light of that.



### **I.III.1. Canaan and the Canaanites**

The debate over the term Canaan and Canaanites is an old one. historians, archaeologists, theologians, and philologists have been exploring it since the early explorations of Palestine, many hypotheses have appeared for locating, dating, and defining what Canaan is, a place or a people? And if it is a land where and what are the borders of this land? If it was a nation, thus, when, where and for how long this nation or group of people lasted in history? And above all, how do we know about Canaan and the Canaanites?

The exact date of the crystallization of Canaan and the Canaanites is unknown, but it appears that somehow there is a scholarly consensus which settles the dating of this group to the Middle Bronze Age or a little earlier around 2000 B.C. (Kenyon 1960: 162; Nakhai 2003: 343). Nakhai uses the term to indicate a place rather than people. Other scholars back the dating of the Canaanites to c. 3000 B.C. (Gray 1964: 53; Lemche 1991: 25-27). De Vaux dated the first mention of Canaan to the 15<sup>th</sup> century B.C. in the Akkadian documents (de Vaux 1971: 123; Pardee 2008: 103). The ending existence of Canaan and the Canaanites is a more complicated issue than the first appearance of them, however, the mention of Canaan can be traced until nowadays in terms of a historical group and land. If Canaan was land or a people, where did they live since the beginning of the Middle Bronze Age? Canaan as the land is located on the eastern coast of the Mediterranean Sea, along the shores of Lebanon and Palestine in the north and bordering Egypt in the south, the eastern borders of Canaan is not particularly defined. It is likely that Canaan had a connecting point with Mesopotamia as well as with Syria in the northeast (Mattingly 2000: 64-65). Whether it was a land or a people, those are the fixable borders of the Canaanite cultural horizon in terms of location.

Canaan and the Canaanites have been mentioned in several historical texts from Egypt and the empire of the Hittites. One of the earliest mentions is dated to 18<sup>th</sup> century B.C. in Tell Hariri (Mari) in which it describes a group of people. Moreover, Canaan and the Canaanites have been mentioned several times in the documents from the Late Bronze Age, Lemche (1991) expressed that by the following:

The references to Canaan dating from the second millennium BCE are rather numerous, and are included in documents which originate in the Syro-Palestinian

area as well as in other parts of the Near East. Furthermore, these sources are found in several different kinds of documents from the period between c. 1500 and 1200 BCE and appear in textual evidence reaching from the Hittite Empire in Asia Minor and the state of Arrapha (Nuzi) in the northeastern Mesopotamia in the north to Egypt in the south. From Syria and Palestine proper there are quite a number of references included in the el-Amarna correspondence of the early 14<sup>th</sup> century BCE, which may be compared to contemporary evidence from Ugarit and Alalakh. (1991: 28).

This situation in the highlights is in my point of view that Canaan and the Canaanites are both a considerable body of people and land alike, with extended and flourishing history at least during the Late Bronze Age. Moreover, the consensus that the Canaanites body had collapsed at the end of this period raises and arguent question about their destiny. As well as the attempt to trace them in the Iron Age and the subsequent periods. Lemche has traced texts that mention the Canaanites as late as the Hellenistic period (Lemche 1991: 51-52) c. 300 B.C. And also as late as the first three centuries A.D. during the Christen ear in (Pardee 2008: 103), for the purposes of this study we will focus on the Canaanites during the Late Bronze and Iron Ages. **Fig. 2** illustrates geography of the Ancient Levant and civilizations in the Late Bronze and Iron Ages.



Fig. 2. Geography of the Ancient Levant and civilizations in the Late Bronze and Iron Ages.

The Canaanites inhabited all of Ancient Palestine from as early as the early stages of the Middle Bronze Age until probably the later phase of the Iron Age and probably beyond. In addition to the great cultural wealth that the Canaanites left behind which included ruins of ancient sites, architecture, pottery, tombs, they have been active on the ancient world's level with relations with the Egyptians in the south and the Hittites in the north. For example, they have been mentioned in Amarna letters 12 times (Lemche 1991: 31; Mattingly 2000: 64). On the other hand, the tangible material culture of the Canaanites is well known throughout Palestine, our concern in this study is the settlement, pottery and tombs of the Canaanites during the Late Bronze and the Early Iron Age.

### **I.III.1.1. Pottery, believes and tombs of the Canaanites**

This above title represents the intesction between archaeology and history, therefore, we will discuss those themes under the historical section, to show these element of the pottery, believes and tombs as one unit.

Because of Tell Dothan tomb 1 two main components, the burial and the pottery collection that has been found, are much connected in the context, we will talk below about those two elements on a larger and general scale which will help later in the understanding the archeology of Tell Dothan with the Canaanite culture. Pottery believes and tombs are important material culture to understand the Late Bronze Age society as well as the subsequent period.

Although the pottery wheel has been used in the Ancient Levant since the fourth millennium B.C. in Mesopotamia (Yon 1981: 236) but it was used according to Amiran in the Middle Bronze I and was popular in the later phases of the same age and since then it was almost the main technology that has been used to produce pottery in Palestine (Amiran 1969: 90; Rice 1987: 11; Bienkowski 2000: 233). With that being said, it's very likely to attribute the invention of the wheel to the Canaanite or that they have used it at least in Palestine at that period and across the Late Bronze and Iron Ages, the pottery of Middle and Late Bronze, as well as the Iron age, is varied with many types, use and technology of manufacturing. Moreover, it is also rich with imports from Egypt, the Aegean and the Mycenaean worlds and more significant during all these periods, which reflects the centralized location of Canaan during these periods in terms of trade, economy and relations to the surrounding

civilizations. The pottery of the Late Bronze/Iron Age I will be highlighted in this study throughout the assemblage of Tell Dothan, bearing in mind that the collection does not have any Egyptian pottery to be studied. In addition to that, burials, tombs and burial practices will be also illustrated throughout tomb 1. Nevertheless, due to the large variety of pottery during the Late Bronze and Iron Age, as well as the tomb several types, we will mention here briefly the main pottery and tomb types to clarify the connecting points of which distinct Late Bronze Age from the following Iron Age.

The pottery of the Late Bronze Age is influenced to some extent from the Middle Bronze Age, in this period several types and shapes have been discovered in excavations in tombs and site across Palestine. The main types are local pottery including rounded and straight-sided bowls as well as the carinated bowls as a Middle Bronze trace, goblets and chalices, kraters of several types, cooking pots with both simple in the beginning and rectangular rim profile later, the Canaanite commercial jars with a pointed base and a tall body that has been used in the trade with Egypt and other regions around Canaan, local rounded jars and sometimes decorated, large jars for storing which known as pithoi, jugs and juglets of several shapes sizes and manufacturing features, biconical jars, jugs and kraters, bichrome pottery ware which is known to be imported to Canaan or imitated, the chocolate-on-white pottery ware which characteristic of the early phase of the Late Bronze Age, the palm-and-ibex motif which was used to decorate pottery vessels such as kraters and jars. The Late Bronze age assemblage including in addition to the above flasks, oil lamps, imported Syrian wares, imported Cypriot wares, imported Mycenaean wares, imported Egyptian wares (Amiran 1969; Golden 2004: 223-225; Killebrew 2005: 110-138). These mentioned types of pottery have been found in several sites on the coastal plain, and the highlands of Palestine, among the sites which were rich with typical Late Bronze age pottery is Tell Dothan. The site has almost all types of the pottery that has been mentioned earlier except for the Egyptian pottery which probably due to the absence of the Egyptians at the site which is a possibility.

During the Iron Age, the pottery in has not changed greatly, the main assemblage is consists of carinated, rounded, shallow, and small bowls, which at some point have the character of the Late Bronze bowls, chalices and goblets, kraters and multi-handled kraters, cooking pots which very similar to those in Late Bronze, pithoi, storage jars, flasks, amphoriskoi, jugs and juglets, bichrome pottery style,

Philistine pottery, Cypriot pottery and oil lamps (Amiran 1969) and the collared-rim jars (Golden 2004: 227; Killebrew 2005: 177), which to most of the archaeologists is a typical Iron Age I type. The pottery of Tell Dothan tomb 1 is a typical Late Bronze/Iron Age which I will be illustrated elsewhere in the study, the assemblage with comparisons from other sites will hopefully give a detailed picture of the pottery in this period.

Canaanites and their beliefs, afterlife and burial customs all will be discussed in the following chapters. However, it's worth mentioning here that Canaanite religion is connected to other practices and somehow it is reflected throughout these practices particularly sacrificial rituals (Nakhai 2001: 81). Tomb 1 at Tell Dothan is a good example of this concept in which it reflects how the people have thought of death and afterlife and all the burial customs that have been linked and included in the tomb in a symbolic way.

In regard to temples – using temples to understand tombs and to reflect on Tell Dothan not have a temple -, Canaanites had built temples in the Middle, Late Bronze and the Iron Ages. A line can be drawn from the Middle Bronze to the Iron Age II in which continuity is obvious in the location, construction – rebuilding with new orientations and probably different sizes – and the way people interacted with temples and beliefs (Mierse 2012: 6-7, 61, 156, 196-197). An important point of view of Mierse which leads to thinking not only in the continuity of temples and cult, but also in the cultural concept of being for the Canaanites including mortuary practices which reflect the traditions of the community and continuity of those traditions in the same periods. Because of the central geographical location of Canaan, it appears that it has been influenced by the empires in the northern and southern borders and to the west the Aegean world, as well as the other civilizations which have probably been influenced by Canaan at the same level (Kenyon 1960: 206; Nakhai 2003: 344-345) especially with Egypt as the controlling power at that time over Canaan (Muhlestein 2011 190-226; Ayali-Darshan 2016: 101).

This is evident in the mention of some Canaanite gods in the Egyptian texts such as the Execration Texts (Givon 1987: 22-27; Ziffer 1990: 79\*) as well as the idea that people when they build a temple, they have in mind a shape that they have

inherited from the ancestors (Burdajewicz 1990: 108-109) which was the probably the pattern for the Canaanites during the Middle, Late Bronze and the Iron Age.

Tell Dothan has produced no traces for a temple neither in the Middle and Late Bronze Age nor in the Iron Age. But there are two possible explanations for this, on one hand, due to the limited excavations which probably have not reached any temple remains, or on the other hand that no temple with a full picture of being temple-like other sites, this probability is given here because on one hand there is the massive tomb 1, which in our point of view represents some kind of a cult in addition to the symbolic function. On the other hand, temples during this period can be symbolically found either by being an open-air temple, or simply a house or a place specifically near the tombs of the site (Bietak 2003: 165-166) such as the “Bull Site” near Dhahrat et-Tawileh in Jenin, in the mid-way between Tell Dothan and Tell el-Far'ah (N) which is an open place for cult practices have been found with a bull figurine that points to the cult (Mazar 1982: 27-35). The place is dated to the early Iron Age, which is, in my opinion, can represent one face of the Canaanite religious practices at that period and probably before.

The Canaanites as an ancient group of people had several mortuary customs for the treatments of the death which is connecting and reflecting their religion and believes (Nakhai 2003: 347). The evidence from Tell Dothan and other sites in Palestine shows that those people have used several tomb constructions from the Middle Bronze to the Iron Age. Continuity has been clear in some tomb types such as the bench burials in caves which were used in the Bronze Middle Bronze Age, Late Bronze and Iron Ages (Ziffer 1990: 81-82\*; Gonen 1992: 149), while other types are not yet determined such as the cave burials, namely, at tomb 1 at Tell Dothan which date to the Late Bronze and Iron Ages<sup>4</sup>. The problematic of tomb 1 at Tell Dothan is the origin which Gonin had classified it as a foreign tomb with influence from different land during the Late Bronze Age (Gonin 1992: 132-133). In my opinion, tomb 1 is a local product of the people who made its first appearance in the region in the beginning of the Middle Bronze Age and continued throughout the Late Bronze and Iron Ages and later periods. The fact that it's a family tomb makes it no doubt

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<sup>4</sup> For the description of tomb 1 at Tell Dothan, .see chapter 3: 111-118, 139-145.

that it's an important concept to the Canaanite community since an early phase of their practices.

Such a type of tombs has been uncovered in several sites and periods such as the early tomb A76 which has been uncovered at BâbEdh-Dhrâ which is dated to the Early Bronze Age (Lapp 1968: 16-17; Salles 1973: 66). Some of the tombs of cemetery B, C, and E, at Jebel Qa'qir south-west of Hebron, dated to the Early Bronze IV and some of them with remains of Iron Age and later periods (Dever 2014: 9-65) which can be considered as proto-type for the cave tombs. Tombs T10B, T15, T22, T31, T39, T47, T53, T57, T58, T60, T61 of el-Jib (Gibon) north of Jerusalem which is dated to Middle Bronze I, and Late Bronze Ages (Pritchard 1963: 66-72). The Tell el-Far'ah (south) (Tel Sharuhen) tombs which dated to the Middle Bronze Age II, particularly tombs F550, F551, F554, F555, F556, F569, F570, and F596 (Williams 1977). The tombs T60, T62, T87, T88, T89, T96, T104, T108A, T110, T116, and T117 of Tell el-Huşn (Beth Shan) dated to the Middle and Late Bronze Ages (Oren 1973: 156-169), The tombs of a site near Tel Qiri in modern-day (Kibbutz Hazorea) the tombs; tomb 1, tomb 1A, tomb 4, and tomb 32, dated to the Middle Bronze I (Meyerhof 1989: 45, 7, 14, 33), the tombs, tomb A1, tomb A3, tomb A4, tomb A6, tomb A12, tomb A14, tomb A18, tomb A31/46, tomb B6, tomb B10, tomb C2, and tomb C6 of Dhahr Mirzbaneh which dates to the Middle Bronze I (Lapp 1966: figs. 1, 4, 7, 9, 10, 11, 14, 17, 31, 34, 42, 43). The tomb at Saḥem in Jordan which dates to the Late Bronze and Early Iron Age (Fischer 1997:106), the tombs of Tiberias which dates to the Middle Bronze (Tzaferis 1968: 15-19).

More tombs such as those at Jericho, which mostly date to the Middle Bronze and some to the Iron Age, these tombs are J3, G37, A34, B35, B3, J1, G1, H6, H11, H13, H18, H22 (Kenyon 1960a: 307, 316, 353, 369, 394, 426, 444, 454, 472, 480, 487, 501). More tombs from Jericho are tomb A85, tomb G3, tomb H23, tomb K23 and tomb 81 dated to the Iron Age, other tombs which dated to the Middle Bronze and probably to the beginning of the Late Bronze is B48, M11, D22, J54, P23, P1, B50, J14, B51, J19, P19, J20, J42, D13, P21, and G73 (Kenyon 1964: 207, 227, 243, 261, 287, 296, 304, 313, 333, 378, 389, 410, 421, 425, 229, 448483, 521-522, 524, 533). Tell el-Mutesellim (Megiddo) the tombs 903, 910, 1122, 1128, 1106, 1101, 1102, 58, 217, 988, 989, 878, 1120, 1100, 63, 84, and 30 are dated to the Early, Middle, Late Bronze and Iron Age (Guy 1938: 11, 16, 19, 21, 25, 27, 30, 32, 34-35, 38-39, 41, 48,

89, 110, 113, 118). Tell es-Sa'idiyeh and the tombs that dated to the Late Bronze and Early Iron Age (Pritchard 1980) the tombs of Tell Khuweilifeh (Tel Ḥalif) dates to the Iron I, with special note to the Iron II cave 7 that has the entrance and the benches (Biran and Gophna 1970: 154-155; Borowski and Seger 1993: 559). Middle and Late Bronze tomb complex at Ashkelon (Baker 2006: 1-31).

The Iron Age cave tombs 1-2 north of Damascus gate-Jerusalem (Mazar 1976: 2-8), the cave tombs, tomb 1, and tomb 2 of Khirbet el-Kôm west of Hebron (Dever 1970: 139-147, 195). Tomb 4, tomb 5, tomb 8, tomb 41 in the village of Silwan which dated to the Iron Age (Ussishkin 1993: 62-66, 72-73, 214-220, 295). Cave tomb A at Khirbet BeitLiyeh (Ḥorvat Beth Loya/Kh. Beit lei) south of Hebron and near Tell Beit Miriam, which dates to the Iron Age (Naveh 1963: 74-75; Patrich and Tsafrir 1993: 210-213). Tombs of Khirbet Marah el-Jumma (an-NabiDanyal) south of Bethlehem dated to the Iron II, which are cave tombs, cave 3, cave 6, and cave 12, (Amit and Yezerski 2001: 171-186), and the cave tombs of Al-Jib (Gibeon) dating to Bronze and Iron Ages (Dajani 1953; Eshel 1987: 1-17). Tomb 1, tomb 2, tomb 3, and tomb 4 of Tel 'Eton south-west of Hebron which dated to the early Iron Age (Ussishkin 1974: 109-177). The burial caves, cave A, cave C and Cave D that have been found at Nazareth which dated to Middle Bronze and Iron Age (Alexandre 2018: 4-13). More tombs have been found in the region from those periods which can be found in (Hizmi and De-Groot 2004).

These examples coming from Middle, Late bronze and Iron Age that I have mentioned above are comparable to the type tomb of Tell Dothan tomb 1 form. Moreover, it may shed some light on the problem of the lack of the tombs in the Iron Age which Kletter pointed out when he described the Iron Age a period that no tombs have been found or used on the archaeological sites (Kletter 2002: 28-29). See also a different opinion that this type of tombs only developed in the Iron Age II (Yezerski 2013: 50-72). Thus, we raise the possibility of continuity of burial practices and tomb types between Bronze and Iron Ages as Nabulsi illustrated (Nabulsi 2017: 15-24). And which probably had some transformations occurred as natural of that, the material culture changes slightly from one period to the next. In addition, the revealed tombs in the sites of Palestine from different periods of the Bronze and Iron Age illustrates the local tradition of using those tombs, as well as, highlighting that those tombs have been in most cases used by families or the community in general.



Throughout the tombs and the funerary practices, we can understand the social system and the construction of families. In the case of Tell Dothan, it is clear that tomb 1 represents a family/community type tomb, the relatively 300/400 years of use indicates that the inhabitants were living close to the burying place, which according to Hodder's hypothesis which we apply here, the practice keeps a link between the lives and the ancestors which reflects beliefs which culturally keeps them connected (Hodder 1982: 141). More details about tomb 1 will be in the following chapters.

### **I.III.1.2. The Canaanite in the transition**

Keeping in mind that the end of the Late Bronze Age, faced a whole collapse had occurred in the Ancient Levant, everywhere from Syria, Egypt, Palestine and the Aegean world, and that the collapse has affected greatly the societies that have lived around the Mediterranean Sea at that time c. 1200 B.C. which is known as the crisis years (Muhly 1992: 10). We bring that there have been several hypotheses trying to explain the causes of the crisis and the collapse as well as the effects of the event on the course of the history in the region, Eric H. Cline had written a book on this issue in which he covered the collapse of the Late Bronze and its causes (Cline 2014).

In the light of the scholarly consensus on the concept of the collapse, Canaan has been also affected by it at the closing of the Late Bronze, the effects were diverse, including Pharaoh campaigns and subsequently the end of the Egyptian control (Weinstein 1992: 147-148), reformation of the Canaanite society (Gottwald 1983: 6-7; Jasmin 2006a: 31) – although Gottwald had a different reason for saying that, but we think it can work for the Canaanite community at the beginning of the Iron Age –, and migration of groups of people reaching the Canaanite shores and coastal plain (Gitin 2003: 57). As well as the gradual continuity of inhabitation of the highland which probably took a different turn in the transition period – from scarcity to abundance in the number of the sites from Late Bronze to the Iron Age – which can be expressed as repopulation of the region which is a very problematic issue in the history and archaeology of Palestine on the textual and archaeological levels (Finkelstein 1995a: 349).

The last issue to be dealt with about the Canaanites is their destiny at the end of the Late Bronze Age. I postulated a continuity in the Canaanite culture which extended into the Iron Age and later according to some texts, however, some scholars are calling for the vanishing of them at the end of the Late Bronze age, and one of the main issues is Lemche's statement which he claims that Canaanites did not know that they were themselves Canaanites, they only recognized that when they left Canaan their original home (Lemche 1991: 152). In my opinion, this contradicts at least the period when the Canaanites had been in connection with the Egyptians during the el-Amarna period when it was known that that land and the people of it were Canaanites. In addition, most scholars are emphasizing the concept of the nationality and the ethnicity at the end of the Late Bronze and the Iron Age.

In regards to the Egyptian/Canaanite relations, I will review several issues in the following including the nature of the Egyptian/Canaanite relations in the Late Bronze and the beginning of the Iron Ages. As well as, some related issues such as the 'Sea Peoples' and the Israelites in of Palestine in the shadow of the collapse of the period, considering them as some kind of consequences of the collapse.

### **I.III.2. Egypt and Canaan, the history of relations**

Late Bronze Age relations between the Egyptians and Canaan will be discussed in light of the environmental conditions, hypothesizing that those environmental conditions have affected the formation of the relationship between the Egyptians and the Canaanites in Late Bronze Age. Assuming that the Ancient southern Levant and Egypt have witnessed a dry climatic change in this period or earlier; we would propose the factors in which have made Egypt control the land of Canaan, for obtaining access to natural resources, which led eventually to the dominance of Egypt in the region.

This review of the events is due to the fact that the geography of Canaan although varies, but is connected, while it is believed that the lowland area is densely populated and directly affected by the Egyptians, the highlands believed to be less populated, though we believe that the events in the lowlands whether economic or political, it was connected to Egypt, which had an effect on the inhabitants not only of the lowlands but certainly to the inhabitants of the highlands, their lifestyle, density,

movements, spreading and so on, in light of this, we review concepts of Egyptian relations and the climate with regards to the highlands where Tell Dothan is located.

The recent years have witnessed new studies with evidence that climatic change into drought in the final phase of the Late Bronze Age Canaan and the region around had taken place. These studies have emphasized over the occurrence of the climatic change and it shows that the area has gone through a period of drought which has affected the region in several ways, including the Late Bronze Age collapse at the end of the period. A factor that is important to put in consideration, while it might not be as powerful as some scholars expect, but the natural influence on the human being needs not to be ignored. In light of this, I will rely on the evidence of the climate change linking between environment and communities' relations and how strong the climate can be towards shaping the economy, lifestyle and strategy of life and politics, settlement patterns as well.

On the other hand, the presence of the Egyptians in Canaan during the Late Bronze Age accompanied with several interpretations dealing with the conditions and the factors that made Egypt dominated the Southern Levant and rule it. Whether if it is economic, or military, or diplomatic relations, these factors have a reflection on the interest in the area north to Egypt, thus, what should be the reason behind the Egyptian's interest economically, or military, or diplomatic relations?

Several variables need to be taken into consideration to understand the Egyptian/Canaanite relations to explain the reason behind the Egyptian presence in the Canaan Land during the Late Bronze Age. We will look at the environmental conditions in the Late Bronze Age, literature review, the impact of the environment from an anthropological view, ancient Egyptian text, and the material culture from The Levant.

### **I.III.2.1. Recent evidence on the climatic change in the Late Bronze Levant**

In recent years, new studies have appeared dealing with the paleoenvironment of the ancient Levant, focusing on the climate and climatic change in the region (Rosen 2007; Wilson 2013: 262-276; Kaniewski et al. 2015: 157-169; Bar-Oz and Weissbrod 2017; 365; more specific, Knapp and Manning 2016: 99-149). Moreover, four field experiments have been conducted to examine the geological layers in four

different areas of Levant, to find out the climatic situation that the region had witnessed over the years and the Late Bronze Age in particular. These four field experiments have concluded that the area of the Ancient Levant had gone through a dry climatic change in the closing of Late Bronze Age (Rambeau 2010; (Bernhardt, Horton, and Stanley 2012: 615-617; Langgut, Finkelstein, and Litt 2013; Kaniewski et al. 2015).

The study of Rambeau aimed at understanding the paleoenvironment of Ancient Levant to provide a key to understand the past societies and their interactions and relationships with the environment and the climatic change, particularly water availability and changing landscapes across the prehistoric and historic times. To accomplish this goal, a geological experiment took place in peaty deposits discovered in the deserted mountain slopes to the east of the Dead Sea. Samples of sediments have been taken from different parts of the area, one of the sediments is a core of 450 cm which was extracted, revealing the presence of approximately 225 cm sequence of organic sediments, four radiocarbon ages were obtained on the main organic sequence to construct a time frame. Pollen samples have been taken and analyzed from 18 successive layers with the framework of the time frame that has been utilized and dated. Pollen analysis shows dramatic variations in the vegetation ratio over the successive periods. Rambeau has concluded that arid conditions characterize the Middle and Late Holocene in the region, with fluctuations in this period (Rambeau 2010: 5241; Black, Brayshaw, and Rambeau 2010: 5182; Rambeau and Black 2011: 101) the Middle and Late Holocene is a European geological term, the parallel archaeological chronology for the late Holocene is 2000 B.C. to 600 B.C. (Gunn 1997: 146).

Evidence also came from Nile Delta in 2012 to examine the density of the pollen as well as the Nile water level. The study concluded that the area of the Delta had faced severe aridity in the Late Holocene period, 4200 cal. yr B.P. (1200 B.C.) which also caused a minimum record in the Nile flow during this time period. This situation has contributed to the problems and famine in the region (Bernhardt, Horton, and Stanley 2012: 615-617).

Another team of researchers has conducted an experimental study in the Lake Tiberias (Sea of Galilee) (Langgut, Finkelstein, and Litt 2013). An 18m sedimentary

record covering almost the Holocene age was drilled from the inner northern part of the lake. Part of this sample covered the Bronze and Iron Ages, the sample has dated using the radiocarbon. Pollen samples have been examined to determine the climate conditions in the Bronze and Iron Ages. The result is that pollen ratio was high and stable, fluctuations have occurred frequently. One distinctive low pollen ratio has been noticed at the end of the Late Bronze Age; beginning of the Iron Age 1250- 1100 B.C., the team has interpreted this as the driest period throughout the Bronze and Iron Ages. It was supplemented with a study of the Egyptian economy in Canaan in the light of climate change and crisis (Finkelstein *et al.* 2017).

At the site Gibala-Tell Tweini on the Syrian Coast which was inhabited during the Bronze and Iron Ages, the site and the region during the Iron Age 1200 B.C., had witnessed severe drought, researchers of Gibala-Tell Tweini came to this result based on extracting two cores in the site and another sediment core from the Rumailiah River aiming at examining the pollen analyses. The result of the experiments showed a decline in the crops production and a drought event in a late phase of the Late Bronze Age and the beginning of the Iron Age with low amounts of precipitation and low river levels. The event according to the excavators has caused the destruction of the site as well as the destruction of Ugarit, in light of the experiment, Kaniewski *et al.* suggested that climate and climate change may have played an important role in the collapse of the Late Bronze Age civilizations, not only in Syria but in the other Ancient Levant regions (Kaniewski *et al.* 2008; 2010; 2011; 2015: 157-169).

### **I.III.2.2. Historical evidence of the climatic crisis**

First of all, the idea of the Egyptians using the Canaanite land for gaining natural sources is evident in the historical written inscriptions. The Barkal Stela coming from the time of Thutmose III around 1479-1425 B.C. In the stela the Pharaoh appears to be interested in the woods and cedar of Canaan where he shows that the woods were cut every year and brought to Egypt for the benefit of the Egyptians, the stela reads as follows:

Every year there is hewn for me in Djahy genuine cedar of Lebanon which is brought to the Court... each and every year... When my army which is in the

garrison of Ullaza comes (they) bring tribute which is the cedar of the victores of my majesty, through the plans of my father, (Amon-Re) who entrusted to me all foreign countries. I have not given (any) of it to the Asiatics (for) it is a wood which he loves. (Nibbi 1975: 71).

This text shows clearly that the Egyptians had a great interest in the wood of the Canaanite land during the Late Bronze Age, for as Nibbi<sup>5</sup> explains that the trees and woods of Canaan are much better than the trees which grow in the Delta. On the other hand, it seems that each Pharaoh was interested and that the land of Canaan had plenty of green trees which were cut and sent to Egypt in yearly bases (Nibbi 1975: 70). This leads to the notion of the exhaustion natural sources of the land of Canaan as Alt pointed.

Written evidence coming from the end of the Late Bronze Age points to a crisis in the ancient Levant during this period in Egypt; it appears that famine struck the empire during Merneptah reign around 1213-1203 B.C. with Libyans (as tribes) trying to attack Egypt (Bryson 1974: 49). Other evidence is the crop failures during the reign of Ramses III which caused by the drop of Nile river water level which led to clashes and riots in the region (Faulkner 1975: 27-28; Butzer 1976: 28-38). Lastly, in light of the above, according to several scholars, the Hittite empire seems to be asking for help from the Egyptians to import grain to aid the Hittites in their land, with evidence of the agreement between Ramses II, on one hand, Hattusili III on the other, in which grain have been shipped to Hitte on a regular base (Bryce 1998: 364-365; Kaniewski et al. 2015: 159). In addition to that, at the close of the 13th century B.C. during Merneptah time, the Egyptians have aided the Hittite as a treaty by sending grain in what appeared to be a famine time (Bryce 1998: 365; Warburton 2003: 75-77; Kaniewski et al. 2015: 159) with the king Amuwanda III describing the hunger that the land suffer during his father reign, which he points to the drought as the reason for hunger evidence (Kaniewski et al. 2015: 159).

In the Hittite empire in Anatolia and northern Syria, some inscriptions have been interpreted as a piece of clear evidence for the drought conditions represented by food shortage and famine in several regions of the Ancient Levant such as the documents that have been found in Syria. For example, the grain shipments from

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<sup>5</sup> Although Nibbi's writing is an old resource, but I found it important to mention in the text.

Egypt to Anatolia represents through a clay tablet 18.38, in which reflects food shortage at the end of the Late Bronze Age and the difficult conditions in the Hittite world at Tell Meskene (Emar) (Bryce 1998: 364-365; 2002: 93-97; 2012 195-196; Kaniewski et al. 2015: 158). The clay tablet 34.152 no.40, gives a clear insight into the deteriorating conditions in Syria around the end of the Late Bronze Age, as well as, the increasing of the grain prices in that period (Singer 2000: 24; Cohen and Singer 2006: 123-124; Kaniewski et al. 2015: 158). Another clay tablet RS 20.212 in which an urgency letter has been sent from a Hittite court to the king Niqmaddu III or Hammurabi around 1200 B.C. for shipping an amount of grain from the coast to a different location in the empire (Nougayrol et al. 1968: 105-107; Bryce 1998: 365; Kaniewski et al. 2015: 159).

Présentement: les Ouréens m[anquent de tout (?) et]  
 au Soleil ils ont demandé  
 du ravitaillement. Le Soleil leur a assigné  
 2.000 (mesures de) grain en provenance de Mukiš  
 Toi, de ton côté, fournis-leur un (seul) grand  
 bateau et des hommes d'équipage  
 et qu'ils emportent ce grain  
 dans leur pays !  
 Ils (le) porteront en une ou deux fois,  
 mais, toi, ne les prive pas de bateau.

RS 20.212. (Nougayrol et al. 1968: 105-107) for English trans. see (Bryce 1998: 365).

Finally, more evidence came from Mesopotamia with written documents describing famine, an outbreak of plague, failure of the crops and food shortage in Assyria and Babylon empires (Brinkman 1968: 387-389; Neumann and Parpola 1987: 161-182;). which can be interpreted as a climatic change in light of the data given above.

In the above studies, the results have shown that the Late Bronze Age seemed to be a dry period in the history of the Ancient Levant, which might have shaped the lifestyle of the societies in several ways. Climate change is a very important

component in the environment in which the human being lives and interacts with. Assuming that the Late Bronze Age is a dry period opens the door for several questions and hypotheses regarding the way the Late Bronze Levant people have lived, dealt with this circumstance. On the other hand, what was the nature of the relationships between different groups in the region? Finally, how we could apply the results of these studies on the relationship between the Egyptians and the Canaanites in the Late Bronze Age? To answer these questions, we will look at the Egyptian relationship with the Levant from various insights.

### **I.III.2.3. Egyptian New Kingdom**

The New Egyptian Kingdom starts at the beginning of Late Bronze Age Canaan, circa. 1550 B.C. (Weinstein 1981: 1), with the 18th Dynasty, the time when Pharaoh Ahmose I expelled the Hyksos out of Egypt. The period of Ahmose I and his predecessor Kamose is known as wartime when the Egyptians had to attack the northern territories and siege some cities. The Egyptians at the time of Thutmose I have controlled Nubia and gain the rule over the rich mineral deposits of the area which continued until the end of the New Kingdom. For the area of Syria-Palestine, it was evident that the Pharaohs after Ahmose I were not prepared more than the defensive activities toward Canaan. The Egyptian land was recovered from the Hyksos period. Ahmose I and his son Amenhotep I took in hand the reorganization of Egypt. After that, the Egyptian dynasties have faced a major crisis of how to rule the land, which means that it is still in the stage of the formation process, the end of the 18th dynasty accompany with the death of Hatshepsut about 1483 B.C. (Murnane 1992: 348-349; Shaw 2017: 82-83).

In the Amarna period during Pharaoh Amenhotep IV (Akhet-Aten) Egypt faced a fundamental change in the balance of power within the other powers in the region; this created a challenging circumstance between Egypt and the other civilizations on the domination over the region of the Levant (Murnane 1992: 349-50). The Egyptian control at this time is described to be a theoretical patronage nature of relation (Pfoh 2016: 123). During the 19th Dynasty Egypt, Ramesses I and his son Sety I were the Pharaohs who led battles against the Hittites over the Egyptian territories borders. Ramesses II continued the battles with the Hittites but the strength of the Egyptians



were less than that during Ramesses I and Sety I. During Merneptah's period at the late phase of the Late Bronze Age, Egypt had some battles against people in east and north of its mainland (Murnane 1992: 351; Shaw 2017: 122-123).

From the above, it seemed that Egypt during the Late Bronze Age had faced several issues regarding the politics in and outside Egypt, it was at recovery and reorganization phase during the 18<sup>th</sup> dynasty which requested a defense against the outdoor northern strong neighbors, Egypt at the end of the 18<sup>th</sup> dynasty and during Amarna period was strong and dominant. At the 19<sup>th</sup> dynasty Egypt faced a difficult time and fought over the northern area in order to keep the sovereignty over Canaan. In this regard, the relationships with the Canaan should be highlighted in order to understand the nature of these battles and relations.

#### **I.III.2.4. Egypt relations with Canaan during the Late Bronze Age**

The Egyptian is dominating the area of Canaan throughout the Late Bronze Age (Bunimovitz 2019: 265). It is apparent that at the beginning of the 18<sup>th</sup> dynasty battles in the area were to defeat the Hyksos at one hand and to secure the area's trade center on the other. The true beginning of the Egyptian dominant on Palestine started during the reign of Thutmose III about 1490 to 1436 B.C. He led an army to the north, defeated the Canaanite cities and took control over the area. This situation helped in establishing the true presence of the Egyptians as a major player in the region; made it distinctive than the northern Levant, the Egyptians existence remained more or less the same until the reign of Ramesses III about 1184 to 1153 B.C. (Ward 1992: 403-404), which can be described as "quasi-colonial" control (Greenberg 2019: 309). Some written documents have shown the interest of the Egyptians in Canaan, inscriptions on the walls of the mortuary temple (Deir el-Bahari) and the walls of Karnak temple during Hatshepsut and Thutmose III reign demonstrates the early activities of the Egyptians in Canaan, with more stability in the Egyptian control, evident through inscriptions came from Amenhotep II and Thutmose IV reigns (Rainey and Notely 2006: 65, 69, 71; Shaw 2017: 94-95).

During the Amarna period the same situation as the 18<sup>th</sup> dynasty took place in the area, with a difference that in this period the Egyptians probably have changed the way they controlled Canaan by establishing small garrisons and resident ambassadors

in the major Canaanite cities (Ward 1992:404). The Amarna Tablets are the absolute evidence of the Egyptian control, during Amenhotep III and IV, which represents the subordination of the Canaanite cities to the Egyptians (Rainey and Notely 2006: 80).

Military occupation was much more evident during the 19<sup>th</sup> and 20<sup>th</sup> dynasties, royal and religious monuments were also more evident in this period. In general, throughout the New Kingdom period, there was an intense commercial and cultural exchange between Egypt and Canaan, traders, merchants and prisoners of war have moved in this area. The Egyptians had controlled the natural sources in Canaan (Ward 1992:404) inscriptions from the Ramesside period, during Ramesses I, Seti I, Ramesses II and Merneptah indicates that the control and domination of the Egyptians over the land of Canaan had continued until the end of the Late Bronze Age, the inscriptions represent the economic and military interests (Rainey and Notely 2006:91, 96, 99).

On the other hand, Pierre Grandet 2008, mentioned that the nature of the existence of the Egyptians in Canaan was caused by the conflict with the northern regions of The Levant, namely with Mitanni during Thutmose III the conflict was interpreted in the battle of Megiddo, with later conflicts with Hitti in the time of Sethi I and Ramses II in the battle of Qadesh. Thus, Grandet named the period as (*l' Empire des conquérants*) with the focus of the conflicts which Grandet drove from monuments and inscriptions such as the temple of Karnak in Louqsor, Medina Habou, d'Abydos ou Abou-Simbel, therefore, these battels and conflicts were caused by the forging politics which were important for the new empire of Egypt which allowed them to expand in the north, as well as, gaining an access to the natural sources in Canaan such as the agricultural crops (Grandet 2008).

To conclude, it appears that the Egyptians always had an interest in controlling Canaan, the rule of the Egyptians continued throughout the Late Bronze Age. This situation is obvious through the history of the New Kingdom which had been written in the records of the Egyptian royal annals and archives (Ward 1992: 403). The archaeological material culture of the Egyptians in sites in Canaan shed another light on the nature of the relations between the two.

### **I.III.2.5. Egyptian material culture in Canaan**

The Egyptians presence in Canaan has been strongly interpreted throughout various archaeological finds, including buildings such as temples, palaces, forts, and governors' residences (Oren 1985; Bunimovitz 2019). And objects such as scarabs, tombs, inscriptions and pottery (Mazar 1990: 279-291).

The material culture of the Egyptians in Canaan has been found in many archaeological sites. Excavations in Palestine uncovered different types of evidence that reflects the Egyptian presence and magnitude of them, the excavations showed that the Egyptians have been continuously in the land. However, the style of the presence, the areas where it is intense differed from one region to another and from one period to the next. In order to understand this pattern, we should review some sites where Egyptians existed and the characteristics of each area. This will be followed by a dissection of the explanation of this phenomenon.

Egyptian temples have been discovered in different places in Palestine (Giv'eon 1978: 22-27). Manfred Bietak suggested that the temple at Tell ed-Duweir (Lachish) is Egyptian (Bietak 2002). Temples also have been found in many sites such as Serabit el-Khadem in Sinai, Tell el-Batashi (Timna), Jerusalem, Tell el-Ḥuşn (Beth Shean) (Wimmer 1998) and Tell el-Mutesellim (Megiddo) (Gonen 1992: 229). Governors residences or palaces according to Oren have been found in sites such as Tell esh-Shari'a (Tel Sera'), Tell Jemmeh (Tel Re'im), Tel Hesi, Tell el-Far'ah (S), Khirbet el-Mashash (Tel Masos), Tell el-Ḥuşn (Beth Shean) and Tell Ras el-'Ain (Tel Aphek) (Oren 1985: 39-49), Deir el-Balah (Goldberg and Rosen 2006), Tell el-'Ajjul (Yassine 1974: 133; Tufnell and Kempinski 1993: 49-53). Jaffa fortress with the new discovery of Ramesses II's gate at Jaffa which believed to have two phases (Burke *et al.* 2017: 98-100). The Egyptians also have a historical road that is well defined to connect Egypt to Canaan (Hoffmeier and Moshier 2013). The Canaanites also have some alphabetical interactions evidence with the Egypt during the period (Na'aman 2020: 29-30). In addition to that, Egyptian pottery if not found at Tell Dothan, but it has been found in many sites mentioned in the Late Bronze in the north and in the south of Palestine (Nataf 2013) as well as the Egyptian inscriptions have been found in different geographical regions of Canaan particularly in the coastal plain and the fertile valleys (Levy 2017: 14-21).

The material culture of the Egyptians is abundant in Canaan during the Late Bronze Age, which indicated that the land has been occupied for a long period from the Egyptians. Also, the locations of the sites may indicate a significance when looking at cities like Tell el-Huşn (Beth Shean), Tell Ras el-'Ain (Aphek), Tell el-Mutesellim (Megiddo), Deir el-Balah, Jaffa and other sites that located in the fertile areas of Canaan, this may relate to the goal of the Egyptian in profiting from the agricultural resources of Canaan at that time.

#### **I.III.2.6. The debate over the Egyptian presence in Canaan**

The Egyptian presence in Canaan in the Late Bronze Age has been discussed by many scholars in the last century. Most of the theories and hypotheses have consensus that the main reason for the Egyptians to be in Canaan is for an economic purpose. Alt had suggested the idea of the economic reason early in 1925 when he concluded that the land had been subject to the Egyptians throughout the Middle and Late Bronze Ages and that the Egyptians controlled the natural sources and were always seeking to gain more from different parts of the land (Alt 1925). The idea has been also discussed by Mendenhall when he pointed out that at the end of the Late Bronze Age the economic conditions were very difficult since the elite had exploited the community's energy in working in different ways (Mendenhall 1962; Gottwald 1979) which probably put the Egyptians as the reason behind the exhausted resources that made the elite put big pressure on the community. Shemuel also has pointed out that Egyptians have controlled the land in order to gain natural resources (Shemuel 1978).

Na'aman had pointed out that the Amarna Tablets have mentioned the economic relations between Egypt and Southern Levant and that Egyptians have some problems of the natural sources, so that the Egyptians have gained materials such as glass, wood, silver, copper, cattle, and slaves (Na'aman 1981). It was suggested that the fact behind the Egyptian control over Canaan is for a domination goal, and rule over the area, with the consideration of the existence of forts, and military as an indicator (Weinstein 1981).

More recently, several scholars have argued about the nature of the Egyptian presence and the relation of them to the collapse of the Late Bronze Age is that the diversion of the Canaanites on the resources to pay for the upkeep of the Egyptian colonial administration and the Egyptian control of trade (Bunimovtitz 1995: 325).

Hoffmeier 2001 suggested that the Egyptians had economic and military interest in the southern Levant during the end of the 18<sup>th</sup> dynasty, Amarna period, and late in the 19<sup>th</sup> dynasty (Hoffmeier 2001: 6).

Another study had supported the idea of the economic goal, which pointed out that the economy in Late Bronze Age was much bigger in terms of systematic agriculture and cattle grazing in light of studying the faunal evidence in some sites in the Canaan Middle and Late Bronze Ages (Kolska-Horwitz and Milevski 2001: 208). In Gadot opinion; the settlement in the coastal plain has been affected by the Egyptians during and after Thutmose III. The direct control of the Egyptians according to him have influenced the establishment of urban centers during the Late Bronze Age such as Jaffa, Tell Ras el-'Ain (Aphek) and Tell Jerishe (Tel Gerisa), these sites demonstrate the Egyptian dominance over the area of the coastal plain. Moreover, the Egyptians decided to annex the area of the coastal plain from the Canaanites control and turn these lands into official estates. Gadot, relates the reason behind this situation to the fact that the coastal plain environment is unique; it is a fertile area rich with water and crops to be gained (Bunimovitz 1994: 187-193; Gadot 2008: 55-69).

In conclusion, we conclude that that environment has played a major role in the human being life all over the history. It can shape the lifestyle of the communities, and by all the factors is included. One important component of the environment is the climate and the climatic change. It is clear that the Levant had faced a period of a climatic change during the Late Bronze Age, this change interpreted as arid and dry conditions in the area, started about 2000 B.C. according to Rambeau and last until about the beginning of the Hellenistic period. The arid climate can cause a reduce in the vegetation and make a shortage of raw material, the fauna and flora in particular, which forces people to move or to find another resource for living.

The Egyptian land – except the Delta and the Nile banks – are naturally more arid than some parts of the Levant, and we assume that it had more population which needs food, which also means that it is stronger in terms of population size and land. This draught which increased across the Late Bronze Age and towards the end of it made the Egyptian look for other areas to gain natural resources in order to survive the Egyptian community and governments. Canaan is a close area and has some fertile

parts of it, which made it an important target for the Egyptians; they needed it for supplies. They created a colonial relation with which interpreted from many scholars as economic relations. Some other scholars have the idea as if the Egyptian relations for a military goal in order to dominate over a larger land, it is true and it might help to protect both the Egyptian domination and the natural resources.

The economic interest of the Egyptians had influenced the settlement patterns in Canaan, to my view, it determined the places where people have chosen the sites to live and settle, or on the other hand to abandon them, which also may explain why the lowlands were highly populated than the highlands in the Late Bronze Age. If we imagine a gradual slow climatic change which may have started at the beginning of the Late Bronze, we can then hypothesize that the effect of the climate was the driving force behind the Egyptian dominant on Canaan and that the Canaanites themselves have been attracted to the lowland during the period. As mentioned elsewhere above, the economic goals were interpreted by Na'aman to be for gaining materials such as glass, wood, silver, copper, cattle, and slaves (Na'aman 1981) as well as, agricultural crops (Grandet 2008).

The Late Bronze came to an end in the Levant because of the intensive use of resources which was clear at the end of the period when the Canaanites had the chance to expand in different regions of the land (Greenberg 2019: 342-343), which made the local people fight over their land and to survive. This famine started with the beginning of the Late Bronze Age reflected through the Egyptian battles over the land with the other civilizations and the Canaanites themselves, or the Canaanites sites, which evident in the destruction of some sites in the Amarna period and in later Late Bronze Age.

### **I.III.3. 'The Sea Peoples' and the Philistines**

As I have mentioned above, the collapse of the Late Bronze Age had numerous consequences, among other results of the collapse is the migration of the 'Sea Peoples' which is a debated group of people that have arrived in Egypt by sea during a late phase of the period (Nibbi 1975: 1-6; Grandet 1993). The collapse phenomenon was studied in length by scholars who deal with the Aegean and the Mycenaean world; they have recorded a destruction phase in sites that have been flourishing for long

periods. The causes of the destruction in these sites were evident throughout the ash levels in each of the sites, but the reasons behind the destruction are unknown. Some scholars have postulated several scenarios such as warfare, earthquakes, invasions, climatic change, and palace economy decline (Sandars 1978: 182-183; Rutter 1992: 70; Dickinson 1994: 307-309; 2010: 483-489; Popham 1994: 278-281; Whittaker 2017: 75-80). Scholars have observed the collapse phenomenon which happened probably around 1200 B.C. in several parts of the Ancient Levant such as in Hattusa in Anatolia in the north (Hoffner 1992: 46; Güterbock 1992: 53; Sams 1992: 56) Cyprus (Karageorghis 1992: 79), in Syria-Palestine (Dever 1992a: 106-108), in the Ancient Kingdom of Ugarit (Yon 1992: 117-120). In Phoenicia with destructions in the cities (Bikai 1992: 132). In Babylonia with different reasons for the crisis in a bit later date (Zettler 1992: 174), in Assyria with minor evidence (Porada 1992: 182) and in Egypt with the collapse of the Egyptians control over Canaan (Weinstein 1992: 142) with a hypothesis postulating that the crisis was not as strong in Egypt as other parts of the Levant (Lesko 1992: 151).

In the shadow of the crisis on the other side of the Mediterranean Sea, the Egyptians during the same period had to face a crisis of the collapse c.1200 B.C. with an archaeological and written sources evidence for the Sea Peoples' invading the Egyptian land and that the Egyptians had to form military campaigns to fight and protect the land from the invaders from as early as the Amarna period. Pharaoh Ramesses II and III and Merneptah. According to Medinet Habu inscriptions and reliefs, the Sea Peoples have been defeated, killed, imprisoned and were placed in Canaan by Ramesses III, among them the Tjekker, Sherden, Sheklesh, Lukka, Tursha, Akawasha and the Philistines (Dothan 1982: 1-13, Grandet 1993: 193) Shaw 2017: 128-143).

Trude Dothan had dealt with the question of the origin of the Philistines. She has postulated on one hand, that they may have emigrated to Egypt and then Canaan from the Greek island and the mainland, or on the other hand, from Southeast Asia Minor. The confusion is a philological-geographical issue regarding the word Caphtor which might be the island of Crete, or a place in Capadocia in light of Akkadian inscriptions describing Caphtor (Dothan 1982: 21). In light of the review above of the crisis and the archaeology throughout destruction levels and pottery we are with the opinion that if a mass migration from the Aegean world have happened around 1200

B.C. the Philistines and other Sea Peoples have been the result of this migration which was evident in the Medinet Habu inscriptions and reliefs which depicts battles between armies on ships sometimes.

After Ramesses III (1184-1153 B.C.) defeated the Philistines and settled them in Canaan which is evident by Medinet Habu inscriptions and reliefs (Grandet 1993: 16-17, 191-207; Redford 2018: 21-41), scholars were able to identify some distinct material culture of this group of people in Palestine. Among the main tools to identify them, is pottery which has been found in excavations of several Coastal Plain of Palestine and the inland sites (Dothan 1982: 24). The Philistines pottery is distinctive in the shape and decorations; it has been found almost all over Canaan whether by settlement or exchanging processes.

According to Trude Dothan archaeologists have found Philistines materials such as pottery at Tell ez-Zuweyid, Tell el-Far'ah (S), Tell Jemmeh (Tel Re'im), Tell el-'Ajjul, Gaza, Ashkelon, Ashdod, Tell Kheidar/Tell Mura (Tel Mor), Tell Beit Mirsim, Tell 'Aitun, Khirbet et-Ṭubeiqa (Beth-Zur), Tel Sipor, Tel es-Safi (Gath), Ain Shems (Beth-Shemesh), Tell el-Jazari (Gezer), Tell en-Nasbeh, Beitin (Bethel), Yazur (Azor), Jaffa, Tell Qasile, Tell Jerishe (Tel Gerisa), Khirbet el-Burj (Dora/Dor), Khirbet et-Tell Dhurur (Tel Zeror), Tell el-Mutesellim (Megiddo), 'Afula, Tell el-Ḥuṣn (Beth-Shean), Tell el-Qadi (Tel Dan), Tell Deir 'Alla, Khirbet el-Meshash (Tel Masos), Tell es-Saba' (Tel Beersheba), Tell esh-Shari'a, Tel Ma'aravim, Tell el-Hesi, Tell esh-Shikh Ahmed el-'Areini, Khirbet Muqanna (Miqna-Ekron), Tell ed-Duweir (Lachish), Tell Ras el-'Ain (Tel Aphek), 'IzbetṢarṭah, Tell Qiri, Tiv'on, and Tell el-Qedah/Tell Waqqas (Hazor) (Dothan 1982: 25-90) as well as, the evidence coming from other sites such as, Tell Abu Hawam, Tell Ras el-'Ain (Tel Aphek), Tell el-Batashi (Tel Batash), Tell Abu Hureireh (Tel Haror), Tell Keisan, Tell ed-Duweir (Lachish), Tell et-Tuyūr (Tel Sippor/Zippor), were archaeologists have noted a destruction level which according to Millek, it was caused by the Sea Peoples in the process of taking the land (Millek 2017: 113-135).

In the light of the excavations during the last 50 years, in addition to the spread of the Philistine pottery in several geographical areas of Canaan. The main sites or cities that the Philistines are known to make as cultural centers are what so-called the Philistine Pentapolis which consists of 5 cities; Gaza, Ashkelon, Ashdod, Khirbet



Muqanna (Tel Miqne-Ekron) and Tell es-Safi (Gath) with rich archaeological phases of pottery that points out the settlement of the Philistines, thus, the flourish in the course of the later periods Iron Age (Lipiński 2015: 46-60).

The Philistine pottery which have been found in several sites is classified to three main types: 1- Philistine 1 pottery which is known as Mycenaean IIIC:1 ware that includes the monochrome painted decoration. 2- Philistine 2 pottery: which is known as the Philistine bichrome ware. 3- Philistine 3 pottery: which is characterized by the gradual debasement of the foreign factors and which mixed with the local older philistine styles, it includes red-slipped and hand-burnished pottery (Dothan and Zukerman 2015: 71).

There are two main theses concerning the problem of the dating of the Philistine arrival in Canaan; the three waves theory which Trude Dothan (1982: 96) have proposed, and the one wave theory which David Ussiskin and Israel Finkelstein have suggested (Finkelstein 1995: 218). Each of the suggested theories depended mainly on the archaeological finds of the pottery in the sites mentioned above. According to Trude Dothan the pottery manufacturing has changed from the last phase of the 12th century in which the first migration settlement has occurred where pottery has represented foreign elements as well as, being manufactured in the Mycenaean world. In the second wave of settlement pottery still maintains the character of its Mycenaean origin, during the last phase of settlement around the end of the 11th century and the beginning of the 10th century. The pottery has greatly changed both in shape and decoration, with some shapes disappearing, new shapes appeared, and the evolution of new and hybrid shapes (Dothan 1982: 96). On the other hand, Finkelstein's suggestion depended on the absence of the pottery at some sites which strengthen his proposal of low chronology. A more recently considerable publication has come out for the Aegean pottery in the Philistine sites in the coastal plain of Canaan, the author dated the appearance of Bichrome and Monochrome pottery to the reign of Ramesses III year 8, c. 1176 B.C. (Mountjoy 2018: 1097). To my opinion, the trade between Canaan and the West has ancient routes before the collapse of the Late Bronze and the beginning of the Iron Age; it is evident throughout the pottery types that archaeologists have uncovered in several sites in Canaan (Stubblings 1951: 1-4; Leonard 1994: 1-2).

The battles between the Egyptians and the Sea Peoples at the closing of the Late Bronze Age raise the question about the nature of the relationship between Canaan and the Sea Peoples in the same period. Bearing in the mind the continuous trade relations which can be traced from the Middle Bronze Age until as late as the Hellenistic period or even later. I'm postulating here that when the Egyptian control over Canaan collapsed, the Sea peoples had the chance to have more active trade with Canaan, since the Canaanites were free to decide and more important, is the battles which in a way reflects a conflict on the trade which has been probably blocked before the end of the Late Bronze Age. Another important issue we raise in light of the above, is the fact that there are doubts about where the Egyptians have settled the Sea Peoples, or at least that the Egyptians have not settled the Sea Peoples in Canaan at all, according to the inscription of Rameses III which reads:

I slew the Denyen in their islands, while the Tjekker [=Sikils] and the Philistines were made ashes. The Sherden and the Weshesh of the sea were made nonexistent, captured all together and brought in captivity to Egypt like sands of the shore. I settled them in strongholds, bound in my name [i.e branded with the name of pharaoh]. Their military classes were as numerous as hundred-thousands. I assigned portions for them all with clothing and provisions from the treasuries and granaries every year. (From Papyrus Harris I, Ixxvi 6-10, after (Stager 1995: 341).

The argument about this statement was raised by Bietak in which he doubted that the Egyptians have settled the Sea peoples in Canaan in the Egyptians' sites. He thinks that the Sea Peoples were settled in places where no Egyptian influence or existence, because none of the sites where the Philistine material has been found includes Egyptian material when the Egyptians' existence was very intense in some sites like Tell el-Huşn (Beth-Shean) and other sites along the Via Maris (Bietak 1993: 294-300; Stager 1995: 341). To this end, we don't know which places in Egypt that the Sea Peoples have been "brought in captivity" to.

According to scholars, Philistines have gone through a process of acculturation, which is a process that includes interacting with the local community by exchanging material culture, and lifestyles which are affected by several factors. All in all, the destiny of the Philistines is not clear since most of the research has focused on the emergence and the origins of this group during the 12<sup>th</sup> and 11<sup>th</sup> centuries, of what we know so far is that the Philistines disappeared from the historical records in about

the 7<sup>th</sup> century B.C. after going through different processes of change and transformations in the 11<sup>th</sup>, 10<sup>th</sup>, 9<sup>th</sup> and 8<sup>th</sup> centuries, which Gitin had illustrated throughout the results of the excavations at Khirbet el-Muqanna' (Tel Migne-Ekron) (Gitin 1998: 162-163). The conclusions of Gitin were based also on the excavations of Ashkelon and the destruction layers in both sites (Gitin 1995: 74).

Imported or imitated pottery from the Aegean world have been found at Tell Dothan in Late Bronze levels including tomb 1, while pottery from the Philistines have not been uncovered not on the tell nor in tomb 1. I will postulate one of two reasons, either the site is not fully excavated or the more convenient reason is that the Philistine pottery has not reached Tell Dothan for the location which is in the highlands. The same situation as other excavated sites in the region, the question of why the Philistine pottery has not been found in the highland is probably for the region is far for the Egyptians, topographically rough landscape, this factor can be also applied to the Philistine trade. On the other hand, a community such as at Tell Dothan had maintained a practice or a tradition to keep them away from the clashes in the lowlands which probably the case of other sites in the highlands in the transition from Late Bronze to the Iron Ages.

#### **I.III.4. The Israelites**

The Iron Age was named by some Israeli archaeologists as the Israelite Period I, II, and III expanding from 1200 B.C to about 587 (Aharoni and Amiran 1958: 171-172) namely, the Iron Age which is known for today. The reason behind the label of the Israelite Period which has been given by Aharoni and Amiran is the connection between the Iron Age and the Old Testament of the Bible. According to many scholars, it's the period in which the biblical narrative has taken place since the Exodus to the conquest in Canaan according to the book of Joshua and the Deuteronomy. Although those narratives were connected to the beginning of the Iron Age 1200 B.C. but the bible has been written in a much later period, according to Grabbe it was written in the Persian period about 550-330 B.C. with some parts that have been written later (Grabbe 2019: 19) as well as, the problem of the maximalists-minimalists and the doubts of the reality of the text as historical (Thompson 2018: 70-87) and that is also a problem of the dating the events.

The search in light of this has started early 18<sup>th</sup> century with the exploration expeditions to Palestine by several biblical scholars searching the bible and the places such as Jerusalem and other cities and sites in Palestine. One of the main studies that have investigated the relationship between the Bible and Canaan is done by the German scholar Julius Wellhausen started in 1878 and later with the publication of several books and articles, especially the works of 1878 in which he mentioned Joshua and his battles with the Canaanites in the process of settling in Canaan (Wellhausen 1878: 429-448, 1905; 1921).

In light of Wellhausen's works which did not focus literally on the conquest as have been written in the Bible, theories have appeared to integrate the text to the land among the pioneer works which draw the bath for the biblical history was Albrecht Alt. He had driven his theory which is known as a peaceful infiltration process for the Israelites who came from Egypt into the land of Canaan in which he relied greatly on the Egyptian texts at the end of the Late Bronze Age (Alt 1925). Other biblical scholars have followed Alt's proposal in taking farther steps exploring this theory (Meek 1936: 17-19; Noth 1948, 1958; Weippert 1971, 1982; Aharoni 1967, 1976, 1982a, 1982b; van der Steen 2004, 2007). On the other hand, William Albright a pioneer Biblical scholar with a long history of archaeological and biblical works had applied the biblical narrative of Joshua conquest in an attempt to locate the biblical events on the land (Albright 1935, 1937, 1939, 1940, 1942, 1943). Albright had expressed in an article in 1963 the problems of the theory of the conquest and how hard it was to apply it in light of the excavation projects in the key sites where the conquest narrative is supposed to have taken place, in addition to that, Albright had not accepted Alt's proposal in the same article (Albright 1963). Albright theory has been adapted by other biblical archaeologists in whom their work based on Albright's proposal such as (Wright 1940, 1960; Yadin 1982, 1985). The archaeological record had not helped the conquest and peaceful infiltration theories in light of this other theories have appeared attempting at finding explanations for the relation between the Bible and archaeology.

The third popular theory is the social revelation which has been proposed by George Mendenhall, which he hypothesizes that Israelites have come to the highland from the lowlands which were controlled by the Canaanites and the Egyptians were ordinary community lived a difficult life under landlords which led them to revolute

and move to a different region within Canaan (Mendenhall 1962, 1973, 1976, 2018; Gottwald 1979, 1983, 1985). Canaanite origins of the Israelites have been the proposal of several scholars such as Niels Lemche and Thomas L. Thompson who both connected this event to the environment factors and economy as part of the main players of the emergence of the Israelites, as well as the vanishing of the Canaanites during the period of the collapse of the Late Bronze Age. The lowlands emergence of the Israelites was also the proposal of William Dever (Lemche 1985; Thompson 1992, Dever 1993).

The above mentioned theories were not convincing to archaeologists like Moshe Kochavi, Volkmar Fritz, and Israel Finkelstein. In light of that, Finkelstein developed a semi-nomadic model which was originally driven from Alt's thoughts, however, the new theory is centered around the semi-nomadic model, in which especially Finkelstein who considered the Israelites as nomads settling in the highlands at the beginning of Iron Age from marginal areas east to the highlands (Kochavi 1985; Fritz 1981, 1987; Finkelstein 1988, 1992, 1994, 1995a, 1996, 1997, 2007a, 2007b; Finkelstein and Silberman 2001). The semi-nomadic model was proposed by Finkelstein in light of the surveys in the highlands of Palestine, with attempts by Finkelstein in finding distinctive material culture for the Israelites. Finkelstein himself contradicted and reversed some of his conclusions about the material culture such as the four-room house, pottery, and other indications as non-ethnic markers for any group of people at that time (Finkelstein 1995a: 355-357).

Each of the theories above had a weakness either with the biblical text or the archaeological evidence. Thus, other scholars had created the solution of which they proposed The Mixed Multitude Theory or model, driven from all the above theories, the mixed multitude theory does not reject any of the theories, however, it does not support, it rather mixing them to produce a conclusion that the Israelites are a result of all a peaceful infiltration, conquest, social revolution and semi-nomadic origins (Killebrew 2005: 184-185, 2006, 2017; Dever 2017). But most scholars argue that the Israelites were made of one group (Grabbe 2017: 123). The models that have been given are based on the bible at first place and on the Merneptah Stele or the victory Stele which is dated to Pharaoh Merneptah 1207 B.C. which talks about Israel, with the problematic of the text for geographical and definition of it is still under a debate (Dever 1995: 208-209; Finkelstein 1996: 200). Research on the Israelites had taken

several turns during the last one hundred years with massive concentration of excavations, bible translations, published books and articles, with the fact that in light of the theories above the result is that there is no consensus between biblical scholars which makes it hard to draw any concrete historical or archaeological conclusion regarding the group called Israelites.

In light of the above review of the history and archaeology of Canaan in the Late Bronze and Iron Ages, I have attempted to highlight the most debated issues in this period. Using archaeology and textual evidence and sources in order to understand the nature of the period and to integrate Tell Dothan in general and tomb 1 in particular in the history and archaeology context of Canaan. Reviewing settlement patterns, local culture, material culture, beliefs, relations, and the environment reflects clearly the complex nature of this nature of the period in Canaan which is influenced by large scale events, produced its history which archaeologists are attempting to draw. In this regard, Tell Dothan with its location and the cultural continuity that is postulated represents a contribution to the discussion and gives a unique window in the Late Bronze, the transition period and the Iron Age. In the following chapters, I will deal with the site itself in terms of location, archaeological and historical issues and then tomb 1 in terms of archaeology, historical context, pottery of the tomb and its reflections on the cultural horizon, in addition to that, the function of Tell Dothan in light of the historical issues of the period.

## Chapter II

Tell Dothan: geography, identification,  
environment and archaeology

In light of the previous chapter, the present chapter is an introduction to the site of Tell Dothan, before going into tomb 1 archaeology, I am proposing to give an overview of the larger context of the site of Tell Dothan shedding the light on several topics which will pave the way to better understand the setting in which history of the site was composed and also reached us today to interpret it archaeologically, historically and culturally. Tomb 1 as one of the main features of the site is not isolated, the issues which I will deal with in this chapter are vital to link the context of the tomb1 to Tell Dothan and which will help us see the archaeological and historical importance of the site and geographical location.

## **II. Tell Dothan: geography, identification, environment and archaeology**

Tell Dothan is located north of Nablus, Palestine; it dates to the Chalcolithic – according to the excavators –, until the Mamluk period, with a continuous sequence that has been interrupted during certain phases of the site's history. The site importance to the archaeology and history of the region is vital to the extent where explorations have been attracted early to visit and explore its ruins, and historians since the Middle Ages until nowadays have mentioned it, in several exploration expeditions, until both excavations and surveys took place to reveal the history and archaeology of not only the site itself but the region in which it is situated.

### **II.1. Geography**

Tell Dothan (Tel Dotan, Dothan, Tel Dothan) is located about 22km north-west of Nablus and about 10km south-west of Jenin (Free 1959: 22, Cooley and Pratico 1995: 147), in the central highlands of Palestine. It rises about 321m above sea level (Zertal 2004: 149) with Sahl 'Arraba (Dothan valley) rises about 235m above sea level (Master et al. 2005: 7). The site total area covers about 101 dunams including the summit of the tell which covers about 40 dunams (Free 1953: 16) and 60.5 dunams are the total size of the slopes around the site. The tell rises about 60 m above the surrounding valley, with about 15m of stratified layers, on top of a natural hill of about 45m high (Cooley and Pratico 1995: 147). **Figs. 3, 4, 5, and 6, as well as 7,** indicates the location and the landscape of Tell Dothan and the Shal 'Arraba in general.







Fig 4. Map of Tell Dothan and Sahl 'Arraba in the larger scale of Palestine (google maps)



Fig 5. Tell Dothan, satellite photo (google maps)



Fig 6. Tell Dothan, looking north-east 2018 (G. Nagagreh)




Fig 7. Tell Dothan, Sahl 'Arraba from Tell Dothan, looking west 2018 (G. Nagagreh)

## II.2. Identification

Tell Dothan has been mentioned several times in the early explorations of Palestine; among these, are ancient historians such as Eusebius in the *Onomasticon* (76:13). In which he located the site to be in the territory of Sebaste, about 12 Roman miles north of Sebastia (Samaria). The site has been visited also by travellers and

explorers in the 19<sup>th</sup> and 20<sup>th</sup> centuries, among them, Van de Velde who discovered the site in 1851 upon his visit to Palestine, he included the exact location of the site in his map (Map of the Holy Land Constructed by C.M.W. Van de Velde, fifth sheet 1858). The site was also mentioned in Edward Robinson's visits to Palestine in the early 19<sup>th</sup> century in his volumes Biblical researches in Palestine, Robinson visited the site shortly after Van de Velde, as he mentioned it (Robinson 1857: 122).

Subsequently, Abel, F.-M. mentioned the site in vol. 2, Pp. 308, Abel also indicated that the site was mentioned in Maspero's Thutmose III 9<sup>th</sup> list (Abel 1933: 308) and also has mentioned Sahl 'Arraba, to be about 10km long valley (Abel: 1933: 92).

After the excavations of M. Mariette of the temple that Thutmose III (1479-1425 BC) of the New kingdom believed to be built in Karnak, a list of names of sites have been discovered, inscribed in Holographic letters on the walls, the names consist of hundreds of geographical names of sites in Syria, Palestine and Nubia. Since then M. Maspero worked carefully on the names' list, in which he was able to identify Tell Dothan as number 9 written by him as “Doutina”  which he identified as “Dothain” in the Bible or Tell Dôthân (Maspero 1886: 1-4, 25). If the reading of Maspero is right of the name of Tell Dothan in Thutmose III reign, the site must be of an important status during the Late Bronze I. Moreover, a number of scholars argued for the accuracy of locating it in the modern-day Tell Dothan (Master *et al.* 2005: 11). In both cases, the question would be, what happened to the site in the Late Bronze II A/B? With bearing in mind the existence of the Western Cemetery in the period. The existence of such a cemetery in the site, propose that it was still inhabited and that the residents have reused the earlier structures of the Late Bronze I, and the Middle Bronze IIB.

Maspero wrote about Thutmose III campaign and in his 9<sup>th</sup> list, Tell Dothan was mentioned as “Doutîna” where the Pharaoh had ordered his advisors to find a new the way in which they can reach to the north, therefore, from Tell Dothan up through the plains until they reached the site of “Taânak” (Maspero 1897: 256). Guérin also visited Tell Dothan in the mid-19<sup>th</sup> century, he described the site in his book “*Description Géographique, Historique et Archéologique de la Palestine* 1875,



*vol. V*” to be located in a fertile valley, where crops cultivated, as well, mentioning the distance between the site and different places around (Guérin 1969: 219).

Conder and Kitchener in the second half of the 19<sup>th</sup> century also have visited the site. They have confirmed the description and identification of Van de Velde and Guérin (Conder and Kitchener 1882: 215). It was also mentioned by Dever in the Anchor Bible Dictionary in vol. 2, Pp. 226-227, general description, noting that the site had sporadic occupation during the Late Bronze Age, he questioned the poor nature of the occupation at Tell Dothan as probably be affected by the Egyptian invasions (Dever 1992: 226).

### II.3. Environment

Tell Dothan can be indicated in two larger geographical ranges, first comes Nablus region which is the main broader range then comes Sahl ‘Arraba in the north and which forms a block where Tell Dothan is located. Sahl ‘Arraba is about 65 km<sup>2</sup>, the bounders of the Sahl fellow the ridges of the fault cliffs that surround it. The northern boundary is at Ya'bad to el-'Asy range, the eastern limit is at Jenin-Qabatiyeh road and the southern limit runs along the crest of el-Rakbah (Zertal 2004: 34-35). Sahl ‘Arraba is an alluvial plain, it was formed by Eocene rock and deposits of Senonian limestone with the area being of broad valleys and rounded hills (Hopkins 1985: 65). **Fig 8.** Illustrates the Sahl 'Arraba with Tell Dothan on the east.

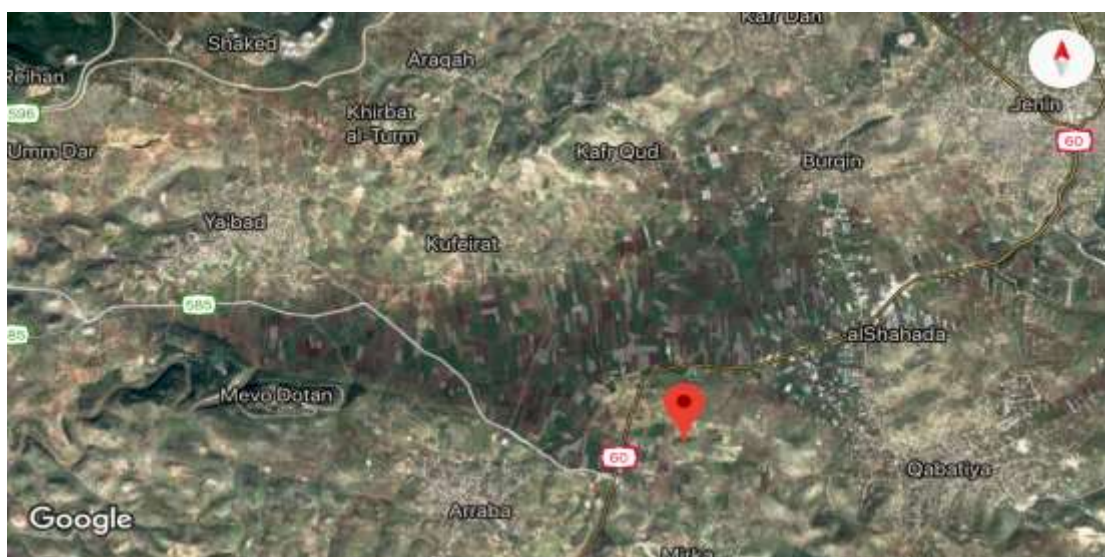


Fig 8. Tell Dothan and Sahl ‘Arraba close up map (Google maps).

Tell Dothan occupies a strategic location in the fertile valley of Sahl 'Arraba north of Nablus. The location of Sahl 'Arraba, with all the landscape which includes fertile lands, fields and springs, were and still are attractive factors for the habitation of the people across the history of the region. Moreover, the strategic location of the valley on the northern edge of the central highlands, the coastal plain to the west, the Marj Ibn Āmir plain to the north, and the proximity to Bisān valley to the east, made it a connecting point which links the coastal plain and Marj Ibn Āmir to the Jordan valley in the east. The nature of the area has created suitable settings towards intensely human activity, whether it be by cultivating land or inhabiting it by the spread and expanse in all ranges of the landscape of Sahl 'Arraba.

The Sahl 'Arraba 10 × 4 km (Owen: 1990: 634) and according to the (*Encyclopaedia Palestina* 1990) is a well-known internal geographical plain in the northern part of Palestine within the highlands. The plain is according to the Palestinian encyclopedia, running east to west, which forms its maximum length at about 10km, with a maximum width of about 4 km in the east side, north-south, and a minimum width of about 1 km in the west, north-south. The overall size of the plain is about 32 km<sup>2</sup>.

According to Zertal's study 2004, the climate of the area of Sahl 'Arraba is typical of the Mediterranean, with long warm summers, and an average rainfall at about 600 mm, there are some differences depending on the location of the site: northern sites of the area get less rain than the south, thus, the main sources of water in the Nablus and Sahl 'Arraba. In particular, comes from rich springs, wells, and artificial digging springs, which would be shallow where rain can be collected. With Tell Dothan located in the western water strip, this strip is characterized by the plenty of the natural springs, which according to Zertal was a major factor for the establishment of many sites along this strip, among them Tell Dothan. The water strip runs north-south, starts from Sahl 'Arraba in the north and continues to the hills of Zawiyeh, Fandaqumiyeh and Jeb'a villages down until Bazariyeh and Burqa in the south (Zertal 2004: 26-28).

The total distance of this water strip is about 13 km starts at Tell Dothan in the north to Burqa in the south. Sahl 'Arraba drains water westward towards Wadi Nus, but swamps can be formed in the winter due to the moderate shape and elevation in the

Sahl. In addition to the swamps, a series of springs located in the middle of the Sahl among them Bir (Well) Haffierh south of Tell Dothan and Bir Hassan as well as the springs of the village of Burqin and Jenin (Zertal 2004: 26, 35).

The area of Tell Dothan and the larger region of Nablus including according to Zertal's survey a variety of vegetation, both in the ancient and nowadays. Some of the vegetation species still exist, while others may have vanished. Among the main vegetation types are five that have been classified, we can mention here the following: the Mediterranean forests and maquis, Siris forest and orchard agriculture, oak forest, and park-forest. These types depended on the altitude for growing, for example, the park-forest carob type was and is still can be found in the valleys of Nablus, as well as other types, moreover, some other types of vegetation can be found on the mountains such as Mediterranean maquis and forests, other vegetation species such as the evergreen oak, and the Palestinian terebinth (*Pastacia Palaestina*) both belong to the Mediterranean maquis of the low trees and high bushes which can be found everywhere in the region of Nablus, including Sahl 'Arraba (Zohary 1973: 131-137; Zertal 2004: 29-30).

The area of Nablus and the north – which includes Sahl 'Arraba and tell Dothan – has several soil types that had been formed through various rock types such as limestone, dolomite, chalk, huwwer and nari. The erosion of these types of rocks produced different types of soil including terra rossa, brown forest soil, and rendzina, these types of soil are found everywhere in the Nablus area. The most common soil in the Sahl 'Arraba and Tell Dothan is the brown, forest soil, which is a greyish-brown, and sometimes dark color. The main factor of the formation of this type of soil is the erosion of semi-hard limestone rock, Nari or limestone conglomerate (Zertal 2004: 27).

The plain is suitable for the agriculture of types such as cereals and orchards (Zertal 2004: 35). The explanation of the discovery of some grain and olive pits in the excavation season of 1958 and 1959 in the buildings that have a large number of Jars dated to the Iron Age (Free 1958: 12, 1959: 22-23) according to Joseph Free is that the function of these jars in the site indicates that Tell Dothan had been a center for collecting taxes of wheat, oil and other crops, which have been stored in storage bins (Free 1960: 7). This explanation was convincing to Oded Borowski in which he

suggested that those jars were used to distribute the stored crops rather than collecting taxes (Borowski 1987: 80). These details are to lead us to draw a line of the agricultural nature of Tell Dothan in light of the larger picture of Sahl 'Arraba which its environmental factors can with no doubt shed light on the site's activities in the past and in the present days.

Tell Dothan, was studied for the soil and the soil types, according to G. A. Pierce, the area of Tell Dothan and the surroundings has 6 different types of soil; (Pierce 2005: 15-17).

- A. Terra Rossa (AAc),
- B. Mediterranean Brown Forest (B),
- C. Rendzina mountain (Cbc),
- D. Vertisols (G),
- E. Alluvial (with lime) (He),
- F. Colluvial-alluvial (J)

This variety of soil illustrates the rich and fertile land in the territory of Tell Dothan, which made it arable for several types of crops.

When discussing the environment of the highlands of Palestine during the Late Bronze and Iron Ages, one needs to bear in mind that among the very important problems in this period – which is our concern – is the climate and the climatic change which is considered according to late research in archaeology to be an important factor for shaping the way people lived, interacted with land and agriculture, needless to say the trade. The climate change into drought according to late research has affected the settlement patterns, people's movement, economy and other essential life principles (Carpenter 1966: 15-18, 26-27, 65-70; Cline 2014: 142-3; Wiener 2017: 43-45; Kaniewski and Van Campo 2017: 85). With this notion in mind, we would try to imagine the situation in and around Tell Dothan within the larger picture of Palestine in this period, including all the events related.

#### **II.4. Routes/roads to Tell Dothan in the ancient times**

The location of Tell Dothan on the edge of the highlands, and the fertile plains of Palestine, the proximity to the coastal plain and the trade routes, and also being almost in a middle way between the coast and the Jordan Valley, played a major role



in the trade activities across the history of the region, needless to say, the Egyptian military campaigns heading north.

Although roads before the Roman period cannot be easily dichotomized, but through the Roman and later periods ancient roads can be reconstructed, the lowlands were and still a region for easy roads unlike the highlands, in addition geography, literary documentation, and archaeology helps reconstruct roads before the Roman period (Beitzel 1992: 776-778). That is to say, to recognize roads in the Late Bronze and Iron Ages is a complicated research which depends on the roads of the Roman period side by side with modern research tools.

Several scholars have hypothesized a reconstruction to the history of the roads that leads to Tell Dothan, Yohanan Aharoni considers Tell Dothan to be one of the sites on the road in the highlands, which runs north-south, this road is single from the south until Nablus then it forks to two branches and Tell Dothan is located on the western branch which passes Nablus, then Sebastia, Dothan, until it reaches the Marj Ibn Āmir in the north (Aharoni 1967: 53). According to David A. Dorsey, Shal 'Arraba (Dothan Valley) has one of the main routes that has been used by Thutmose III to reach Marj Ibn Āmir from the coastal plain direction. According to Dorsey the road is lined with Iron Age sites – Site at 1594 2026, Firasin, el Khirba, er Rujman, T. el Masalla, T. el Muhafar, Site at 1721 2062, and Burqin – that located on the way from the start of the route in the west until it reaches Marj Ibn Āmir which, indicates probably the importance of this road connecting east to west. Dorsey had driven this conclusion depending on the ancient texts as well as the following of the same course as the 19<sup>th</sup>-century tracks of the Palestine Exploration Fund Map: sheet 8 (Dorsey 1991: 98-99). To conclude, Tell Dothan according to the roads reconstruction is an important site, however, it is all hypothesis which cannot be proven.

The Egyptian Pharaohs since Thutmose III, Amen-Hotep II, and the Pharaohs of the el-Amarna period have been launching military campaigns across the land of Palestine, in order to reach the northern lands in Lebanon. The campaigns have been recorded in several tablets or/and inscriptions on the walls of the temples such as Karnak in Louqsor, Medina Habou, d'Abydos ou Abou-Simbel (Grandet (2008) describing the campaigns and the historical events and the places that they reached and took over (Aharoni 1967: 140-173). Although no direct or clear mention of Tell

Dothan or the valley where the site located, but the sites and regions that the Egyptians reached are all in the larger region of Palestine, and more especially that Tell Dothan is situated on one of the main roads that lead from west mainly The Via Maris which links the south towards Egypt to the north towards Lebanon and also the east towards Jenin and Besan.

It is interesting to mention that according to the excavators, the site has been abandoned in the Late Bronze Age II or at least a very poor settlement continued to exist on the ruins of the Middle Bronze and Late Bronze I (Master *et al.* 2005: 11)<sup>6</sup>. The lack of settlement in the LB II was according to Monson due to the invasion of Thutmose III, who has – as we mentioned elsewhere – invaded the region and depopulated it (Master *et al.* 2005: 11). If what Monson proposed is accurate, it is a good indicator that Thutmose III's troops according to Maspero have reached the site, which also indicates that the site was an important one during and after the Late Bronze Age I.

Zertal has also mentioned and classified three types of roads that run through the Nablus region; the three types are international (long distance), national (middle distance), and local roads (short distance). Only one international road passes through the area which is Via Maris<sup>7</sup> as mentioned elsewhere that runs from the coastal plain and cuts through Sahl 'Arraba up through Jenin to Marj Bin Āmir. Of the national roads, two roads can be traced cutting or running through Sahl 'Arraba; one is to the west which called Deir Sharaf-Jenin road, one of the roads branches led to Sahl 'Arraba near the village Ajje. The second national road that leads to Sahl 'Arraba is Qabatiyeh-Jenin, which cuts through the eastern side of Sahl 'Arraba and descends to Jenin (Zertal 2004: 31-32).

There are many local roads in the region which leads from one place to the other or connects the site to the surroundings. The following roads that will be mentioned here are the local roads that existed in the region before the 20<sup>th</sup> century and which has been included in the British maps, and for our concern, only local roads that run or cuts through Sahl 'Arraba will be of importance. The Fahmeh-Dothan-Qabatiyeh

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<sup>6</sup> In "*Dothan I*" (ed.) D. Master 2005, John M. Monson wrote the chapter 2: Regional Settlement: Dothan in the Northern Arena Pp. 7-14.

<sup>7</sup> Via Maris is a Latin name for the road crossing Palestine North-South, it could have been the same road during the Late Bronze and Iron Age.

road: this road cuts through Sahl 'Arraba to 'Arraba until Qabatiyeh. The second road is the Ya'bad-Dothan junction, this road runs through the middle of Sahl 'Arraba (Zertal 2004: 33).

## **II.5. Settlement patterns of the Sahl 'Arraba in the Late Bronze and Iron Ages and other key sites in the region**

The plain of Sahl 'Arraba is a rich region for agriculture and an easy land for people to move and practice all daily life activities; this factor made the plain an attractive center for habitation, in which villages and towns were established across the history of the region. The plain was and still described as the most fertile valley in which it is a sizable breadbasket, as well as providing an excellent pasturage for flocks (Master *et al* 2005: 9). This situation of the plain gives an excellent indication of why the area was and still intensively populated with several sizes of sites and over different periods of history.

In Zertal's survey of the region of Nablus and the northern hills which he called "Manasseh" he conducted an extensive survey, he and his team were able to date hundreds of sites depending on the pottery that has been collected from the surface of each site. They gave a percentage to each period existing on the archaeological site, then the team draws a settlement pattern maps for each period with numbering sites that can be fit in each chronological map, if a site actually exists in one or another period. Among the areas that have been surveyed was Sahl 'Arraba in which tens of sites have been recognized and have been mapped in chronological sequence. The process revealed interesting results concerning the settlement patterns in the Sahl 'Arraba environs, mentoring the history of the place since early the archaeological periods up until the Ottoman period.

The whole region, as mentioned above, was divided into several different zones for the survey purposes, our focus here is the two zones northeast of Nablus, the one covers the area from Nablus to Jenin, which would be the main region of the northern Nablus hills (Zertal 2004). The second zone is the region to the west of Nablus which covers sites from Nablus to Wadi 'Arah (Nahal 'Iron), and which adjoin the central zone where the entire Sahl 'Arraba located with the hills that surrounds it (Zertal and Mirkam 2016). In these two zones of Nablus northern hills, Middle Bronze IIA, Late Bronze I-II/ Iron Age I-II have been surveyed. In the following, we mention the sites

with the pottery percentage that have been registered, as well as, indicating the changes from one period to the next. This will give us a better understanding of the area's history of habitation, and maybe explains the fact that Tell Dothan was not inhabited or poorly inhabited during the LB IIB according to the excavators. Moreover, it leads to the conclusion of why Tell Dothan had this huge so-called Western Cemetery.

Sheet 1					
MBII	118	97	115	50	177
	123	137	120	56	178
15	125	158	125	59	208
23	133	193	135	74	210
24	135	204	137	76	211
26	137	222	179	95	213
27	138		181	96	214
28	142	Iron I	193	97	222
29	155		195	100	224
30	158	2	204	102	227
31	159	4	208	104	231
33	163	11	214	105	234
34	163+	12	222	106	236
37	166	13	234	107	238
38	171	15	236	112	239
44	178	19	239	115	243
50	181	23	251	116	244
51	190	26	258	122	246
52	193	27	259	125	247
54	196	29	261	134	251
56	197	31	272	137	261
57	214	43	276	138	266
59	220	44		139	268
62	222	47	Iron II	141	271
65	227	50		142	272
71	234	51	4	153	276
77	265	53	11	154	
90		55	12	160	
91	LB I-III	56	12	163	
92		57	15	166	
93	13	59	17	167	
94	23	61	19	170	
95	26	77	20	177	
96	27	95	23	178	
97	29	96	26	181	
102	37	97	29	183	
106	44	102	37	188	
107	50	105	38	193	
111	61	110	44	203	
115	65	112	47	158	
	95				

Sheet 2				
MB II	LB I-III	80	202	104
		85		106
13	13	87	Iron II	109
24	30	92		110
26	38	94	2	113
3038	42	95	3	115
42	55	96	5	122
51	58	99	6	123
53	80	104	8	124
56	87	106	11	125
57	96	107	13	127
58	106	108	15	129
72	122	110	20	137
74	160	113	24	146
78	169	114	26	149
79	196	115	30	151
80	198	132	38	153
95		137	50	162
106	Iron I	143	54	164
108		146	57	165
110	3	147	63	169
122	6	149	75	171
160	8	152	76	176
162	11	163	77	177
167	13	169	78	178
169	20	171	80	180
174	24	177	85	182
177	30	182	87	189
182	38	183	90	196
188	42	193	93	197
189	57	196	94	198
193	63	197	95	199
196	75	198	99	
198				
201				

Table 3. Site numbers in Zertal's survey, each of those sites located in the areas north and north-west of Nablus, including pottery from MBII until Iron Age II (For more details on sheet 1 see Zertal 2004: vol. I; for more details for sheet 2 Zertal and Mirkam 2016: vol. III)

The area of Dothan and the Nablus region were surveyed by Zertal in which he showed the number of the sites in the area during different periods of settlement. The differences that happened in each period of settlement shed a light on how the changes from one period to another occurred. In our research, we will focus on the Middle Bronze IIB until Iron Age I, to show the density of the settlement, in this regard, Zertal has mentioned in the survey that about 72 sites are dated to the Middle Bronze IIB in the Nablus highlands and 34 more sites to the west of the highlands

mainly from Wadi 'Arah to Wadi She'ir (Nahal Shechem). The same area witnessed deep changes in the density of sites during the Late Bronze Age, which is according to Zertal's survey are 18 sites, plus 14 sites to the west. The number of sites has increased again during the Iron Age I with about 56 sites and about 50 sites to the west (Zertal 2004: 52-55; Zertal and Mirkam 2016: 37-40). **Table 3.** above includes site numbers that have been dated to the Late Bronze II to Iron II, sheet 1 and 2 derived from the survey vol. 1, sheet 2 from the survey vo. III.

Other sites in the highlands have been excavated and revealed Late Bronze and Iron Ages, those sites are key sites to understand the area around Tell Dothan, here below we mention a few of them with the distance to Tell Dothan. The main characteristic of these sites is the location which is the highland, which might have been formulated a net of settlement in the Late Bronze and continued into the Iron Age. We highlight those sites since it's in the same region of Tell Dothan and we lack information about them particularly during the Late Bronze Age. The sites are as follows:

#### **1- Tell Ta'annek, (local name: Ti'inik)**

The site is about 34 km to the north-west of Nablus. Rises about 182m above sea level, the size is about 80 dunams. It was excavated in two expeditions. The first by E. Sellin from 1902 to 1904, dated the site into 5 different strata, starts from the Early Bronze to the Islamic period, within these levels evidence of the existence of Late Bronze Age and Early Iron Age in the site (Glock 1993: 1428-1433).

The next excavation took place in the site was under the direction of P.W. Lapp in 1966 and 1968. It confirmed the work of Sellin that has added more history and found more destruction levels in the Middle Bronze, Late Bronze and Iron Age II. The pottery of the site was published partly by W. Rast in Glock's edited vol. Taanack 1, in which he published the Iron I pottery (Rast 1978: 1). Period IA which is about 1200-1150 B.C, in this period the pottery that was presented is consists of different shreds of different types. Period IB about 1150- 1125 B.C (Rast 1978: 3-4). The site was surveyed by Zertal and Mirkam in 2016. The archaeological sequence according to Zertal's survey is as follows: EB II-III, MB IIB-c, LB I-II, Iron I, Iron II, Persian, Middle Ages, Later Periods (Zertal, and Mirkam 2016: 173-176).

## 2- Khirbet Belameh

The site is about 25 km to the north-east of Nablus. 245 m above sea level, with a size of about 90 dunams (Zertal 2004: 123-125). It was excavated, By Hamadan Taha and a Dutch team headed by Gerrit van der Kooij. It was excavated for the first time in 1998. The Iron Age I levels was found in two areas of the actual digs (Field B and Field C) with collard rim jars and cooking pots. Miner publications of the site, short articles and reports can be found with no details about the dig and the typology. However, a detailed report is planned to be published in the near future of the excavation (van der Kooij and Taha 1999: 47-48).

The site was surveyed by Zertal, the site number is 26: 17-20/75/1 Pp. 123-125 in Vol. 1. The archaeological sequence as follows: EB I 10%, EB II 10%, EB IIB10%, LB III 5%, Iron Age I 10%, Iron Age II 10%, Persian 10%, and later periods.

## 3- Tell El-Far'ah (N)

Located about 10/11 km north-east of Nablus, about 150m above sea level, with a size of about 80 dunams. It was excavated between 1946 and 1960 under the direction of Roland de Vaux of the École Biblique et Archéologique Française in Jerusalem. The site has several strata, as early as Neolithic to the end of Iron Age. Late Bronze Age is not well preserved at the site stratum (VI), but there is continuity with the Middle Bronze Age. Later in Iron Age, it started early at the end of the Late Bronze Age, the Iron Age consists of five periods, most important are the periods (VIIa and VIIb) which represents the early Iron Age: VIIa: 12th century, VIIb: 11th century which is not the focus of the study (Chambon 1984: 12; De Vaux, and Chambon: 1993: 433-440). The Late Bronze Age (niveau VI) is located in *Chantier* II Nord, for the Iron Age I (Le niveau VIIa, is located in the Chantier II, III. Another dating for LB located at the area of what so-called (The Temple) which is stratum 4, during the Iron I (stratum 3) it was built directly on top of the LB, in the NW of the site, as well as the fortifications and the gate (Chambon1984: 9-13, 15-52).

Survey: the Site was surveyed by Zertal, in Vol. 2, site number 151: 18-18/28/2. Pp. 421-422, the archaeological sequence is as follows: Neolithic: 5%, Chal: 5%, EBA I 5%, EBA II 20%, EBA III 5%, EBA IV 5%, MBA 1-5%, MBA IIB 5%, LBI 3%, LB II 5%, LB III 5%, Iron Age I 2%, Iron Age II 20%, later periods.

While Late Bronze Age pottery is not published, we will make a comparison of the Iron Age in the site to the pottery of Tell Dothan.

#### **4- Tell Abu Zarad:**

Located about 13 km south-west of Nablus, about 680 m above sea level, about 28 dunams. The site has been surveyed by N. Gluck after that by Finkelstein (Finkelstein 1988:152), then Miller II and lately by the Palestinian Antiquates Authority and the Italian University of Rome under the direction of J. Yasin and L. Nigro. Each of these surveys has pointed out that the site includes pottery shards from the LB and the Iron Age I. According to the latest survey, the Late Bronze and Iron I Ages are located on the site as follows: Late Bronze is present in the Upper City, but probably partially removed by following periods. Iron Age (I and II) were found both in the Upper and Lower City, with a major concentration to the east (Nigro et-al. 2015: 141-143).

The main archaeological periods in the site are according to (Nigro et al 2015: 143) as follows:

Period I – Early Bronze Age.

Period II – Intermediate Bronze Age.

Period III – Middle Bronze Age.

Period IV – Late Bronze Age town (LB I-III, 1550-1200 BC).

Period V – Iron Age settlement and city (IA I-II, 1200-586 BC).

The site was surveyed by Finkelstein and Lederman in the 80's of last century with results: site number 17-16/17/01 Pp. 606-610 in Vol. 2. The archaeological sequence is as follows: The strata sequence covers almost all the periods in the site, as follows: EB II-III 3.8%, MB 37.1%, LB/IAI 0.3%, IA I 8.4%, IA I-II 2.3% and later periods (Finkelstein and Lederman 1997: 606-610).

Although not much of the site has been excavated and a little amount of pottery have been published, but we can have a window as deep as south to the nature of the pottery in that region.



## **5- Tell Balatah, Nablus (Shechem)**

Tell Balatah-Nablus (Shechem) is about 550m above sea level, 70 dunams, (Campbell and Magen: 1993: 1345-1359). The most important Strata XIV-XI at the site which we are concerned about is the Late Bronze and Early Iron Ages.

The Late Bronze and Iron I Ages remains are located at the field I in the (Fortifications) namely the East gate, and the North-West gate, also in-field III which is the Late Bronze Age temple, the tower 944-947. Field XIII, field VII and field IX all so-called the inner city including the housing and several complexes on the site (Campbell 2002; Duff 2015).

The site was archaeologically surveyed in the 60s by the Shechem excavation project with other sites around in Vol. II by Edward F. Campbell, Jr (1991: 13-20). A detailed stratigraphic sequence was given as follows: The site has 5 strata which form the whole Tell: Chalcolithic, Chalcolithic/EB, MB IIA-IIB-IIC, LBI-IIA-IIB/Iron IA, Iron II, Hellenistic. The LB IIA (stratum XIII) LB IIB (stratum XII) and the Iron IA are represented by reuse MB II fortifications, poor housing, tombs, and destruction (Campbell 1991: 13-20).

The site is rich with pottery assemblages from both Late Bronze and the Iron Ages which have been published lately and which will be used as a key site for the comparison of the pottery of Tell Dothan and which we believe that the site is central for the region.

## **6- Distance and elevation of the sites with regards to Tell Dothan**

We can draw a unique line between the selected sites of study; all of them are in the highlands, located at northern central Highlands, clustered around Nablus (Tell Balaltah). The sites starts on the edge of the Highlands in the north such as Tel Taanach, reaching the deep central Highlands in the south at Tell Abu Zarad south of Nablus, between the two sites located three more, gradually raises, Khirbet Bel'ameh, then to the south Tell Dothan, and Tell el-Far'ah (N) (north to the south-east).

The unique location of the sites will help us understand two major issues; the expansion of the habitation of the region in terms of settlement patterns and the relative dating in teams of which to be startled first, regarding direction (East-West or

West-East). **Fig 9.** illustrates a map of the location of each site as well as the location of other sites important to the study. In addition to the mentioned sites above, we will put in consideration sites such as Tell el-Ḥuṣn (Beth Shean), Tell el-Mutesellim (Megiddo) and Tell Deir 'Alla, all will be used for pottery comparison. In addition to that, **table 4.** shows mainly the distance between the different sites in as well, the size and the main strata of each of the sites.

<b>Site Name</b>	<b>LB/Iron Age IA str.  (1300-1150 B.C ±)</b>	<b>Location  (Highlands North-South)</b>	<b>Elevation, size (Dunom), distance from Tell Balatah</b>	<b>Main features of LB-IA str.</b>
Taanack	LB to IA II: str. II	In the Marj Ibn Āmir (Jezreel Valley), Southeast of Megiddo	182m, 80D. 34k NW.	Cuneiform Building, Drainpipe Structure, Twelfth-Century House, Western Building
Khribet Bel'ameh	IA, no strata given (Unpublished)	S. of Jenin. 11km SE of Taanack	245m, 80D., 25km NE.	According to survey the site has LB III 5%, Iron Age I 10%. Main excavated areas (A and C)
Dothan	Tomb 1: Level 3: LBIIB Level 2: Trans. LBIIB-IA I. Level 1: IA I.	Eest of Kabatiya. 6 km SW of Khirbet Bel'ameh	321m, 60D, 21 km NW.	Western Cemetery: Tomb 1. Areas: A, L, k
Tell el-Far'ah	LB: Period VI, str. 4 IA: Period VIIa, str. 3	SW of Tubas. 17 km SE of Dothan	150m, 80D, 10km NE	Chantier II, III Nord, (The Temple)
Tell Balatah (Shechem)	LBIIB: str. XII IA: str. XI	Nablus, 67 km North of Jerusalem	550m, 70 D.	Field I: E. Gate, N. W. Gate. Field III LB temple, tower 944-947. Field XIII, Field VII Field IX (Inner city)
Tell Abu Zarad	LB: Period IV IA: Period V	One Preliminary Report	680m, 28D, 13km SW	Area A: sector I

Table 4. Data connects sites that located and excavated in the highland along with Tell Dothan

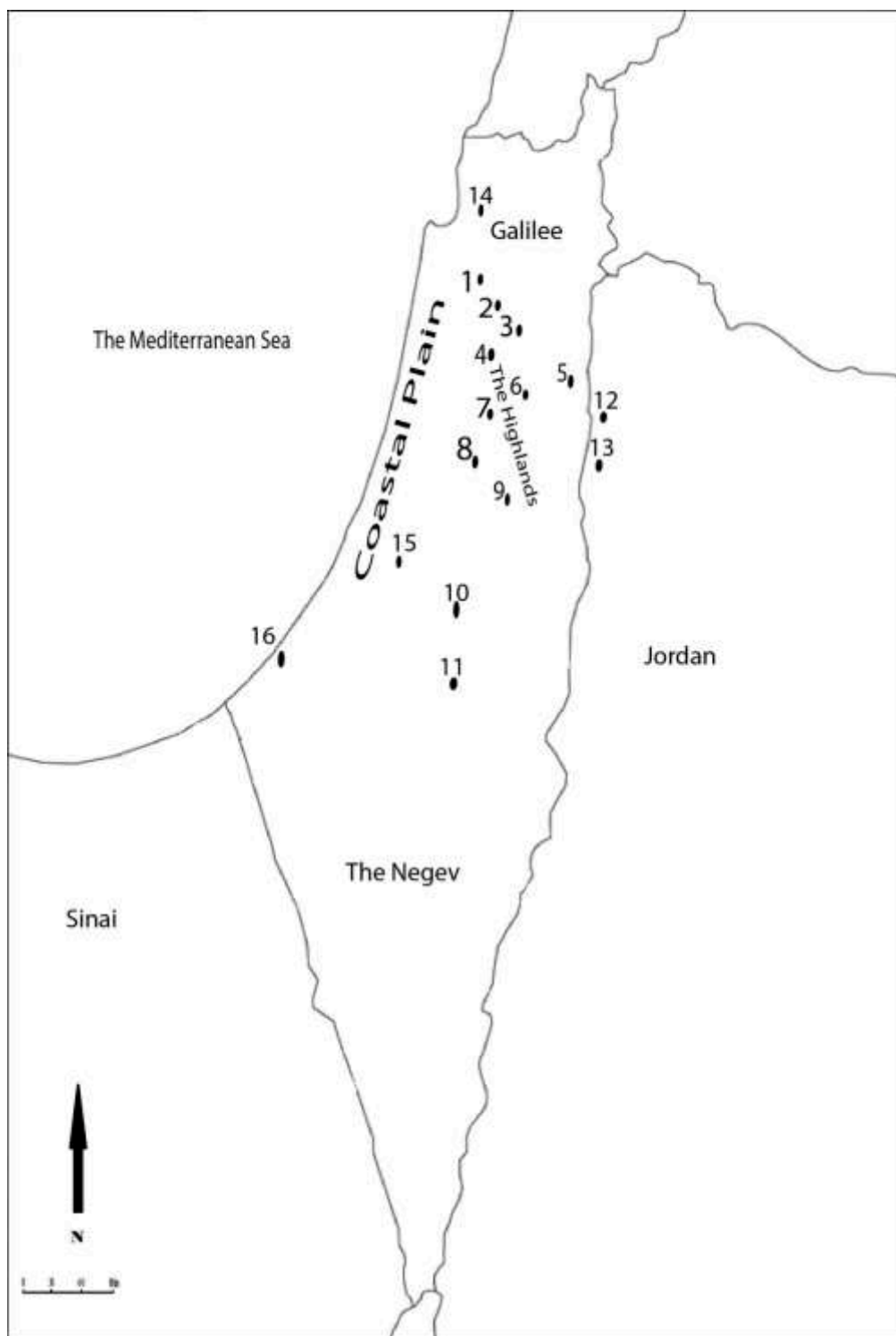


Fig. 9. Map of location of each site as well as the location of other sites important to the study. 1- Tell el-Mutesellim, 2- Tell Ta'annek, 3- Khirbet Belameh, 4- Dothan, 5- Tell el-Huşn, 6- Tell El-Far'ah (N), 7- Tell Balatah, 8- Tell Abu Zarad, 9- Khirbet Seilun (Shiloh), 10- Jerusalem, 11- Hebron, 12- Tell es-Sa'idiyeh, 13- Tell Deir 'Alla, 14- Tell Keisan, 15- Tell el-Jazari (Gezer), 16- Gaza.

## II.6. Archaeology of the site

Here I am presenting the history of excavations and then we turn to each period briefly with the most significant finds, in the way that will show the site in the general chronological sequence. **Table 5.** shows the general stratigraphy of the site.

The first excavation mission to the site started in 1953 until the mid-60s, under the direction of J. P. Free of Wheaton College, Illinois. Incomplete reports have been written on the findings. The site includes strata of Chalcolithic, Early Bronze Age,

Architectural Phases							Cultural Phases Represented in the Ceramic Assemblage	Approximate Date	General Stratum
Area A and Area D	Area B	Area D110-112	Area K	Western Cemetery	Area L	Area T			
	1 2				1	1	Mameluk	13th-14th c. A.D.	I
							Early Islamic	9th c. A.D.	II
	3 4						Byzantine	4th-5th c. A.D.	III
							Roman	1st-2nd c. A.D.	IV
1	5						Hellenistic	2nd c. B.C.	V
					<i>sherds</i>		Persian	6th-5th c. B.C.	VI
2					2		Iron IIC	late 8th-7th c. B.C.	VII
					3		Iron IIB	8th c. B.C.	VIII
3			1		4		Iron IIA	10th-9th c. B.C.	IX
4		1?	2	T1: Level 1	5?		Iron I	12th-11th c. B.C.	X
				T1: Level 2-3			LB IIB	13th c. B.C.	XIA
				T1: Level 4-5			LB IIA	14th c. B.C.	XIB
5 6 7							MB IIB/C - LB IIA	late 18th-early 15th c. B.C.	XII
		2	3						XIII
8			4				EB III	27th-24th c. B.C.	XIV
9 10		3 4	5 6				EB II	30th-27th c. B.C.	XV XVI
							Late Chalcolithic	45th-37th c. B.C.	XVII
							Neolithic	64th-59th c. B.C.	

Table. 5. The stratigraphy of Tell Dothan with total of 17 strata covers Neolithic through the Mameluk period (After Master *et al* 2005: fig 7.4)

Middle Bronze Age IIB, Late Bronze, Iron Ages, Hellenistic and Roman periods, up to the Mamluk period (Free 1953, 1954, 1956a, b, c, 1957, 1958, 1959, 1960, 1962). The decision to excavate Tell Dothan was long-planned by Free who visited the site years before and made all the efforts to explore and excavate (Master *et al.* 2005: 21). The excavation lasted for more than a decade with a total of 9 seasons; 1953, 1954, 1955, 1956, 1958, 1959, 1960, 1962, and 1964. The expedition has not been in the

field in the years 1957, 1961, 1963 (Cooley and Pratico 1995: 148-150; Master *et al* 2005: 22-4).

The excavations were conducted in several areas of the site, which are (T, B, A, D, L, and K) in the order east to west. Each of these areas has revealed a wealth of archaeological remains (Cooley and Pratico 1995: 149). **Fig 10.** shows the excavated areas at Tell Dothan.

Before we turn to the archaeological periods on the tell, it's relevant here to mention an important note on the excavations of Joseph Free. According to Master *et al* 2005. Joseph Free has no academic degrees in archaeology, he was a passionate, a knowledgeable person, experienced and willing to dig the history of Palestine; his excavations used the back in the day advanced standards, but missed certain factors of the excavation methods. In addition to that, Master noted the problems of the elevations as well as the issues of the accuracy of the maps, drawings, and recoding of the pottery sherds, above all two short missions, were conducted in the site in 1980 and 2004 to examine the excavated areas and to clarify maps and elevations. Needless to mention, the fragmentary and lack of published detailed information and the relatively long period since the excavation termination made it sometimes difficult to deal with the site excavation analysis (Master et al 2005: 1-6, 21-24).

## **II.6. 1. Neolithic, Chalcolithic, and Early Bronze Ages**

The archaeological remains of the site are rich, started from the Neolithic (Master et al 2005: 27), Chalcolithic with pottery shards and no architecture (Free 1953: 16). The next level or stratum at Tell Dothan dates to the Early Bronze Age and characterized by fortifications that have been found in areas D and K of the excavation. The period is presented by a group of walls with several phases, which most probably formed a fortification system around the site. In area D which according to Free and Helms would be dated to the latest phase of the Chalcolithic and the beginning of the Early Bronze Age (Free 1953; Helms 1977: 102) and more favorably to the Early Bronze Age with paved surfaces, a tower, and a gate, all these features have been phased into several different phases according to Helms (1977) and Master et al. (2005), Later Master et al dated the Early Bronze Age at Tell Dothan to be of the Early Bronze Age II/III (Master et al. 2005: 48).

A gap of settlement occurred at the site at the beginning of the Early Bronze IV/Middle Bronze I (Intermediate Bronze), and the Middle Bronze IIA, the site then resettled and built up during the Middle Bronze IIB (*Ibid*: 49). The dramatic change in the site during the middle Bronze IIB will be discussed below.

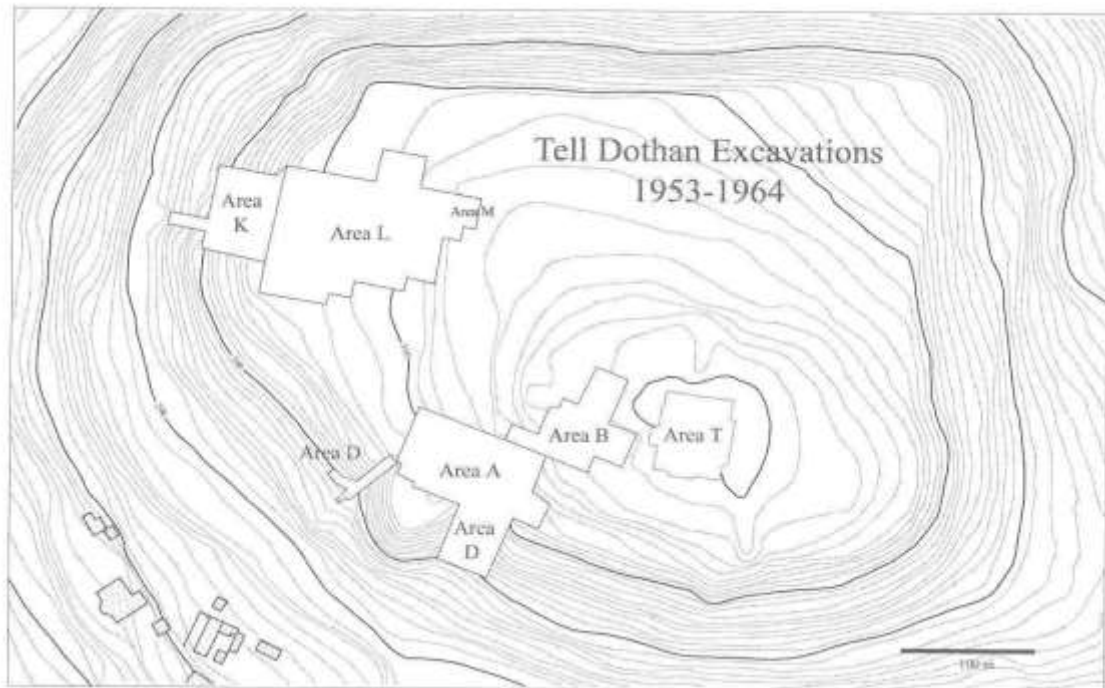


Fig 10. Tell Dothan excavated areas (Master *et al* 2005: fig 4.5)

## II.6. 2. Middle Bronze and Late Bronze I Ages

One of the main periods at Tell Dothan is the Middle Bronze Age IIB, where excavations took place mainly in areas A and D. Free's focus since the very beginning of the excavation on the Middle Bronze Age, and the discovering of this period started in the first season. The features of the Middle Bronze have been characterized by the finding of a fortification system (a rampart), which was partly an Early Bronze Age structure that has been reused later in the Middle Bronze (Master *et al* 2005: 64) were walls, rooms, patrician house and typical Middle Bronze burials have been found in jars and under the ground of the houses. Although the Middle Bronze remains are limited according to Master, but it represented the flourishing of the site in that particular period, moreover, the site witnessed continuity towards the closing

of the Middle Bronze and the beginning of the Late Bronze Age (Free 1953, 1954, 1955; 14; Master *et al* 2005: 49-55). And for the Late Bronze I, David Ussishkin suggested that the Late Bronze Age inhabitants have reused the Middle Bronze Age II architecture (Ussishkin 1993: 373).

### II.6.3. Late Bronze Age II

The Late Bronze Age II is a problematic issue at Tell Dothan, because while Free has mentioned the finding of the Late Bronze Age II in several areas on the tell as he has indicated in the reports. He proposed that people of Late Bronze Age in general have used the Middle Bronze architectural elements, as well as, the finding of painted pottery shards characteristic of Late Bronze Age imports (Free 1953, 1954, 1955, 1956a, 1956c, 1958, 1959, 1960) such as Mycenaean IIIA2, Mycenaean IIIB, Cypriot White Slip II, Cypriot Base Ring II. All according to Master have been found in secondary contexts (Master *et al.* 2005: 65). However, Master *et al.*, on the other hand, mentioned that in his study of the excavation, and was unable to define any substantial ceramics or coherent architecture dated to the Late Bronze Age (*Ibid*: 65).

One of the main discoveries in the site which dated to the Late Bronze Age II and the Iron Age I is the Western Cemetery in area K in the western slope of the site (Free 1959, 1960, 1962; Coolly and Pratico 1995, 150; Master *et el* 2005: 65).

In 1959, the excavation team came upon a circular stone-lined pit in area K in the western slope of the site, that discovery led to the excavating of the Western Cemetery during the years 1959, 1960, 1964, which included 3 tombs, 1, 2, 3. Tomb 1 is the largest and the well preserved among the others. Tomb 1 was covered with Early Bronze Age accumulations. Four days before the end of the season, the team has uncovered a stone-lined pit that diminished in size until it funnelled into a square-cut shaft in the bedrock. Digging 1 m down led to a stone slab leaning against a vertical rock-cut doorway. From there, the team worked for another 3 seasons to excavate the 3 Tombs completely, to mention, tomb 1 was one of the largest tombs to be excavated to date, not only at Tell Dothan but in the entire regions of Palestine.

It's highly worth mentioning here the confusing narratives about the excavation of the trench that led to the discovering of the western cemetery; while Free

mentioned in the report of 1959 season the way that the trench was excavated with the pottery sherds that have been collected as follows:

"This season (1959), since the irregular stones, possibly fallen, yielded no clear face or pattern as we continued to the north, we decided to dig down vertically. Finally, after nearly 17 feet (5 meters, going through scattered stones and Late Bronze-Iron I sherds, we came to a circular stone-lined pit which diminished in size until it funneled into a square-cut shaft in the bedrock, approximately four feet on the side (1.25×1.40 meters). About a meter down the shaft, a stone slab, leaning out from a vertical rock-cut opening, implied the doorway of a tomb-which it proved to be" (Free 1959: 27) tomb 1.

What is important here is to note that Free and the team have dug for almost 6 meters fill, with finding Late Bronze-Iron I pottery shards. A different narrative has been later given by Cooley and Portico in which they have mentioned the following: "During the Late Bronze Age, a pit (approximately 6 to 7 m deep) was cut into Early Bronze Age debris and lined with stones. The pit gradually diminished in circumference until it reached bedrock, at which point it became a shaft that opened to a stomion with seven steps that led into a very large burial chamber" (Cooley and Pratico 1995: 151). The question here is whether the whole trench that has been excavated is a Late Bronze or only the pit? That leads us if the answer is the first part of the question to believe that Free did miss a considerable archaeological layer reaches about 6 m thickness of Late Bronze/Iron Age I.

The structure of tomb 1 consists of three architectural components; a vertical shaft, a stepped entryway, and the main chamber tomb which is described as being an irregular shaped chamber which measures (1.75 by 1 m wide, and 1.51 m deep) (Free 1959: 26-29, 1960: 10-11; Cooley and Pratico 1993: 374; 1995: 150-52).

Rivka Gonen described the tomb 1 as a very large, irregular cave, measuring 10.65×6.90 m and 5.50 m high. It was cut during the Late Bronze Age; in an uninhabited area of the Tel. it was cut through the Early Bronze Age debris (Gonen 1992: 132-3).



The Western Cemetery includes three tombs, most important of them is Tomb 1. It was excavated in 1959, 1960 and 1964, on the western side of the site. Tomb 1 is the most important among the three tombs that have been uncovered, yielded more than 3,400 objects of all kind, among them pottery types like kreters, flasks, biconical jars, stirrup jars, pyxides, chalices, lamps, juglets, bowls. The tomb was stratified in 5 different levels, the levels were separated by layers of limestone and were dated to the following levels:

levels (5) and (4) were dated to the Late Bronze IIA (1400-1300),

level (3) dated to Late Bronze IIB (1300-1200),

level (2) is transitional between Late Bronze IIB and Iron Age I,

level (1) was dated to the twelfth century. (Iron Age I A, 1200- 1150).

To conclude, the tomb was used two to three hundred years from the Late Bronze II to the beginning of the Iron Age. (Ussishkin, Cooley and Pratico: 1993: 372-374; Cooley and Pratico 1995: 150-152; Master *et al* 2005: 65). The structure of Tomb 1 with its finds and dating will be discussed elsewhere in this study.

#### **II.6.4. Iron Age I-II**

Iron Age I is not well preserved at Tell Dothan but it was identified by some important elements such as the beginning of the Four-Room House and the collared-rim jars in area A which is one of the main characteristics of the Iron Age I in Palestine. The excavation in the area A yielded to the discovery of a cache of whole vessels including several types of vessels. The pottery of areas (L and K) has pottery dated to Iron Age I but it is hard to combine it with the context of the Iron Age I in area A, most of the archaeological remains in these two areas belong to the Iron Age IIA and IIB (Master *et al.* 2005: 67-68, 87).

According to Free, Ussishkin and Master, the Iron Age II stratum seemed to be the main occupational phase in the site represented in areas A, K and L and by the discovery of several Iron Age II structures including houses, streets, courtyards, stone-lined storage bins, and ceramics, as well as the continuation of the Four-Room House in this period (for detailed study of the archaeology of the site see Master *et al* 2005).

In the following I will present a few examples of the Iron I/II pottery that have been excavated on the site and published by Master *et al* 2005 for the comparison with pottery from tomb 1, in which some of it resamples the pottery of tomb 1 and also which is differentiated from it in the later dated pottery. **Fig 11.** Represents similar characteristics to the bowls of level 1 at tomb 1, as well as **fig 12.** which resamples the multi-handled kraters and the krater-mugs of levels 1 and 2 in the tomb. The pottery in **figs. 13, 14, and 15** represents a later phase at the end of the Iron I and the beginning of Iron II, which looks not similar to the pottery of tomb 1 level 1.



Fig 11. Bowls of Iron Age 1 similar to those in tomb 1  
(Master *et al* 2005: 79, fig. 9.23: 1-2)

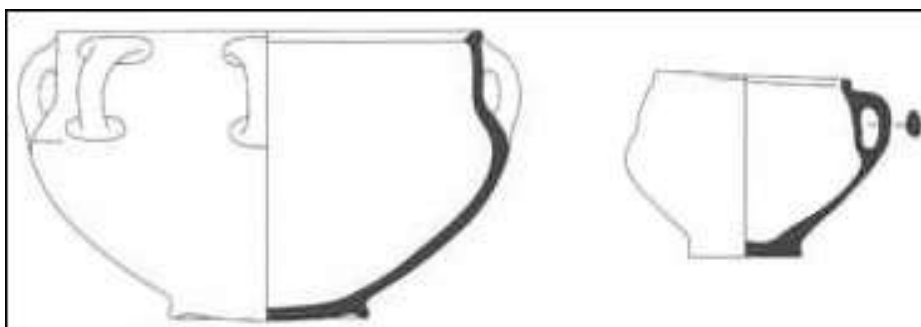


Fig 12. Different types of kraters from open-air excavated squares at Tell Dothan (Master *et al* 2005: 79, fig. 9.23: 5-6)

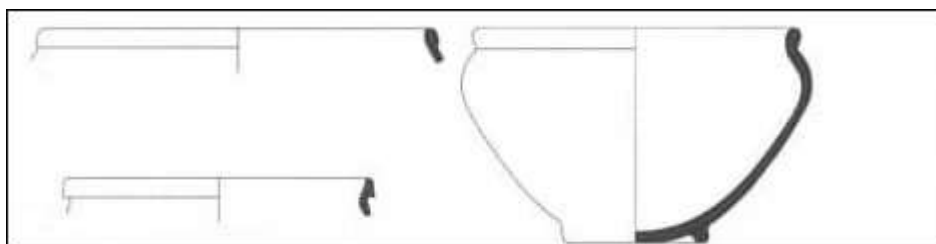


Fig 13. Kraters from Tell Dothan Iron I/II  
(Master *et al* 2005: 81, fig. 9.24: 10-12)

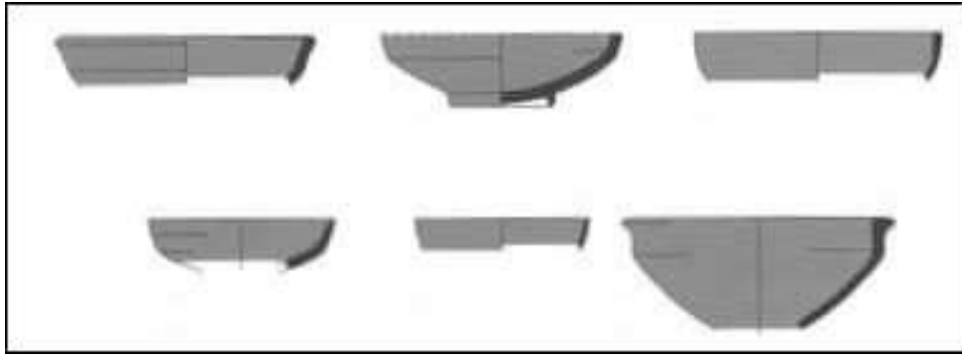


Fig 14. Slipped bowls dated to the Iron II form Tell Dothan  
(Master et al 2005: 117, fig. 10.53: 1-6)

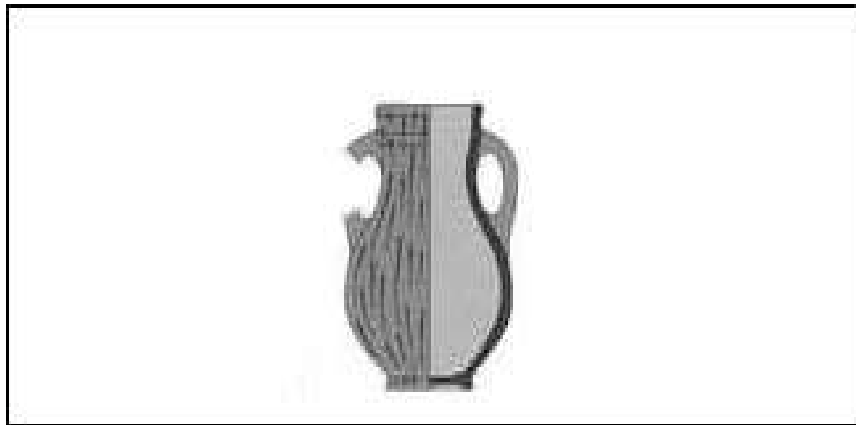


Fig 15. Iron Age II slipped jug from open-air excavated squares at  
Tell Dothan (Master et al 2005: 125, fig 10.57: 4)

Those pottery examples were given here are to give a view of the general pottery in Tell Dothan at this period and to show the differences and similarities within the Tell Dothan pottery horizon, which appears similar when it comes to the Iron I bowls and kraters and maybe similar to the earlier levels at the site, while on the other hand, pottery from Iron II can be relatively different.

#### **II.6.5. Hellenistic, Roman, Byzantine and Islamic periods**

The site has witnessed a gap of occupation after the Iron Age II, until the Hellenistic period where a building with a group of Rhodian stamp seals and a coin with an inscription of Antiochus the King discovered. The building was described to have been built with massive walls, rooms, and above all, a Hellenistic Insula that has been excavated in the site which indicated with no doubt along with a coin and the stamp seals the dating of this phase to the Hellenistic period (Master *et al.* 2005).

A good quantity of Roman and Byzantine periods pottery uncovered at area B of the excavation, other areas seemed to be poor. Among the discoveries in area B is what so-called Massive Building which consists of 5 rooms, the Massive Building was partly destroyed and replaced by a later building on the south. According to Master *et al.*, the area is hard to be understood because of the lack of information or drawings and maps (Master *et al.* 2005: 139-144).

When excavating area T, the team has uncovered an open courtyard dated to the Mamluk period, the courtyard is surrounded by about 25 rooms form the large farmhouse which was identified with 3 phases all dated to Mamluk. In addition to the farmhouse, a cemetery has been uncovered in area L which was dated to the same period (Master *et al.* 2005: 147-153).

#### **II.6.6. The systematic survey of Tell Dothan and the results**

Tell Dothan has been systemically surveyed in 1979 and published in 2004 by Adam Zertal on behalf of Haifa University, Tel Aviv University and the Israel Exploration Society (Zertal 1993: 1311-1312). The site on the Israel grid is 1727 2021, and 7105 5886 on the UTM grid. The elevation of the site is 321 m above sea level and about 42 m above the surrounding areas. The size is 60 dunams (Zertal 2004: 149-150). The results of the survey as the following; the site number is 44: 17-20/22/1. Pp. 149-150. The archaeological sequence as follows: Chalcolithic 5%, EB I 10%, EB II 10%, MB IIB 15%, LB II 5%, Iron Age I 15%, Iron Age II 15%, and later periods (Zertal 2004:149-150).

Zertal described the site as a large, very steep, artificial mound standing in the eastern edge of Sahl 'Arraba (Dothan Valley) east to Sebaste, with the spring of Bir el-Haffireh an important water source that may have provided the site with water in ancient times (*Ibid*: 149).

Tell Dothan was resurveyed by Miller II in 1996, where he confirmed the results of Zertal's survey. Miller II mentioned that the site includes in addition to Iron Age I, pottery from Late Bronze Age and Iron Age II, with noting that the site is about 42m above Terrain on Terra Rosa soil (Miller II 2001: 144, 162).

The distance of Tell Dothan from archaeological key sites in the highlands derived from a website (<https://www.distancefromto.net/>).

To Tel Taanach: 13 km  
 To Kh. Bal'maeh: 6 km  
 To Tell el-Far'ah: 17 km  
 To Tell Balatah: 21 km  
 To Tell Abu Zarad: 34 km.

## **II.7. The site nowadays**

After Joseph Free's expedition terminated in 1964, no more archaeological activities have been conducted again on the site not the surroundings, only a survey by Adam Zertal, 1979 and other scholars who made late surveys in the area. Minor archaeological works have been done by Daniel Master before and during the writing of the Tell Dothan volume I., the site is neglected and untouched since.

A recent visit by the writer and Pascale Ballet in summer 2018, in which we have noticed the collapsing and almost unapparent remains of Joseph free's excavation areas and squares. Tomb 1 in the western cemetery is also in a bad situation and unclear structures. With erosions and collapses on the sondages on the slopes of the tell, including the Western Cemetery sondage. Moreover, we have noticed the isolation of the tell which led to looting and destruction activities in some areas of the tell. No human habitation on the tell nowadays which leaves the place in isolation. **Figs.** 16 and 17. show the looting activities, as well as the collapsing of the western slope, were tomb 1 is located.

The materials of Tell Dothan including pottery, metal, bones, and other objects are stored in several different places in the United States of America, Jordan, and Palestine. A major part of the pottery and part of the archives housed at Wheaton College, Illinois. The archives are at Gordon Conwell Theological Seminary Massachusetts. A small collection of the pottery is housed in the Jordan archaeological museum in Amman. Three other collections are housed in different institutions in Jerusalem, namely, St. George College, the Siriganian Building, and Rockefeller museum. The largest collection in Jerusalem is the one housed at St. George College. In addition to the fact that the human skeletons have been reburied in the 60's of the last century in an unidentified location in Palestine.



Fig 16. Tell Dothan with the looting activities, July 2018 (G. Nagagreh)



Fig 17. Tell Dothan, the collapsing and erosion of the western slope, looking west, July 2018 (G. Nagagreh)

After looking into different historical and environmental variables in this chapter, which led to the formation of Tell Dothan in the fertile valley of Sahl ‘Arraba, we can sum up the following: Tell Dothan area has been an active region for settlement along most of the historical periods, it has been continually inhabited with the fact that that environment has provided the region of all factors that assure continuity both in human and culture terms. There other factors besides environment, such as strategic location of both the valley and the site which have been on the cross

road between four different geographical zones which probably have made it a connecting point in the ancient time. Bearing in mind the sites which lay around it and in the area of Sahl 'Arraba in general. Although there some doubt about the mentioning of Tell Dothan in the Egyptian texts as we have pointed out earlier in the chapter, but that doesn't mean it's an isolated site, the strategic location on a high hill facing all the plain or the valley, with the fortifications over different periods of the site indicates that the site had been in contact and sometimes in danger of outsiders, not only that, in my point of view, the site had been functioning as a guard site over the rich field of the plain. The pottery which been uncovered in the site with the several grain pits also can be used as an evidence for strengthen my idea.

The excavations of Joseph Free were partial and didn't cover all the site and imperfect, and as Master *et al.* said that it's not very clear and systematic in which it's hard to gain a very accurate idea about stratigraphy and Late Bronze Age phase, however, it produced a treasure, namely tomb 1, which was excavated carefully by specialist. Moreover, it was well stratified archaeologically and Sealed and phases have been separated by the ancient people with layers of limestone, that helped greatly in figuring out which belongs to which, not only that, the nature and size of the pottery collection that have been uncovered is unique and gives a good reflection on the people's culture and helps establishing a vision in terms of technology and pottery typology for the archaeology of Palestine at the period.

Some of evidence is missing from the tomb context due to excavation methods or the replacement of the Material over the last sixty years, but tombs is still a very important keys to understand Tell Dothan during the Late Bronze and Iron Ages, and it opens a verity of keys which shed light on the culture of ancients people of the site as well as some insight to the history of Canaan as possible. The following chapter I will dig in the archaeology of tomb 1 targeting several topics which can lead to interpreted historically in light of the above chapters.

## Chapter III

Tomb 1: excavation, structure, date, finds, and origin



### III. Tomb 1: excavation, structure, date, finds, and origin

General archaeological description of the site was mentioned in some details in the previous chapter. The archaeology of the Western Cemetery, namely, tomb 1 will be the subject of this chapter in which I present the tomb excavation process, the architectural elements, the finds, dating, the debate on the tombs in Late Bronze and Iron Age, and comparative examples from Palestine.

#### III.1. The excavation

In 1959, during the 6<sup>th</sup> season of the excavation of Tell Dothan, the team led by Joseph Free found while excavating the Early Bronze Age city wall in the western slope of the tell in area K, and the tracing this wall, they have found an irregular mass of stones, with the possibility of falling of those stones, which described as having no face or pattern, the team decided to dig vertically, and after removing about 5m of the dirt, which contained scattered stones, Late Bronze and Iron Ages pottery sherds. The team then came upon a circular stone-lined pit which diminished in size until it funneled into a square-cut shaft in the bedrock; an approximate measurement is 1.25×1.40m. Subsequently, the team excavated about a meter down the shaft, where a stone slab, leaning out from a vertical rock-cut opening implied the doorway of the tomb 1 (Free 1959: 27). **Fig 18.** shows the area K with the squares that the western cemetery has been found, in addition to **fig 19.** which shows the section of the western slope of the tell where the cemetery have been found.

The excavation which lasted for 4 seasons (1959, 1960, 1962, 1964), yielded the so-called the Western Cemetery which included 3 tombs, 1, 2, and 3. Tomb 1 is the largest and well-preserved one among the other two tombs (Free 1960: 10). Although Joseph Free was the director of the excavation of the tell, Robert Cooley was responsible for the excavation of the Western Cemetery including tomb 1 (Cooley and Pratico 1995: 150). **Fig 20.** shows a plan of the tomb 1 with its main feature.



Fig 18. Area K of the excavation, with the squares where the western cemetery has been found, after (Master *et al.* 2005: fig: 6.18, Pp. 38)

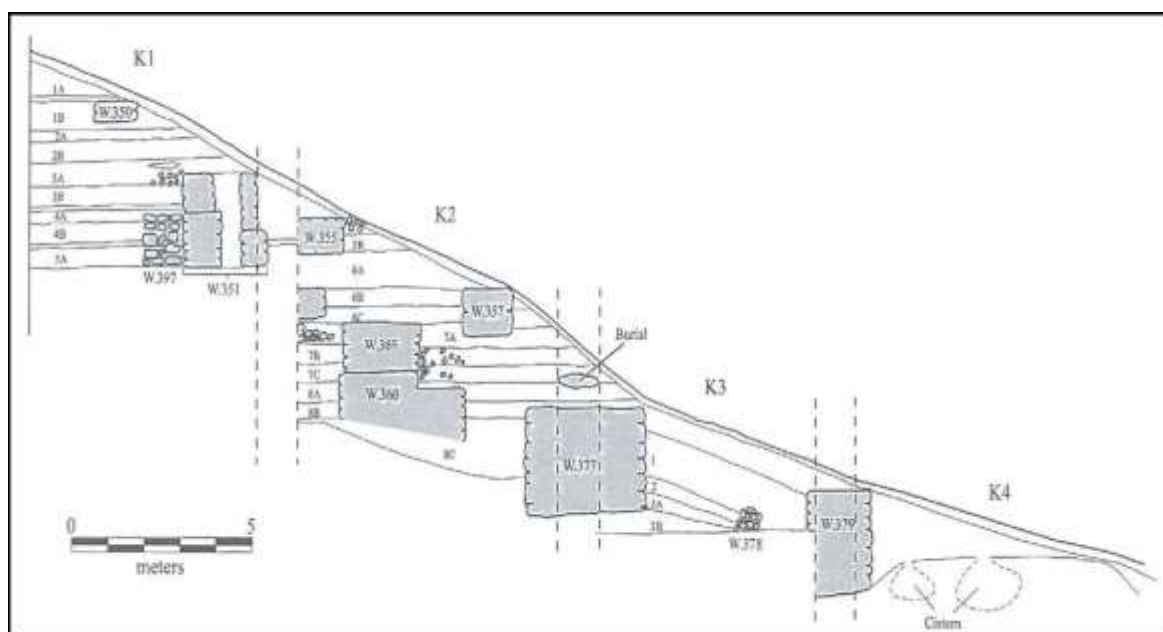


Fig 19. The western slope of the tell where the western cemetery has been found, after (Master *et al.* 2005: fig: 6.22, Pp. 40)

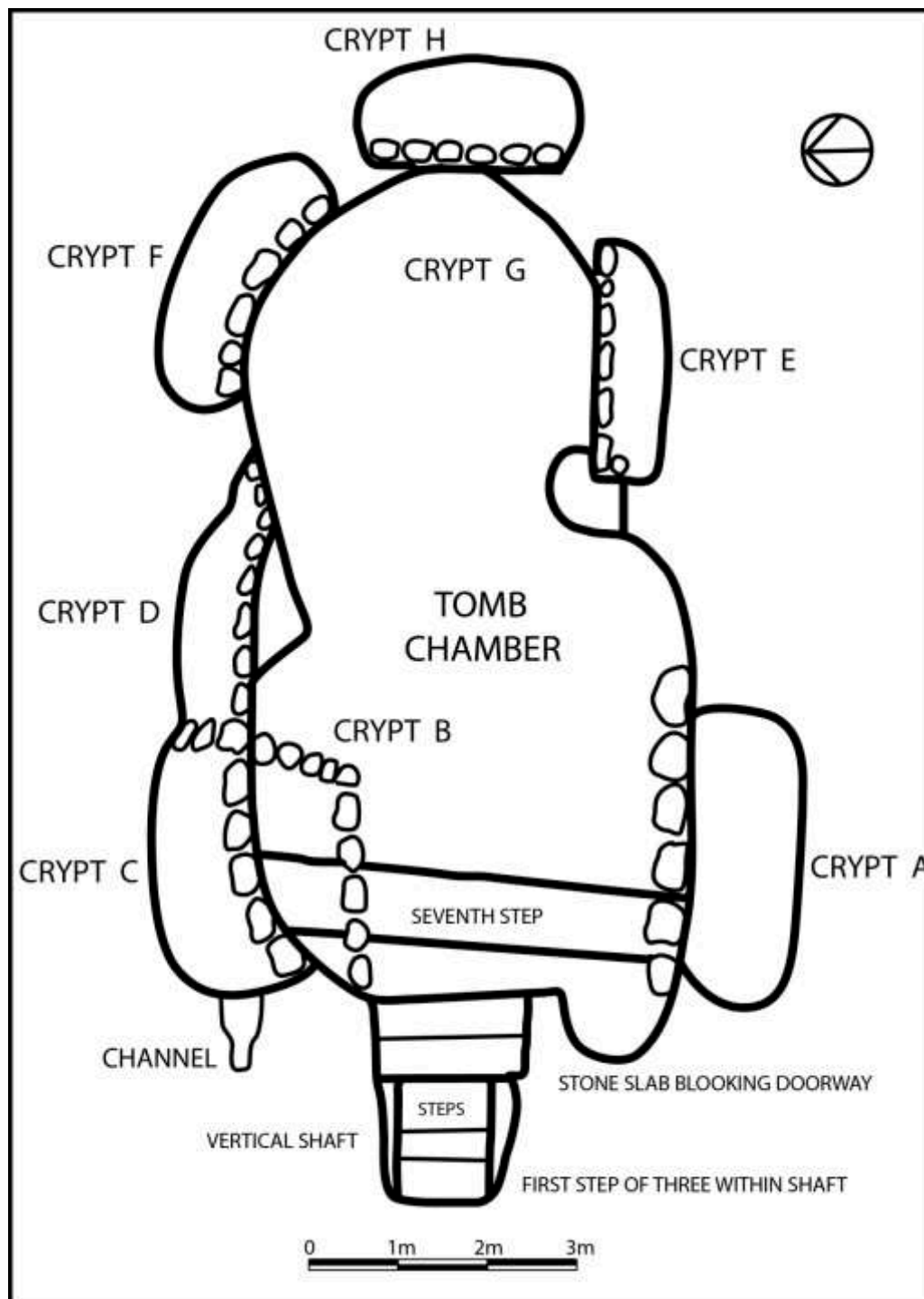


Fig 20. Plan of tomb 1 with the main features,  
after Cooley and Pratico 1995: 152, fig. 5

In 1959 only 4 days before the closing of the season, the Western Cemetery was found, the team had worked round the clock to excavate and finish the tomb 1 which by the end of the season had yielded about 52 vessels<sup>8</sup> dated to the Iron Age I (Free:

<sup>8</sup> Those 52 vessels were found at the entrance of the tomb, it was recorded and it's stored in USA.

27-28). The team had dug about a meter deep through a collapsed ceiling, a meter to the left and another to the right in order to reach the bottom of the tomb but due to the lack of time, the excavators had to seal the tomb with reinforced concrete until the next season had started when the team continued the excavation of the tomb (Free 1959: 27-28). **Fig 21.** shows the section of the excavation which led to the discovery of tomb 1 on a depth of about 7m from the topsoil.



Fig 21. The deep excavated section on the left which led to the discovery of tomb 1, (Cooley and Pratico 1995: 154, fig: 7)

The discovery of the Western Cemetery was possible after the excavation of the Early Bronze city wall which has started in 1958, when the team opened area K for the first time and dug a trench (sondage) on the western slope of the tell. The measurements of the trench were about 7m wide and 27m long towards the slope in the west including the squares K1, K2, K3, K4 and K5, with a dimension of 5×7m and a 2m baulks between the squares. In tracing the Early Bronze walls to the north of the area, the team opened squares K11, K12, K21, K22 and K13. During 1959 season the team had removed the baulks in the north of the area K and opened squares K21, K22, as well as K23. In the same year, the team had excavated squares K31 and K32 as an extension to the area in the northwest where Free discovered a large pit which

was the entrance to the tomb 1. In excavating square K32 and widen the area, they had discovered tomb 1 as well as, tomb 2 and tomb 3 (Master *et al* 2005: 38). In addition to the removal of a major part of the fallen ceiling which has been estimated to be about 1.50cm thick and about 4.50 to 5m in diameter, consisting of limestone, that collapsed in conical shape (Free 1959: 27; 1960: 15). The three tombs 1, 2, and 3 all together became known as the Western Cemetery of Tell Dothan.

The team had to dig for 5 m trench and about 1 to 2 m in the shaft which leads to the entrance to the tomb 1 which is located in square K32 on the summit of the slope. In addition to that, the team dug about 1 m extension to the left and another 1 meter to the right around the tomb entrance. At that time Free explained this type of discovery of the tomb saying that the Iron I people had dug a pit in the Early Bronze fallen remains (Free 1959: 26-27). **Fig 22.** shows an overview of tomb 1 after it has been excavated and cleaned up by the team, the entrance, the main chamber, as well as the falling ceiling, are included in this photo.

In 1960, namely, the seventh season of the excavation, the team resumed the excavation of tomb 1 along with the other two tombs. During this season they have started excavating on the slope above the previous excavation 3m wide and about 10m long, the goal was to come down on top of the fallen ceiling to reach to the whole extent of the tomb upper part, the excavation of this portion estimated to be as deep as 6.80 cm that is in order to reach the top of the fallen ceiling. According to Free, the cause of the falling of the ceiling was due to an earthquake that shattered it and made it fall on the materials that the tomb contained (Free 1960: 10) which we suggest that the earthquake occurrence at the end of the Iron Age I and that was probably one of the reasons why the tomb had been abandoned.

The excavation of this section lasted for two weeks; the rest of the season was spent on the excavation of the tomb itself, going through four levels of the tomb out of 5 and uncovering more than one thousand complete pottery vessels and other objects. The excavators could not complete excavating the tomb in the 1960 season. It appeared that the team had excavated the tomb by creating a trench inside it, this method allowed them to reach the bottom of the tomb with dimensions of 7 m wide and about 3.70 cm long from west to east (Free 1960: 10-13). However, there are no

indications in the report of the seventh season, that the team had reached the fifth level of the tomb.



Fig 22. Overview of tomb 1 with the entrance, main chamber and the falling ceiling, after (Cooley and Pratico 1995: 151, fig: 4)

During the eighth and ninth seasons of the excavation (1962 and 1964), the team had continued and completed the excavation of the Western Cemetery including the three tombs and uncovered the rest of the pottery and the objects in tomb 1, with about two thousand more pottery vessels have been uncovered. Preliminary reports were prepared for the eighth (1962) and ninth (1964) seasons, but they were never published (Cooley and Pratico 1994: 72; 1995: 148-149).

The excavation methods inside the tomb are not clear but according to Free's preliminary reports that we rely upon for most of this study. Tomb 1 had five different levels; each had been sealed with a layer of limestone that prevented contamination (separation between levels for unknown reason). After the team has reached the entrance to the tomb which is a square shaft about 1m deep. The team in 1959 excavated about 1m deep, uncovering 52 pottery vessels belongs to level 1 which is the Iron Age and other objects (Free 1959: 27). In the next season, they have excavated a semi-trench inside the tomb running west to east, this method allowed them to reach the bottom of the tomb with dimensions of 7m wide and about 3.70 cm long until the eastern end of the tomb, noting that the depth is uncertain due to the fact that in 1960 they had only reached level 4, and not yet excavated the fifth level which was in the bottom of the tomb (Free 1960: 10-11).

The tomb was divided into 9 major squares 1, 2, 3, 4, 5, 6, 7, 8, and 9, each of these squares has been divided into minor or sub-squares A, B, C, D, E, F, and G. For example, the squares have been named 1A, 1B, 1C, 1D, 1E, 1F, and 1G. It covered the entire tomb and it was excavated as mentioned above by a trench. In 1962 and 1964, the team completed the excavation of the tomb including the fifth level at the bottom (Cooley and Pratico 1995: 150). **Fig 23.** shows the squares inside the tomb and the excavation method.

Since the tomb had been used for over four hundred years, it was occupied in 5 different levels, 1, 2, 3, 4, and 5. Each of the levels represented a phase of the history of the tomb, started from the Late Bronze IIA until Iron AI. It was all stratified and sealed with limestone from each other. This situation had affected the thickness of the deposits. The tomb of 5.50cm depth from the bedrock at the center to the fallen ceiling (Cooley and Pratico 1994: 78) with deposit thickness including the collapsed ceiling measured at about 3.65m (Cooley and Pratico 1995: 152). With deposits thicknesses including each layer of limestone and earthen fill that separated the levels from each. **Table 6.** shows the thickness of the layers in the tomb. And **figs 24, 25,** and **26.** shows the progress of the excavation of the tomb's different levels and the wealth of the finds, as well as, the condition of the pottery vessels.

The deposits that have been included in those five levels have been all excavated in a systematic method, in addition to dividing the surface of the tomb into



squares and sub-squares, the pottery vessels and objects have been given a registered number as well as the human bones, which altogether estimated at a total number of about 3400 objects including metal, pottery, bones and other types of objects. The contents of the tomb will be discussed elsewhere in the present chapter.

Level, fill	Thickness in cm, total of 3.65m
Collapsed ceiling	1.50 cm
Level 1	10 cm
Limestone fill between levels 1 and 2	15 cm
Level 2	10 cm
Limestone fill between levels 2 and 3	5 cm
Level 3	15 cm
Limestone between levels 3 and 4	40 cm
Level 4	25 cm
Limestone between levels 4 and 5	40 cm
Level 5	15 cm
Limestone fill between level 5 and bedrock	40 cm

Table 6. Thickness of each level and limestone layer in the tomb deposits after Cooley and Pratico 1995: 152, table 1.



Fig 23. Methods that has been used to excavate the chamber of the tomb, after Cooley and Pratico 1995: 157, fig: 13.





Fig 24. Progress of the excavation of level 1 in the tomb, the latest of 5 levels, after Cooley and Pratico 1995: 158, fig. 14.



Fig 25. Progress of the excavation of levels 2, 3 and 4 with the different elevations of the dig, after Cooley and Pratico 1995: 159, fig. 15.



Fig 26. Progress of the excavation of level 5 of the tomb, the bottom of the tomb, after Cooley and Pratico 1995: 160, fig. 16.

The excavation of tomb 1 has been a significant part of the Tell Dothan archaeological expedition. The lack of information on the excavation of the two seasons (1962, 1964) is problematic but since tomb 1 was well stratified and well preserved, the excavation process was well documented. According to the excavators; tomb1 is one of the largest tombs that have been discovered in Palestine with the great wealth of material culture it contained as well as the structural elements that shed light on the burial practices and tomb construction during the Late Bronze and the Iron Ages. Bearing in mind the debate about the problem of the lack of tombs in the Iron Age, we now look at the tomb 1 construction as well as its architectural elements.

### **III.2. Tomb 1: Construction and architectural elements**

Due to the lack of detailed information about the tomb excavation and construction as well as its architectural elements; we depend on the preliminary reports that had been published by Joseph Free, and the later articles by Robert Cooley the actual excavator of the tomb and his assistance Gary Pratico, in addition to

scholarly articles and studies that have been written in light of the published details by the principle excavators.

As mentioned above, the ancient people of Tell Dothan has dug a pit of about 7 meters deep through the fallen remains of the massive Early Bronze Age city wall. The excavation team then dug through it vertically until reached a circular stone-lined cone-shaped, leaning out from a vertical rock-cut opening implied the doorway of the tomb 1 (Free 1959: 27-28; Cooley and Pratico 1993: 374). The entrance led to seven steps cut in the bedrock, leading to a rock-cut cave which formed the main chamber of the tomb, contents eight crypts, six of them were cut in the bedrock, and two were built of lined stones. In addition to that, the tomb had a channel or window in the north-west of the tomb in crypt C (Free 1959: 28; 1960: 10-11; 1962: 119-120; Cooley and Pratico 1993: 374; 1994: 75; 1995: 151-152). Those are the main architectural features of the tomb, which will be described in details below.

### **The entrance:**

The entrance: The entrance to the tomb starts with a steep inter way followed by a circular shape lined stones which diminished in size until it funneled into a square-cut shaft in the bedrock about 1.75m by 1m wide, and about 1.51m in-depth, with a stone slab located at the lower part of the shaft, leaning out from a vertical rock-cut opening. The stone slab measured at 1m wide by 1.10m high, and 12cm thick, it formed the entrance to the tomb, with fragments of jars and handles placed in the entrance probably served as brutal offerings (Free 1959: 27-28; Cooley and Pratico 1993: 374; 1994: 75; 1995: 151). The entrance including three steps at the bottom which formed with the other four steps the leading path to the main chamber. **Figs 27. and 28.** shows the entrance from outside and inside the tomb.

The next main feature of the tomb is the seven steps which were cut in the bedrock to lead to the main chamber, the first three of these steps are connected to or part of the shaft, and the other four steps are part of the main chamber (Cooley and Pratico 1993: 374; 1994: 75). The steps were reached during the 1960 season, Joseph Free mentioned that when the team reached the fourth level of the tomb, the 7 steps were all uncovered down from the shaft to the tomb, due to the continuous use of the tomb, the steps appeared to be all covered with the tomb deposits (Free 1960: 13).



Fig 27. The entrance to the tomb from outside, after Cooley and Pratico 1995: 155, fig. 9.



Fig 28. The entrance to the tomb from inside, with the steps that lead to the chamber, after Cooley and Pratico 1995: 154, fig. 8.

The measurements of the steps are not known but the distance between the first step to the shaft is 1m, the second step is 1.32m, the third is 1.51m. The distance between the uppermost of the shaft to the seventh step which is located in the main chamber is 3.30m (Cooley 1968: 115; Cooley and Pratico 1995: 151). In the complex of the entrance to the tomb, in addition to the shaft and the steps, is the doorway leading to the tomb which was blocked with a slab, it measured with width at the base of 1m, width at the top is 90cm, and height is 1.75 (Cooley 1968: 115). All were cut in the bedrock which is composed of limestone.

### **The main chamber:**

The main feature of the tomb is the main chamber which was cut in the bedrock in the Late Bronze Age which is a type of a cave that was used during all the phases of the tomb history. The cave has several features, in addition to the main chamber, it consisted of 8 crypts, a water channel or a window (Cooley and Partico 1995: 151). **Fig 29.** shows the main chamber looking west with the entrance and crypts on the two sides.

The main chamber of the tomb is in irregular shaped, but basically rectangular with rounded corners, with a west-east orientation, it measures 10.65 m west to east, and 6.90 m north to south, that is including the crypts, but the chamber itself excluding the crypts measured 8.30 east to west and 5m north to south, the depth of the main chamber from the ceiling to the bottom center is 5.50 m (Cooley and Pratico 1993: 374; 1994: 78, 1995: 152). The chamber was carved in the natural bedrock, it held all of the deposits of the tomb, and also was the place where most of the corpses lied down to be buried. The floor of the chamber is very smooth and sloping sharply towards the east direction, with about 40cm of silt covering the eastern side, and only 1 to 2cm covering the western part. The tomb chamber was cut by a metal blade of about 2 cm wide. The main chamber was covered with all the deposits of about 2.15m due to the continuous use and reuse. In addition to that, the excavators have not noticed any plastering nor decorations or paintings on the walls of the cave (Cooley 1968: 114-115). **Figs. 30. and 31.** shows the main chamber with the entrance and a clear view of crypts A, B, C, as well as the four lower steps.





Fig 29. The chamber looking west with the entrance in the face including the steps, and the crypts on the two sides, after Cooley and Pratico 1995: 155, fig. 10.



Fig 30. The main chamber with the entrance, crypts A, B, and C, after Cooley and Pratico 1995: 153, fig. 6.

### The crypts:

The main chamber of the tomb is including 8 crypts, 6 of them were cut in the bedrock, in addition to 2 crypts were constructed by the walls of a lined stone later. The crypts location is all around the main chamber from the three sides north, south and west. The crypts are A, B, C, D, E, F, G, and H. crypts B and G are the later ones and which were built with lined stones above deposits (Cooley 1968: 114; Cooley and Pratico 1993: 374; 1994: 75; 1995: 152). **Fig. 31.** shows an example of the rock-cut crypts, the crypts in this figure is H.



Fig 31. Crypt H as an example of the rock-cut crypts in the tomb, after Cooley and Pratico 1995: 156, fig. 12.

Crypt A , cut in the bedrock, is located in the south-west of the tomb, it was cut in the bedrock with measurements of 1.20m wide, and 2.80m long, it is the largest crypt in the tomb.

Crypt B, is located within the tomb chamber in the north-west corner of the tomb, it was created by a lined up stones in a later period, it was constructed above the tomb deposits with measurements of 1.10m wide and 2.30m long.

Crypt C, cut in the bedrock, is located in the north-west of the tomb, it includes the channel as well as a semi-window, the measurements of the crypt are 1.13m wide and 2.60m long, the measurements of the semi-window are: inside opening square shape 60×60cm, outside opening circular shape 20cm in diameter.

Crypt D, cut in the bedrock, is located in the north center of the tomb walls with measurements of 81cm wide and 2.25m long.

Crypt E, cut in the bedrock, is located in the south-east of the tomb walls, it measured 79cm wide and 2.25 long.

Crypt F, cut in the bedrock, is located in the north-east corner of the tomb measured 88cm wide and 2.30cm long.

Crypt G, is located within the tomb chamber in the east side of the tomb walls, it was created by a lined up stones in a later period, it was constructed above the tomb deposits with measurements of 80cm wide and 2.20m long.

Crypt H, cut in the bedrock, is located in the eastern wall of the tomb measured 1.02m wide and 2.20m long (Cooley 1968: 115; Cooley and Pratico 1994: 77; 1995: 152).

The function of those niches or crypts at tomb 1 at Tell Dothan according to Suriano is to secondary burying the dead; after the initial burring of the corpse on the floor of the tomb. The remains of the bones and the offerings of the body will be moved to the niches for the secondary burring (Suriano 2018: 62), the idea of Suriano is favorable, although the excavators have not mentioned such a practice in a clear statement, or they have not noticed it when they excavated the tomb.

The last feature in the tomb is a channel or a window located above crypt C in the north-western corner of the tomb, it was created as an opening from the outside of the tomb to the inside. The opening is roughly square in shape from the interior measured 60×60cm, it narrows to roughly circular shape on the exterior with a diameter of 20cm (Cooley and Pratico 1995: 152). The following **table 7**. indicates the main features of tomb 1, with measurements of each of the futures:



Tomb Feature	Measurements
The Pit	6 to 7m deep
Collapsed Ceiling	1.5m thickness, diameter 4.50 to 5m
Shaft	1.75×1m, 1.51 deep
Doorway	1m base wide, 90cm top width, 1.75 height
Blocking slab	1m wide, 1.10m high, 12cm thickness
Main Chamber	Without Crypts: W-E 8.30m, N-S 5m With Crypts: W-E 10.65m, N-S 6.90m Roof to Floor 5m
Deposit thickness	2.15m
Crypt A	1.20 m × 2.80 cm
Crypt B	1.10 m × 2.30 cm
Crypt C Window/Channel	1.13 m × 2.60 cm Inside opening square: 60 cm × 60 cm Outside opening circular 20 cm diameter
Crypt D	81 cm × 2.25 m
Crypt E	79 cm × 2.25 m
Crypt F	88 cm × 2.30 m
Crypt G	80 cm × 2.20 m
Crypt H	1.02m × 2.20 m

Table 7. Measurements of the main features of tomb 1, after Free 1959, 1960; Cooley 1968; Cooley and Pratico 1993, 1994, 1995

Tomb 1 all features were fully excavated and cleaned up, the tomb has produced a great wealth of materiel culture in the five different levels that were uncovered. Below we mention the finds of the tomb including, pottery, metal and bones.

### III.3. Tomb 1: the finds

Tomb 1 at Tell Dothan was described by the excavators to be one of the largest tombs that have been uncovered in Palestine in the fifties and sixties of the twentieth century. A very distinctive feature of the tomb is its finds, the wealth and a great deal of the number of the artifacts that have been discovered as well as the human skeletal remains played a major role in the tomb uniqueness. The artifacts which can be sorted into 8 different general groups including human bones, personal ornaments, weapons, amulets and ritual objects, flora and fauna, animal bones, implements, miscellaneous

deposits, and pottery vessels of all types, all counted to be 3484 objects, these objects were found in the five different levels of the tomb.

The tomb soil was sieved during the excavation (Lev-Tov and Maher 2001: 103). The number of the deposits have been included in several articles by Robert E. Cooley, the actual excavator of the tomb 1, it was mentioned in details in his doctorate dissertation. We will show the types and number of the artifacts in light of Cooley's 1968 doctoral dissertation, in which it provides the most accurate numbers. Moreover, we will include other precise details in other studies if found. According to Cooley 3484 objects have been found, consisted of 288 known human skeletons in all 5 levels, 154 personal ornaments, 94 weapons, 31 amulets and ritual objects, 19 objects of flora and fauna, 34 implements, 235 animal bones, 60 miscellaneous deposits, and 2804 pottery vessels of several types which can be classified into 18 different types (Cooley 1968: 128-129, 165-167). Below we will include the numbers of the different artifacts and the distribution of each group and type on the 5 levels of tomb 1.

### **Skeletons:**

The bones in level 1 of the tomb were in a bad condition due to the collapsing of the ceiling of the chamber, two skeletons were found in crypt A, another two in crypt C were almost complete, estimation of the skull fragments indicated that 74 skeletons excited in level 1. In level 2, 92 skeletons were estimated depended on skull fragments. The condition of bones was better in level 3 were 65 skeletons have been found. 47 skeletons have been found in level 4 they were in a very good condition, in addition to that 10 skeletons have been uncovered in level 5 and they were intact (Cooley 1968: 128-129). The following **table 8.** indicates the number of skeletons distributed on the five levels of tomb 1.

Level number	Skeleton (skull) number
1	74
2	92
3	65
4	47
5	10
Total: 288	

Table 8. Number and distribution of the skeletons (skulls) on tomb 1 five levels after (Cooley 1968).

A bioarchaeological analysis has been conducted by a group of researchers on the human teeth that have been found in tomb 1. The aim of the study was to examine if the population of the Southern Levant in general and Tell Dothan, in particular, was homogeneous in the Late Bronze and Iron Ages. For this reason, 3053 teeth have been examined, the collection came from levels 1, 3, and 4. The teeth from levels 2 and 5 were not examined due according to the authors the fact that the teeth were not collected or the storage place where they located is unknown. The actual dental morphology examination included 2102 teeth, the destruction of them on the levels was, about 29.5% came from level 1, 16.0% of the teeth came from level 3, 54.5% came from level 4 (Ullinger *et al* 2005: 467, 469). The question of the location of the human skeletons have been answered by Gregoricka and Sheridan stating that the human bones have been reburied at unidentified place in Palestine in the 1960s before the Six-Day War, that information was from personal communication with Robert Cooley (Gregoricka and Sheridan 2017: 75).

The researchers concluded their study by stating that the dental morphology examination indicated a biological continuity in the late Bronze-Iron Age transition in Tell Dothan. On the other hand, the study pointed out that there is no dental morphological evidence for major population replacement at Tell Dothan during the Late Bronze and Iron Ages. This result according to the researches does not support the idea of new immigration to the region during this period. The importance of this study is that it's one of the very few studies dealing with the issue of continuity and discontinuity in the southern Levant (Ullinger *et al* 2005: 474).

### **Ornaments:**

Personal ornaments in tomb 1 consisted of 154 objects including 60 beads. These objects interpreted as personal ornaments belonging to persons wearing them on the fingers or beads for necklaces, or in the hands, or on the clothes, as well as ornaments for decoration, they were mostly made out of bronze in addition to two objects that have been made out of ivory. According to Cooley, the number of personal ornaments is not high, that probably means that the corpses were buried unclothed or with very simple dresses, the number of the beads for each level of the tomb is not specified (Cooley 1968: 168), the function of those objects have been possibly for offering purposes as most of the other artifacts in the tomb. **Table. 9.**

shows the number of personal ornaments, the type and the distribution on the five levels of tomb 1.

Type of object	Level 1	Level 2	Level 3	Level 4	Level 5	Total number
Bracelet	1	0	0	1	0	2
Ring	6	6	2	30	10	54
Earring	0	9	0	9	0	18
Golden Earring	0	0	0	0	1	1
Toggle pin	0	0	0	3	1	4
Button	0	0	0	1	0	1
Ivory Pendant	1	1	0	0	0	2
Bead	?	?	?	?	?	All 60
Pin	3	0	0	9	0	12
						Total: 154

Table 9. Type, number and distribution of personal ornaments on the five levels of tomb 1, after (Cooley 1968: 165)

### Weapons:

Weapons in tomb 1 count 94, it consists of three types; projectile points, daggers, and spear points. Weapons number is limited, they were made in most cases out of bronze. The handles of these weapons had disappeared due to decay, moreover, some traces of wooden handles evidenced (Cooley 1968: 165, 168). Most common type in the weapons group is the daggers, it was described of having a high number in each of the five levels. The type, number and distribution of weapons on the five levels of tomb 1 are presented on **Table 10**.

Type of object	Level 1	Level 2	Level 3	Level 4	Level 5	Total number
Projectile point	2	0	1	1	0	4
Dagger	9	18	18	10	16	71
Spear point	2	7	5	3	2	19
						Total: 94

Table 10. Type, number and distribution of weapons on the five levels of tomb 1 (Cooley 1968: 165)

### Amulets and ritual objects:

Very few amulets and ritual objects have been found in the tomb, a total of 31 objects, these consisted of scarabs, zoomorphic figurines, and one kernos ring made out of clay. According to Cooley, these objects are connected to religious practices, the zoomorphic figurines in particular, which were formed in the shape of bulls with

features sexual attributes reflecting fertility which might have been some kind of cult practice in that period, that is in addition to the kernos which with its cups can reflect the fertility of the earth. 25 scarabs were found and regarded as amulets (Cooley 1968: 167, 170-171). **Table 11.** shows the type, number and distribution of the amulets and ritual objects of tomb 1 at Tell Dothan.

Type of object	Level 1	Level 2	Level 3	Level 4	Level 5	Total number
Scarabs	4	7	4	10	0	25
Zoomorphic figurines	2	2	1	0	0	5
Kernos ring	0	0	1	0	0	1
						Total: 31

Table 11. Type, number and distribution of the amulets and ritual objects of tomb 1 at Tell Dothan (Cooley 1968: 167)

Very few flora and fauna remains have been found at tomb 1, only 19 objects, consisted of olive pits, shell, skim, fish and sheep bones, due to the organic nature of these objects. We suppose that that certainly the majority of flora and fauna had disappeared, it was interpreted by Cooley as food offerings (Cooley 1968: 167, 169-170). **Table 12.** includes the number of flora and fauna remains and the distribution on the five levels of the tomb. For the accurate number of animal bones, we rely on a recent study by Lev-Tov and Maher below (Lev-Tov and Maher 2001: 93).

Type of object	Level 1	Level 2	Level 3	Level 4	Level 5	Total number
Fish	0	0	1	0	0	1
Olive pit	0	2	6	0	2	10
Sheep	1	1	0	0	0	2
Shell	0	0	0	1	4	5
Skim	1	0	0	0	0	1
						Total: 19

Table 12. Number of flora and fauna remains and the distribution on the five levels of the tomb (Cooley 1968: 167)

### **Animal bones:**

A zooarchaeological analysis has been carried out by Justin S. E. Lev-Tov and Edward F. Maher in 2001, they have studied the animal bones that came out of Tomb 1 at Tell Dothan, which according to them, animal bones collection at tomb 1 is much larger of many other tombs that have been discovered in Palestine. The problem with the animal bones is that it was mixed when it was excavated by the team. In addition to that, another problem which faced the two researchers, it was impossible for them to associate any of the bones to a certain level of the tomb, the third problem is that

the animal bones when collected were mixed with the human bones (Lev-Tov and Maher 2001: 93). In the following **table 13**, we show the number and type of animal bones that have been found at tomb 1 and that was classified and identified by Lev-Tov and Maher.

The result of the study concluded that animals were an important part of the rituals at Tell Dothan, it represented the banquet that supposed to be held every time the tomb opened for a new corpse. The estimation of the animal bones number to be 235 compared to the 288 skeletons indicated that conclusion to Lev-Tov and Maher (2001: 93).

The main 9 species that have been identified are domestic cattle, domestic goat, domestic sheep<sup>9</sup>, sheep/goat, pig, wild/domestic, gazelle, Nile perch, unidentified fish,

Species type	Number	Per cent
Domestic cattle	25	11%
Domestic goat	6	3%
Domestic sheep	5	2%
Sheep/goat	193	82%
Pig, wild/domestic	2	1%
Gazelle	1	0.4%
Nile perch	1	0.4%
Unidentified fish	1	0.4%
Unidentified rodent	1	0.4%
Total: 235		

Table 13. Number and type of animal bones that have been classified and identified at Tomb 1 (Lev-Tov and Maher 2001: 94, table. 1)

and unidentified rodent, it consisted of mandibles, maxillae, loose teeth, and horn cores. It appeared that most of the animals were mature (above one year old) at the time of death, it was hard to determine according to Lev-Tov and Maher the gender of the animal, but most probably, they were males which mean that males were slaughtered for the offerings. Since all bones are not sorted to a certain level, this situation made it hard to assume which species were used for food offerings and which were introduced to the tomb accidentally. And since the goat/sheep is the dominated species in the collection, it is to a certain extent have been used as a food offering. Two cattle bones have been found as well, they are noticed to be a calf and

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<sup>9</sup> The distinction between the bones of cattle, goat and sheep is because of the precise study of it by Lev-Tov and Maher.

an older one. Among the collection finds are two pig bones, were a molar and a mandible (Lev-Tov and Maher 2001: 94, 95, 100, 101).

The presence of wild species such as the gazelle horn, the pig molar, reflects the use of wild animals for the ritual, along with a nuchal, a portion of a cattle and the fish vertebra. The horns at tomb 1 collection either sheep/goat or gazelle had cut marks on them which represents according to Lev-Tov and Maher some kind of ritual, where the horns had been cleaned and cut for a purpose (Lev-Tov and Maher 2001: 96-97). On the other hand, the tomb had produced two fish bones, one was identified as Nile perch, and the other bone had not been identified. The Nile perch bone was a unique discovery because it is not certain if the Nile perch had been exported from the Nile region or if these species lived in Palestine during the Bronze and Iron Ages. In addition to the find of the Nile perch, the authors associate that to the find of the Egyptian scarabs and an alabaster chalice in the tomb. It may have represented trade which Lev-Tov and Maher are both in favor of, but that question is not possible to the answer, particularly because it's not clear if all those objects were contemporary (Lev-Tov and Maher 2001: 97-98).

### **Household implements:**

Few household implements have been found, totaling 34 objects consisting of needles, knives, hooks, tweezers, whorls, burnishing stones, and spindles. Some tools have been used for textile, while others such as the knives represent domestic implements, some of the knives according to Cooley had traces of wooden handles (Cooley 1968: 166, 169). **Table 14.** represents the number, type and distribution of the household implements that have been found in the tomb.

Type of object	Level 1	Level 2	Level 3	Level 4	Level 5	Total number
Needle	0	1	0	0	0	1
Knife	0	2	1	1	0	4
Hook	0	0	0	2	0	2
Tweezer	0	0	0	2	0	2
Whorl	3	3	6	0	3	15
Burnishin g stone	1	1	1	1	0	4
Spindle	3	2	1	0	0	6
						Total: 34

Table 14. Number, type and distribution of the household implements that have been found in the tomb (Cooley 1968: 166)

### Miscellaneous artefacts:

60 Miscellaneous deposits/objects have been found in the tomb, although very few; it represents several types of artifacts, it is as the following; alabasters, faience, bronze bowls, 1 bronze oil lamp, 1 ivory cup, basalt bowls, basalt platters, 1 basalt chalice, 1 limestone bowl, seals, and 1 game piece. Most of the objects are fragmentary, except for the metal objects, some were decorated such as the faience bowl which is decorated with painted lines on the bottom (Cooley 1968: 167, 170).

**Table 15.** represents the number, type and distribution of the miscellaneous deposits that have been found in tomb 1.

Type of object	Level 1	Level 2	Level 3	Level 4	Level 5	Total number
Alabaster	2	0	3	0	1	6
Faience	0	0	0	1	1	2
Bronze bowls	3	12	14	8	2	39
Bronze lamp	1	0	0	0	0	1
Ivory cup	0	0	0	1	0	1
Basalt bowl	1	0	0	3	0	4
Basalt platter	0	0	0	0	2	2
Basalt chalice	0	0	1	0	0	1
Limestone bowl	0	0	0	0	1	1
Seals	0	1	0	1	0	2
Game piece	0	0	0	0	1	1
						Total: 60

Table 15. Number, type and distribution of the miscellaneous deposits/objects that have been found in tomb 1 (Cooley 1968: 167)

### Pottery:

The richest collection in tomb 1 is the pottery collection, it is one of the very distinctive collections that have been found in Palestine during the Late Bronze and Iron Ages. The tomb has provided a wealth of about 2804 complete, fragmentary and intact vessels, the collection of the pottery is not only rich with the huge number of the pottery that has been found in only one single room, but also the great variety of types that are included as well as the dating which expanded through almost three hundred to four hundred years. The collection includes about 18 different pottery types such as bowls, oil lamps, pyxides, jugs, flasks, chalices, jars, kraters, stirrup jars, base ring ware, milk bowls, and cooking pots<sup>10</sup>. A distinctive feature in the

<sup>10</sup> The comparative study of the pottery of the tomb with other sites in Canaan will be discussed in chapter 4; pp. 179-227.



collection is the very high number of the bowls, oil lamps, pyxides, and jugs, which can suggest a connection between these types in terms of functioning together in one certain burial customs (Cooley 1968: 166, 169). **Table 16.** indicates the number, type and distribution of the pottery collection on the five levels of tomb 1 as mentioned by Cooley.

Type of object	Level 1	Level 2	Level 3	Level 4	Level 5	Total number
Bowls including Cooking Pots	118	197	123	114	64	616
Milk bowls	0	0	1	2	6	9
Base-ring-ware	0	0	0	6	0	6
Jugs and Juglets	99	145	118	64	50	476
Kraters	32	11	1	0	0	44
Flasks	15	12	14	11	5	57
Pots	37	53	45	50	13	198
Pyxides	178	196	129	52	17	572
Strainer spouts	4	2	2	3	0	11
Jars	2	0	4	0	1	7
Jar stands	2	1	0	0	0	3
Zirs	2	5	4	0	2	13
Funnels	0	1	1	1	0	3
Vases	0	1	0	2	1	4
Stirrup Jars	1	3	8	9	0	21
Chalices	27	33	31	24	6	121
Lamps	124	163	108	116	76	587
Zir bases	3	9	9	11	3	35
Unidentified	21	0	0	0	0	21
						Total: 2804

Table 16. Number, type and distribution of the pottery collection on the five levels of tomb 1 as mentioned by Cooley (Cooley 1968: 166)<sup>11</sup>

### Statistics of the finds:

In the following **table 17.** we will indicate the 8 different types of artifacts to each level of the tomb. This way we look at the wealth of each level separately, including bones, personal ornaments, weapons, amulets and ritual objects, flora and fauna, household implements, miscellaneous deposits and pottery vessels. This will help us understand which of the tomb's levels is the richest and in which level also more activities took place in light of the site's habitation. The beads (60 pieces) will be excluded from the table due to the undetermined number of the beads that have been found in each level. The whole collection number is 3484 but on the table, it will

<sup>11</sup> The classifications and the statistics of this table depends on Cooley's work, the author was not able to see all the pottery collection to make different statistics and classifications.

be 3424 with the exclusion of the 60 beads. **Table 17.** illustrates the type, number and distribution of all objects found in tomb 1, and the total number of each 8 types distribution on the 5 levels of the tomb.

It appears that level 5 in the tomb had the minimum number of the deposits with about 311 objects, the second less dense level is 4 where 610 objects have been found but with the double amount of level 5. Level 3 is the third having about 724 objects. Level 2 had the maximum number of objects, it held about 999 objects the highest number among the other 4 levels. Level 1 is very similar to level 3, where 785 objects have been found.

This probably an indication to the increase of the population or the activities in this particular tomb from the first time that it was used until the time when it was neglected at the beginning of the Iron Age. The difference between level 5 and 2 is great that raises the question of the density of the habitation at Tell Dothan during the time that the tomb had been in use. And it appears that the peak of the use of the tomb was during level 2, it is evidenced by the number of both the skeletons and the pottery vessels.

Type of object	Level 1	Level 2	Level 3	Level 4	Level 5	Total number
Skeletons	74	92	65	47	10	288
Personal ornaments	11	16	2	53	12	94 (excluding 60 beads)
Weapons	13	25	24	14	18	94
Amulets and ritual objects	6	9	6	10	0	31
Flora and Fauna	2	3	7	1	6	19
Household implements	7	9	9	6	3	34
Miscellaneous deposits	7	13	18	14	18	60
Pottery vessels	665	832	598	465	244	2804
<b>Total number of objects for each level.</b>	785	999	724	610	311	
						3424

Table 17. Type, number and distribution of all objects found in tomb 1 and the total number of each 8 types distribution on the 5 levels of the tomb. After Cooley 1968.

### III.4. Dating of the tomb

According to Robert Cooley, the tomb was cut first in the Early Bronze Age city wall. Another indication that the tomb dated from Late Bronze IIB according to him is that the builders of the tomb had to dig through Middle Bronze Age strata in the area, which means that the tomb had not existed during the Middle Bronze Age nor in the first phase of the Late Bronze Age (Cooley 1968: 100). Moreover, no pottery indications that could suggest that the tomb is dated to the Middle Bronze or the beginning of the Late Bronze, this will be discussed in the following chapters.

As mentioned earlier, tomb 1 at Tell Dothan was rich with all sorts of material culture, this wealth of artifacts have been put into 5 different phases in a sequence of time and space, expanded according to the excavators for 3 to 4 hundred years from the Late Bronze IIA to the Early Iron Age I. The main indicator to the given date is the pottery typology, this method allowed the excavating team to make a distinction between the 5 levels of the tomb because, in addition to the limestone layers that have separated the 5 levels, the pottery also helped in a great deal to date the five different levels. In the following, we review the 5 different levels and the point of view of the excavators of Tell Dothan.

Joseph Free the director of the excavation has mentioned four of the five levels of the tomb until the season report of 1960, in which the team at that time had not reached level 5 which is in the bottom of the tomb, and which is below levels 1, 2, 3, and 4 older to newer.

Level 1: Level 1 represents the Early Iron age phase, which is the latest level in the tomb, comes above levels 2, 3, 4, and 5. It was right below the collapsing ceiling of the cave, the pottery of this level are characterized are early Iron age, which is why it was dated by the excavators to the Iron Age.

Level 2: Level 2 holds the largest number of objects, it was dated by Free and Cooley to the Late Bronze IIB and the beginning of the Iron Age (1200 B.C.) namely, the transition period, the dating was given due to the fact that the pottery was dated to Late Bronze and Iron Ages and it was found in this level as a mixture (Free 1960: 11-12; Free 1962: 119; Cooley and Pratico 1994: 86; 1995: 162).

Level 3: Level 3 is dated to the Late Bronze IIB (1300-1200 B.C.). The tomb in this level was enlarged with more crypts in the north. The presence of imported or imitated pottery types such as Cypriote and Mycenaean wares made the assumption of the dating that was given to this level (Free 1960: 11; 1962: 119; Cooley and Pratico 1994: 86; 1995: 162) in addition to special characteristics to the local pottery that is known and dated to this period.

Level 4: Level 4 is dated by the excavators from the Late Bronze IIA (1400-1300 B.C.) depended on the imported or imitated pottery from Cypriote and Mycenaean. A special character is the milk bowls that have been popular in the Late Bronze IIA (Free 1960: 11; 1962: 119; Cooley and Pratico 1994: 86; 1995: 161-162).

Level 5: Level 5 is the earliest level in the tomb in the bottom, it was dated by Cooley from the Late Bronze IIA (1400-1300 B.C.), this level is not included in Free's reports, it means that it was uncovered in the last two seasons of excavations in the site (1962, 1962), this level had the minimum number of objects, all were found in the back of the chamber (Cooley and Pratico 1994: 86; 1995: 161). The excavators dated this level and level 4 to the same period depended on the pottery indications which include the Chocolate on White ware.

An article published in 2017 for the isotope approach and radiocarbon to an examination of the human teeth remains in tomb 1 at Tell Dothan (Gregoricka and Sheridan 2017). The results were not as expected, the test of dating was applied on samples from level 4 at the tomb which the relative dating is the Late Bronze IIA (1400-1300 B.C.). Another sample that has been examined in the tombes from the context of level 1 which is dated to the Early Iron Age (1200-1100 B.C.), those two levels in addition to the other 3 levels were dated by the excavators depending on the pottery typology. However, the absolute results were contradicting the relative dating in which both samples are to be located in the Iron Age I (1200-1000 B.C.) with high dating for level 1 at cal. 1216 B.C., low dating at cal. 923 B.C. which the lowering is expending the latest dating of the tomb to the Iron Age II. On the other hand, high dating of level 4 is cal. 1261 B.C. and lower dating is cal. 940 B.C. (Gregoricka and Sheridan 2017: 76, table 2). **Table 18.** Illustrates the dates were given to the examined teeth.

UGA Lab #	Sampled Tissue	Sample Code	Specimen ID	Level	Expected Range	C14 date (BP)	cal. 2 $\sigma$	Relative contribution to probabilities
UGAM #18084	LM <sup>1</sup>	TD-17	T1 2010 L1 13	1	1200-1100 BC	2920 $\pm$ 25	1209-1029 cal. BC	1.00
UGAM #24334	LM <sup>1</sup>	TD-19	T1 L1 41	1	1200-1100 BC	2750 $\pm$ 30	975-953 cal. BC	0.061
							944-923 cal. BC	0.939
UGAM #24333	LM <sup>1</sup>	TD-16	T1 L1 537	1	1200-1100 BC	2930 $\pm$ 25	1216-1044 cal. BC	1.000
UGAM #24337	LM <sup>1</sup>	TD-44	T1 L1 257	1	1200-1100 BC	2910 $\pm$ 25	1206-1203 cal. BC	0.008
							1196-1141 cal. BC	0.204
							1134-1014 cal. BC	0.789
UGAM #18085	LM <sup>1</sup>	TD-15	T1 2010 L4 1130	4	1400-1300 BC	2900 $\pm$ 25	1193-1144 cal. BC	0.120
							1131-1008 cal. BC	0.880
UGAM #24335	LM <sup>1</sup>	TD-22	T1 2010 L4 1137	4	1400-1300 BC	2900 $\pm$ 25	1193-1144 cal. BC	0.120
							1131-1008 cal. BC	0.880
UGAM #24336	LM <sup>1</sup>	TD-23	T1 2010 L4 1131	4	1400-1300 BC	2960 $\pm$ 25	1261-1108 cal. BC	0.974
							1100-1083 cal. BC	0.023
							1063-1059 cal. BC	0.003
UGAM #24338	LM <sup>1</sup>	TD-62	T1 L4 456	4	1400-1300 BC	2870 $\pm$ 25	1121-973 cal. BC	0.968
							957-940 cal. BC	0.032

Table 18. The dates were given to the examined teeth from tomb 1, after (Gregoricka and Sheridan 2017: 76, table 2).

There are conclusions which we can draw from these results, bearing in mind issues related to the methods of the excavation, the time that had passed since the excavation, the preservation of material, and the problem of nature influence the ancient material. As well as, the unstable storing of the material which was expressed in Gregoricka and Sheridan's article, which led to the discrepancies between the relative dating and chronometric dating. The reasons for this discrepancy are due to several factors as the authors have indicated in the following:

The fragmentary and commingled nature of the deposits meant that skeletal remains could not be stored by individual; because of their small size, loose teeth may have settled to lower levels of the burial assemblage. Furthermore, due to its discovery very late in the 1959 field season, the hurried excavations of Tomb 1 may have led to handling or labeling errors in the assignment of teeth to specific levels. Moreover, the loose teeth in this study were not collected in situ but were instead gathered by sifting (Cooley, personal communication), which may call into question the provenience of the screened sediments. Additional error may have been introduced as the collection was moved numerous times in the intervening years between its initial excavation in 1959 until 2001, when these materials were first curated and studied. (Gregoricka and Sheridan 2017: 75).

Based on Gregoricka and Sheridan's results, a recent article by Sheridan dealing with commingled remains dated tomb 1 at Tell Dothan to a limited period, namely, the very beginning of the Iron Age (Sheridan 2019:203, 205-206) without paying attention to the pottery typology and without noting the factors I have mentioned above that may have affected the results of the experiments.

In light of Gregoricka and Sheridan, we present here **table 19.** to show the high and lower dating of the examined tooth samples, which are not absolutely accurate when bearing in mind the conditions that they faced since the discovery until the publishing of the article.

Level	Expected dating	High dating	Lower dating
1	1200-1100 B.C.	1216 B.C.	923 B.C.
4	1400-1300 B.C.	1261 B.C.	940 B.C.

Table 19. Higher and lower dating from the examined teeth from tomb 1 in light of Gregoricka and Sheridan article 2017.

The data in **table 2.** shows the expected dating of levels 1 and 4 which were dated by the excavators, with the higher and lower dating of the results which contradicts the traditional dating, however, in light of the teeth excavation methods and preservation, movement circumstances and the expected contamination over the last ca. 60 years, we will depend on the traditional dating in terms of names not numbers (level 1: Iron Age, level 4: Late Bronze Age IIA) as it will appear below in the study.

On the other hand, the study of Gregoricka and Sheridan has other important results of which can give us an insight into the nature of the community of Tell Dothan in terms of origin, nutrition, and the effects of the environment on the people particularly at the end of the Late Bronze Age with the dry climate conditions that are being postulated in recent years of archaeological research in the Levant. The two authors have concluded that the population of Tell Dothan is homogenous that has been resided there since childhood, it's a settled community with the absence of the "non-locals" and that has not been affected by the general collapse of the period, the community rather is adapted to those conditions (Gregoricka and Sheridan 2017: 73, 81). In addition to that, the dietary system of the people of Tell Dothan showed that

they have consumed animals and plants which are local to the region (2017: 82-83), in light of those results we will examine the pottery collection that tomb 1 has produced and highlight the pottery technology and typology as well as, to examine if all the pottery was mingled or heirloom or on the other hand belongs to one single period/phase or if it belongs to 4 different phases of history.

### **III.5. Burial practices and rituals in tomb 1 at Tell Dothan**

Joseph Free has mentioned that during the excavation on the pit that led to the shaft and the entrance of the tomb. A great quantity of broken Iron Age jars have been found; part of them were complete and some were broken, these pieces of pottery were found on the stones blocking the entrance, which were interpreted by Free to be the burial offerings that have been placed on the entrance after it was closed (Free 1959: 28).

Another indication of burial rites according to Free, is the presence of weapons such as the daggers and spear points, which reflects that at some time of the history of the tomb, it was used to bury a warrior (Free 1960: 120) that may have been the case, bearing in mind that more and more objects of ritual nature has been uncovered in the tomb in almost all the levels. In the following, we will depend on Robert Cooley's excavation, observations, study and interpretation of the tomb 1 burial rituals, in addition to other available studies that have discussed this subject in some length.

Tomb 1 construction has its own indications of the burial rituals, the entrance and the broken jars are indications for a ceremony that had taken place after the burring of a dead, and other indications from within the tomb itself, the crypts and the window/channel above niche C also represents according to Cooley the need for the dead to see beyond the burial itself (Cooley 1968: 89). The function of the window/channel is not clear but it might have to do with the beliefs of the people in that period especially that the excavating team has found two large jars on the two sides of the window/channel each with a small dipper juglet, in this case, it might have been providing the dead with water (Cooley and Partico 1995: 152).

The finds (offerings) tells a great deal of the burial rituals and practices that have been practiced in tomb 1, in addition to that, the skeleton placement positions

and treatment shed light on this process. Although the ritual offerings are few according to Cooley and the skeletons circumstances are not well preserved, the excavators have been able to drive certain observations about the burial practices in the tomb 1 despite. In the following we bring a description and interpretation of the placement of the skeletons and the reflections of the offerings in light of Cooley's study.

The inhumation was the main burring practice for a family tomb 1, the bodies were placed in an extended position, no attention was given to a fixed orientation. No special platform installation for the bodies existed in the tomb for the placement of the body. the tomb was a multiple successive burial practice which was a common practice during the period, the evidence is driven from the skeletons that have been found which were about 300 skeletons in one chamber. The practice was according to Cooley is to replace or move the older bones to the sides of the walls of the chamber in order to create a space for the newly dead, while the long bones had to be stacked along with the chamber's walls, this way of treatment of the bones is known in the region from other tombs that have been found (Cooley 1968: 88-89).

Tomb 1 has some distinctive burial practices that have been noticed by the excavators 1- some bodies were covered with a shroud made of large storage jars pottery sherds, 2- The finds although few had provided unique offering indications, 3- The window/channel installation believed to be for the dead as assured access to the supply of water, in addition to two large storage jars which were placed at the entrance, each one with a dipper juglet, all these observations on the tomb may have been a representative to the concept of libation (Cooley 1968: 90-91), and libation is a practice in which involved the idea of pouring for example wine in a vessel for cultic reasons related to death.

At tomb 1, the burying practice was present by placing the body on the chamber floor or on the debris of the previous interments in an extended position. No role of orientation was applied or followed in the placement of the corpse. The practice of burring in multiple successive burials in the tomb caused a great deal of destruction of the bones as well as, nature intervention and the fallen ceiling and time, but an example can be given for a well-preserved burials that can illustrate the practice. Nine skeletons have been found in a complete articulation, they were placed side by side



and were well preserved, they were buried in an extended position and were oriented east to west, with head towards the back of the chamber. The skulls were in several positions, five out of nine were placed in a side position, three of the skulls were in a face-up position, and the remaining skull was in a face-down position. According to Cooley, it seems that all the nine skeletons were not in the final placement, or it was not clear if this was the final position of the skeletons or a primary burring (Cooley 1968: 126-127).

Another example of the burying practice at the tomb according to Cooley 1968 comes from niche H where a complete skeleton has been excavated<sup>12</sup>, the way it was treated is distinctive in which the body was in an expanded position, with right arm beside the right leg, and the left arm in an over-head-position. The uniqueness of this burial according to Cooley is that the skull position, in which, cranial fragments rested between the knees and according to Cooley, it was suggested that it might have been possible that the skull had been detached before burial and placed in this position (Cooley 1968: 127). It is not clear whether the beheading was practiced at the tomb after the death or only when the flesh exposed that they removed the whole skeleton. The observations on the skulls showed no vertebrae had been articulated within the lower part of the skull. The skeletal remains of tibia and fibula had been in excellent preservation, they were often stacked like cordwood against the walls of the tomb. In addition to that, a piece of evidence coming from another skeleton showed that the skeletons were moved while the flesh still not completely decomposed (Cooley 1968: 127-128).

This is in terms of the practices of burring the corpses and the treatment of the old and new dead in the tomb. Moreover, the people each time interred a new corpse to the tomb, they have then closed the tomb entrance with the slab of the tomb, and then probably held a ceremony on the entrance, this is suggested by the broken pottery shards that have been piled on the entrance from outside. The nature of the finds raises another feature that gives an idea of the ritual practice at the tomb in all the phases of use since the Late Bronze IIA until the Iron I, in the following we review the ritual finds and the reflection of those on the rituals of the tomb.

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<sup>12</sup> The author does not have an access to the detailed photos of the excavation, which has not allowed providing them for the tomb burying practices.

Although the ritual objects in the tomb are not of a great quantity, they indicate and reflect a significant meaning of the death understanding of the ancient people not only at Tell Dothan but the whole region. The finds of the tomb including preliminary eight general categories disclosing skeletal remains, those are personal ornaments, weapons, amulets and ritual objects, flora and fauna, animal bones implements, miscellaneous deposits, and pottery vessels of all different types.

In general sense, all that have been found in the tomb must have been with a certain ritual function, we will bring the interpretation of Cooley and other scholars who worked this issue in detail. The fact that amulets and ritual objects are very few, doesn't mean that it was only limited to these types of objects, on the contrary, as mentioned above, each object had played a certain role in the completion of the rituals that have been practiced, if not in a direct way, then it will be in a secondary way, being an amulet to the dead body or an offering to the afterlife, those gathered to form the belief. Tomb 1 included over 3000 pottery vessels, almost all of them were put in the tomb for an offering purpose, moreover, decoration and number of vessels also of importance to indicate rites of the tomb, placing objects around the corpse and the way that has been utilized to do, reflects an idea of the meaning of death, the way it was handled and the importance to the living people as well as the value of the dead member of the community to his family or group. In terms of the afterlife concept, it seems that it was important to the community at Tell Dothan to use one tomb or cemetery for several generations and keep the tomb active.

Among the objects that have a clear ritual function is an oil lamp that has a molded male figurine on its bottom, the lamp has a head on the bottom of the nose for decorative purposes, and a body on the rest of the base, the uniqueness of this lamp made it one of the richest finds of the tomb and most probably considered to be serving as a cultic object (Cooley and Pratico 1994: 83-84; 1995: 163-165). Another object of ritual indications is a kernos with seven spouts or cups, it may have been used for libation which reflected the idea of fertility of land when the liquid is poured. Five zoomorphic vessels also have been found in the tomb, they were manufactured and shaped with careful craftsmanship skills, all of the five vessels have depicted a bull image (Cooley 1968: 89-90) and which may have represented symbolized fertility which was reflected by a clear sexual attribute (Cooley 1968: 170). **Fig. 32.**

shows the oil lamp with the male figurine on the bottom and the crowned head that may have been believed to be the symbolic source of the light in the tomb.

In terms of the rest of the finds, finger rings were the most popular, it has been made out of bronze and one was made out of silver. Beads and weapons were rare (Cooley 1968: 168-169), in addition to that, a large number of lamps and pyxides were found, the almost equal number of these type pottery vessels suggest a connected function according to Free, which might have been that the oil lamp had been brought into the tomb with a pyxis that held a supplement of fuel, and the great number of oil lamps suggests that people needed a good quality of light to hold some kind of ritual practices during the burring of the corpse, two ring flasks were found and three seven-spouted pottery oil lamps with a distinctive shape (Free 1960: 12-13; Cooley 1968: 169) no figurines of cultic characters have been found in the tomb, only scarabs which may have served as ornaments to the dead (Cooley 1968: 171).

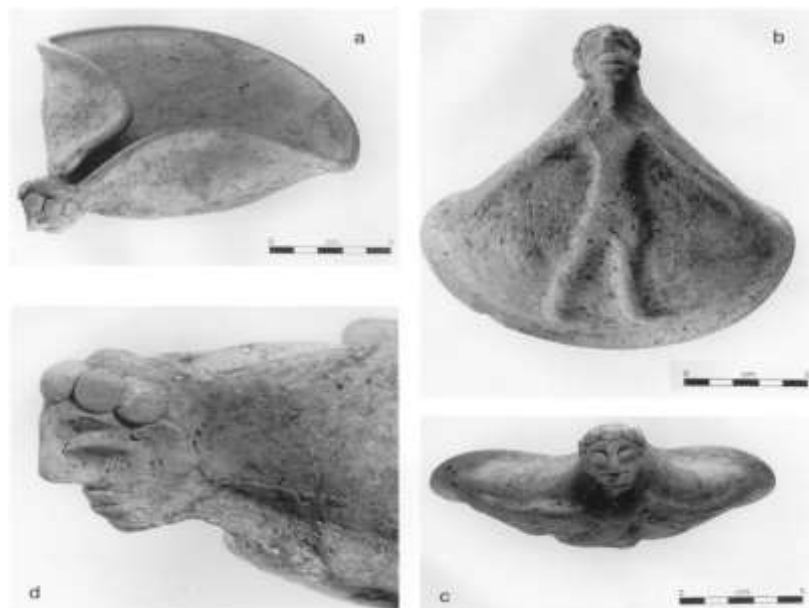


Fig 32. Unique find of the decorated oil lamp with a male on the bottom and the crowned head (Cooley and Pratico 1995: 165, fig. 18)

All the mentioned objects here which have been found in all five levels of the tomb have been used by the community in the belief that it was provided for quenching the thrust of the death by means of libation which had strong and clear evidence in the tomb, with the window/channel, the kernos, the storage jars with the

dipper juglets and the flasks (Cooley 1968: 177). If the flasks were used for the same libation purposes not for the long-distance movement to bring the dead.

One of the burials in level 5 in niche H, shows the burring practice and the way the offerings have been placed. The burial included one skeleton and several pottery vessels that have been distributed around the body, in addition to a clamshell. The vessels including a small dipper juglet, a very large flask and the shell, all were placed near or over the head, the rest of the vessels including a medium-sized bowl, rounded juglet, a jug, a pot and a milk-bowl, all were placed at the feet of the dead (Cooley 1968: 164). This seems like a simple practice but the meaning of placing the objects in such a way is not clear, but it shows that many pottery vessels have been used as offerings, which may have been the case instead of having more precious objects, or that the precious objects have suffered looting in the contemporary timing of the use of the tomb.

Throughout Cooley's excavation, study and observations on tomb 1 at Tell Dothan, it seems that the body or corpse of the death has been treated with respect at the time of interment, but when the flesh was decomposed and they needed the place to bury another dead, the previous skeleton would be swept aside in the belief that the spirit had left the body to the nether world, which means that the tomb had served as a temporary residence for the dead and it was used time after time which why a great accumulation of Materialand bones have been found in it, which would have been reached the ceiling according to Cooley. Because of the people seemed to never have cleared the tomb since the first time it was used until the final stages when it was neglected or destroyed by the earthquake which we talked about elsewhere above (Cooley 1968: 176-177).

Pottery vessels that have been found in the tomb also reflected ritual practices and symbolism (Cockerham 1995), Katherine L. Cockerham of Gordon-Conwell Theological Seminary conducted a study on the symbolism of the pottery vessels that have been found, she focused on the shape, decoration and the function of the pottery from the tomb and the reflection on the cult and cultic practices in that period through the observations on the vessels, it included the multi-handled kraters, the krater mugs, the anthropomorphic oil lamp, the zoomorphic vessels, the kernos ring, and the tree motifs that have been painted on some vessels as a decoration.

Cockerham attempted at finding the cult aspect at tomb 1, she argued to examine the idea of "byt mrzḥ " at the tomb, which is a place where a big cultic activity used to be held in the ancient Levant, where people gather and worship a deity, feast and practice a big meal and drink which is connected to the gods of that period (Feldman 2014: 63-68; Lewis 2014: 69-74) and which also utilized objects of which have been found at tomb 1, such as the multi-handled kraters, krater mugs. The anthropomorphic lamp, the five zoomorphic vessels, the kernos, and the tree motif that was drawn on some kraters and jars (Cockerham 1995: 4, 13, 64-65).

In her study, Cockerham made a description of the objects which were included in her study. She focused on the number of the vessels in each level compared to other levels, size, shape, decoration if found and details of manufacturing and parts attached to the body such as handles. The purpose was to connect all these objects with its distinctive feature to the cult idea not only at tomb 1 at Tell Dothan but the larger picture of the ancient Levant. In order to do that, she focused on the above-mentioned features in addition to the link of them.

In linking the objects under study, Cockerham was able to make the connection between the material at Tell Dothan and the rest of the region. She has reached the point where she could associate those objects to the cultic functions that represent and subsequently links it to cultic beliefs of the people at that time, for example, the zoomorphic vessels are linked to the fertility god of the Ancient Levant. The anthropomorphic lamp was hard to assume its symbolic function, but depending on some details it may have reflected royalty or divinity, especially with the details of the head which has a shape of a crown. Another factor which has been noticed, that the lamp has not been used, no carbon traces on the nose, which probably reflected that the lamp symbolizes the source of light in the tomb, bearing in mind that about 600 lamps were found, all of them have been used with carbon traces on each of their noses (Cockerham 1995: 48-58).

Tree motif decoration has been examined by Cockerham, she has found that the tree motif painted on several vessels in the tomb has a symbolic function connected to the cult of tomb 1. Moreover, the tree motif is linked in the ancient Levant to the concept of the tree of life or the sacred tree (Cockerham 1995: 42-43, 51-52).

Robert Grutz pointed out that chalices with the standing structure may have served a cultic function in the Late Bronze and Iron Ages. Those objects have been uncovered throughout Palestine during this period, in temples or domestic spaces or in tombs, the chalice as well have been a single object in a domestic setting, or a part of the larger cultic installation, although it's not certain, some chalices were used for a cult or not but connected to temples and tombs is a significant indicator for the cultic function (Grutz 2007: 3-6). 121 chalices have been found in tomb 1 at Tell Dothan in the five levels (Cooley 1968: 166), this points out among other cultic and ritual objects that chalices are part of a larger cultic activity that took place in the tomb, the function may be interpreted in two possibilities, first, it might have been used to hold and give an offering either symbolic or liquid or on another hand, was used to burn incense in the tomb, this second possibility is more convenient since I have noticed some carbon traces on the bowl of the chalices, as well as its shallow bowls which may have not been formed to hold liquids.

If all the rest of the objects in tomb 1 have cultic symbolism, as well as burial rituals and practices, this may have been true that the ancient people of Tell Dothan not only practiced tomb rituals but also cult in which a gathering for feasting, mourning, eating and drinking would be of their basic believes of death.

Finally, it appeared that tomb 1 with its finds and bones, have served the community for more than 300 years with a continues sequence, it had about 300 skeletons, more than 3000 objects including pottery vessels which were the majority of the finds. A wealth of other objects, a large chamber, 8 crypts and niches, 5 different levels, and a clear ritual practices although simple, all these factures clearly reflect an idea of how important the death conception to the community of Tell Dothan was, which apparently seems that the death considered to be a very important principle in the lives believes. And that supplying the death with food, drink, household objects and bringing all that to the tomb presents that death is, in reality, alive (Cooley 1968: 190).

### **III.6. Tomb 1 type**

Tom1, its origin and resembling examples will be discussed here in order to understand it in the general context of the history of the region. Tomb 1 at Tell

Dothan was cut in the bedrock in the Late Bronze Age, it was large enough to receive as many corpses and offerings as the people needed. Cooley described it as a family tomb (Cooley and Pratico 1993: 374) and a cave tomb (Cooley and Pratico 1994: 87-88; 1995: 166). The tomb type was discussed by Rivka Gonen 1992, and Elizabeth Block-Smith 1992. In light of the research, that both authors have conducted, Katarzyna Joanna Chudzik wrote her master thesis about tomb 1 at Tell Dothan construction, type and relation to tombs in other sites in Palestine and Cyprus. The purpose of her study was to trace the origin of tomb 1 in the larger context of the Ancient Levant archaeological investigations and research, if tomb 1 was a local or a foreign tradition that reached Palestine and Tell Dothan in the Late Bronze Age from outside Canaan.

Chudzik has done a comparative study between 4 sites in Palestine Tell Dothan, Tell el'Ajjul, Tell ed-Duweir (Lachish), and Tell el-Mutesellim (Megiddo), and 4 sites in Cyprus are Dhenia Kafkalla, Ayios Iakovos Melia, Korovia Paleoskoutella, and Lapithos Vrysi tou Barba. These sites were chosen because each of them has one or more burial caves that look similar to tomb 1 type at Tell Dothan. She focused on questions such as if tomb 1 at Tell Dothan was a natural development in the region or if it was influenced by other regions in the greater Ancient Levant.

Depending on several studies about burials and burial construction in the Late Bronze and Iron Ages that have been made on such questions as mentioned above. Chudzik focused on studying the niches that have been cut in the rock in all of the tombs in the eight different sites, she found that the construction of the tombs in each of the sites were similar, although the dating of the tombs was different, but she made a comparison between Tell Dothan tomb 1 and tomb 7 at Korovia Paleoskoutella in Cyprus, she wanted to find similarities and differences between the two tombs. According to Chudzik the similarities between tomb 1 at Tell Dothan and tomb 7 at Korovia Paleoskoutella are regarding the shape which in both tombs is rectangular, they have 4 to 8 loculi or niches, stepped dromos, and a distinctive stomion, the two tombs have no decorations and the skeletons were placed both on the floor of the chamber and in the niches. In addition to that, the orientation of both tombs is similar, both are oriented east-west (Chudzik 2007: 81).

On the other hand, the differences between tomb 1 and tomb 7 according to Chudzik are as following; the dating of the two tombs differs, while tomb 7 dated to the late Middle Bronze Age. Tomb 1 at Tell Dothan dated to the late Bronze and Iron Ages. The size also differs greatly, while tomb 1 at Tell Dothan is 74m<sup>2</sup>, tomb 7 Korovia Paleoskoutella is measured at 19m<sup>2</sup>. No tumulus at tomb 1, while it existed at tomb 7. The absence of a channel or a window at tomb 7, while it is one of the main features at tomb 1. In addition to the construction elements, the finds in the two tombs differed greatly which she tried to compare (Chudzik 2007: 81-82). In our point of view, this comparison cannot be made because of the particularity of each tomb not only in the two regions, Palestine and Cyprus but also in one single region.

On these criteria, and the comparison between the Palestinian coastal plain, the highlands and Cyprus, Chudzik came to the assumption that the tomb 1 type has arrived to Tell Dothan in the highlands from the Palestinian coastal plain, and that the coastal plain had this type coming from Cyprus in the Late Bronze Age, along with the trade of other materials such as pottery and luxury items (Chudzik 2007: 112). Cooley and Partico also made a comparative between tomb 1 and tomb 7 and they also assumed this notion of the foreign origin of tomb 1 at Tell Dothan and that it was influenced by Cyprus (Cooley and Partico 1994: 88; 1995: 167). Cooley, Partico and Chudzik all have driven their conclusions from the study that have been made by Rivka Gonen in 1992, as well as, partly the study of Elizabeth Block-Smith.

According to Block-Smith, 8 different burial types have been identified in Palestine, some types were common in some areas and other types in other areas of the land, for example, one of the main standards that have been generalized by Block-Smith is that pit graves were common in the sandy regions such as the coastal plain, while cave tombs were common in the rocky regions such as the highlands with some variations and exceptions for the two regions. In light of this, the tomb classifications are: Simple tombs, cist tombs, jar tombs, anthropoid coffin, bathtub coffin, cave tombs, bench tomb burials and cremation burials. According to her, the distribution of cave tombs were restricted to areas of the highlands which was cut in the limestone and it was predominating during the Late Bronze and the Iron Ages, it was slowly less used in the preceding parts of the Iron age as a different type of tombs were introduced. Cist tombs were common in the lowlands and valleys. Bench tombs were common in the coastal plain during the Late Bronze and Iron Ages, the distribution of



this type was in the coastal plain and the lowlands (Block-Smith 1992: 19, 39, 133-134, 137). Block-Smith has classified tomb 1 to be of the Cave or chamber tomb which is similar to tombs from Ras Shamra (Ugarit), along with other examples from Jordan and mostly highlands of Palestine such as Amman, Baqah Valley, Tell el-Far'ah (N), Hebron, and (Ugarit) (ibid: 167-171).

Rivka Gonen, on the other hand, examined the tomb types in Palestine during the Late Bronze age. She focused on the idea of how foreign or local the tomb can be. She regarded that Palestine or Canaan is a small land which can be influenced by other regions around, it also can be an easy target for invasions from outside (Gonen 1992: 3-4). Assuming that the society in the Late Bronze Age was on the move, Gonen strengthen her point of the foreign influence because she supposes that when people are on the move, this makes it possible for the outside influence which leads to the change of the traditions in those people, namely here, burial and burial customs (ibid 5). This point was the departing point for Gonen to consider some tombs as foreign tombs to Palestine in the Late Bronze Age, in addition to some constructional elements in the tombs which may resemble some features of the tombs in other regions around Palestine such as the rock-cut niches which have been found in different regions such as Cyprus. She considers Tomb 1 at Tell Dothan to be one of those types that have been introduced to Palestine in the Late Bronze Age, for the assumptions that have been mentioned above, in other words, the hypothesis that people were on the move in that period. The small size of Canaan and the niches which were cut in the tomb are to Gonen's opinion indicating a foreign influence most probably from Cyprus.

Gonen also pointed out a very important indication in her study of what she called foreign burials, she related the dating of both burials in Cyprus to be at the end of the Middle and the beginning of the Late Helladic period (1550-1500 B.C), and for Palestine in the same period which is the end of the Middle Bronze Age (Gonen 1992: 25; Gilmour 1995: 155-165). In addition to that, Gonen is emphasizing on the Cypriot influence on Canaan but not certain of the process of how the cave tombs with loculi have reached Palestine from Cyprus and not even the circumstances, here I quote Gonen:

The loculi burial caves in Canaan thus display hybrid features of the Greek and Cypriot origins, although they are generally closer to Cypriot models. Apparently the idea of individual burials within the family or community, which was well established in Cyprus, was sporadically accepted at about the same time in Greece and Canaan. Both Greece and Canaan modified, to some extent, the physical aspects of the burial cave. It is impossible to determine the circumstances of the migration of the loculi burial carriers into Canaan, or how long the process took. The location of the loculi burial caves at Tell el-'Ajjul, Megiddo, and Lachish does not point to a geographical clustering but rather to a preference of urban environment. The carriers of the custom either were urban people in their homeland or had business in the towns of Canaan and settled there. If so, loculi burial caves may be expected in the cemeteries of other towns of the period. (1992: 25-26).

On the other hand, Gonen thinks that cave burials without niches were used from the Early Bronze Age until the Late Bronze Age, with nearly similar burial costumes and treatment of the dead which indicates that the inhabitants of the Late Bronze Age were direct decedents of the earlier populations, in addition to that, she pointed out that cave burials were the main burial type in the highlands during the Late Bronze Age (Gonen 1992a: 240-241). But she made a distinction between cave burials with and without niches, in which she pointed out that only three sites revealed the burials with niches in all the land of Palestine.

In conclusion, it appears that Gonen is hypothesizing that Canaan had burial and burial customs that arrived and introduced to the people at the beginning of the Late Bronze age along with pottery and other material culture, due to the idea that people from Cyprus found their way to the land and influences people. In this regards, I think that according to Block-Smith those cave burial caves were common in the highland and the pit burials were common in the lowlands and the coastal plain is a good indication for the specialty for each region with a specific type that matches the natural setting of each region. Moreover, the appearance of the loculi cave burials in Cyprus and Palestine at relatively the same course of time makes it inaccurate to call cave burials a foreign type that has been brought from Cyprus to Palestine and then according to Chudzik had gradually reached the highland, namely, Tell Dothan. Moreover, it is clear through Gonen's review of the sites that the highlands are having more cave burials than the lowlands and the coastal plain, and that the lowlands

predominated with pit caves more than in the highlands. While there are about 27 cave burials in the highlands across the north to the south regions of Canaan as well as to the east that has been mentioned by Gonen, there are 20 pit burials in the lowlands and the valleys north and south (Gonen 1992: 17, 35-36).

Cave burials are well known throughout Jordan in the Late Bronze Age such as the tomb that has been excavated at Sahem in the north of Jordan near the Yarmouk and which contained hundreds of objects (Fischer 1997: 15; 2014: 571-572). More of the tombs that resemble the shape of tomb 1 were found at Tell el-Mutesellim (Megiddo), maps, photos of the tombs at Tell el-Mutesellim (Megiddo) are published by P.L.O. Guy in 1938 (Guy 1938: 9-134). Another cave burial from the Late Bronze Age have been found north of Hebron in a site called Tel Jedur, the cave had produced pottery objects similar to what have been found at tomb 1 at Tell Dothan (Ben-Arieh 1993: 468).

Moshe Kochavi excavated a site in Hebron hills called Khirbet Rabud, he mentioned that the site revealed cave burials from the Late Bronze Age with imported and local pottery (Kochavi 1974: 19-26; 1993: 1252). Although Kochavi classified the tombs as cave burials, some of them were natural and some were hewn in the bedrock, and with the pottery, he dated a number of them to the Late Bronze Age, and although Cooley and Pratico used the tombs at this site for the analogy of tomb 1, Kochavi did not provide plans to show the shape of the tombs at Khirbet Rabud. Another clear example of the cave burials have been discovered in Bisan valley in 'En Nashab, the tombs are rock-cut, two chambers have been found, very similar to tomb 1 with local and imported pottery finds, the tombs at this site seems to date earlier than tomb 1 (Gal and Zori 2005: 17-30, plan: 1) the importance of this tomb is to show an earlier dating to Late Bronze Age to the cave burials in Palestine.

On the other hand, another factor is important to mention here, the *mrzḥ* and the *mrzḥ* practice in the Aegean world. S. Rebecca Martin 2018 pointed out in her article that *mrzḥ* has been an ancient practice in the Ancient Levant, the Aegean world had been using it in light of an influence from the Ancient Levant and Mesopotamia. She noted that *mrzḥ* has been mentioned in several texts and inscriptions for the Levant, one of them is dated to about 2500 B.C that come from Ebla, another which dated to the 1200 B.C. which comes from Ugarit. Bearing in mind that the *mrzḥ* is a

much later practice in the Aegean, she proposes that throughout the textual evidence the mrzḥ tradition in the Aegean is a Levantine influence (Martin 2018: 295, 297). This leads us here to question the issue of the Aegean and the Levant influences in terms of which is the earlier example of the pattern. The cave burials in the Levant appeared as far as the Early Bronze Age as I have mentioned for example the tombs at the site of Jebel Qa‘aqir above, with the mrzḥ dated much earlier, then crossed to the Aegean world. To this end, we think that the origin of cave burials with all the practices related is a Levantine invention and tradition, which have been probably influenced the Aegean world in later periods.

The pottery finds of tomb 1 will be the body of the next chapters, in which I look at the typology, technology and all the related details. In the next chapter I make a general overview of the pottery both in the Late Bronze and Iron Ages in Palestine.

Tomb 1 at Tell Dothan as I have attempted to show, is a rich complex of cultural reflections on several levels, wither structural, cultic symbolisms, or in terms of the quality and quantity of finds namely, the pottery assemblage for the 5 levels. In the following I will study the pottery of the tomb1, offering a typology, dating, technology and plates of the pottery drawing, comparisons as well.

## Chapter IV

### Study of pottery assemblage of tomb 1 at Tell Dothan

In the present chapter, I concentrate on the pottery of tomb 1 at Tell Dothan, with the notion that continuity exists in the culture of Tell Dothan as I have demonstrated in the previous chapters through my own presupposition supplemented with experiment researches on finds from the site, and from studies and reports not only of Tell Dothan but from the archaeology of several sites in Palestine of all regions. Continuity in this chapter will be examined by looking at the pottery types that have been uncovered from the five different levels of the tomb and which have been selected and analyzed by the present author. This will be preceded by an introduction to the pottery collection and the nature of it, moreover, an introduction to the fieldwork of which I have conducted will be presented.

#### **IV. Study of pottery assemblage of tomb 1 at Tell Dothan**

In the following, I introduce the pottery collection with all related issues, such as the number, selection, general types and distribution of the collection on the 5 levels of the tomb.

##### **IV.I. Nature of the collection**

Tomb 1 as I have mentioned before, produced nearly 3000 complete, intact and broken or partial pottery vessels. Each of the levels had contended a certain amount of pottery due to the intensity of the use of the level. Moreover, several pottery types are present in the collection with the fact that I have not covered all the collection, because of the fact that the collection has the replication factor of some types, such as the oil lamps and the pyxides, with more than 500 vessels for each of them. For more information on the number of the whole collection, **table 16** in chapter 3 gives the number and type of pottery that has been found in the 5 levels. Another factor for the selection is the limited access to all the pottery which is as well, scattered in three different countries.

The number, type and the distribution of the pottery of the present selection are illustrated in the following **table 20** in which I have tried to pick the available, but due to the nature of the levels in terms of density of use that may have affected the number of the types in each level, it is sometimes made a difference in the selection.

Type of the vessel (Total)	Total	%	Level 1	Level 2	Level 3	Level 4	Level 5
Bowls	(118)	21.8	26	21	31	22	18
Unnumbered "Bell shape bowl"	(1)		?	?	?	?	?
Milk and imported Bowls	(16)	2.9	0	1	3	3	9
Cooking Pots	(8)	1.4	1	1	2	3	1
Kraters, M.H. Kraters	(47)	8.6	21	15	4	5	2
Krater Mugs	(22)	4	2	12	10	6	2
Jars	(8)	1.4	1	1	2	1	3
Biconical Jars	(46)	8.5	7	10	13	12	4
Jugs	(68)	12.5	16	14	14	9	15
Dipper Juglets and Juglets	(14)	2.5	3	3	3	1	3
Pyxis	(86)	15.8	20	23	22	12	9
Stirrup Jars	(10)	1.8	0	1	7	1	1
Flasks	(16)	2.9	4	5	3	1	3
Chalices	(29)	5.3	6	4	12	3	4
Oil Lamps	(52)	9.6	10	10	12	12	8

Table 20. Type, number and distribution of the pottery collection in the present study, over the 5 different levels of the tomb 1 at Tell Dothan<sup>13</sup>

The present collection includes about 541 vessels distributed over the 5 levels of the tomb, which consists of a variety of types, differences, divisions and sub-divisions between each of the types, which have been in most of the cases drew and analyzed by the present author. In addition to that, in the following, there will be a detailed study of the different features of the pottery including typology, manufacturing characteristics, fabric, color, decoration if found, inclusions, treatment of the surface and the attached parts of the vessels, and measurements for the pottery of the same type, in order to find if an evolution exist in each type according to the level which it dates to. That will be followed by a comparison that includes types from levels 1, 2, 3, 4, and 5, this procedure is to be made to examine the chronology of each level and eventually, the entire tomb. Bearing in mind the debate over the dating of the pottery which can be classified according to the shape and the appearance/disappearance of some shapes over different periods of the archaeological sites, particularly, in the Late Bronze and Iron Ages, which we have come to talk about in the previous literature.

We put in consideration the three articles which have been lately referred to in the dating of tomb 1 pottery and skeletal remains (Ullinger *et al.* 2005; Gregoricka

<sup>13</sup> The table is made for general statistics of the total vessels in the assemblage of the dissertation. The classification of the types is done by G. Nagagreh. The details of the type's frequency in each and all levels, the change in shape and differences are made in chapter 5.

and Sherddan 2017; Sherddan 2019). These studies in general sense have offered a dating which doesn't match the early dating that the excavators have given (Free 1962: 119-120; Cooley and Pratico 1995: 161-162) instead, they have proposed the notion that the collection is to be dated only to the Iron Age, and that the pottery or the contents of the tomb in most cases is an heirloom and or commingled remains, this assumption was given by the laboratory examination of human bones remains, which according to the researchers may have been affected by the fact that the samples haven't been properly excavated or stored or picked for the experiment. In light of this, we start the actual examination of the collection on different bases which altogether assist in solving the problem, moreover, examining the continuity/discontinuity concept in the collection.

Over four missions to Jerusalem aimed at studying the pottery of tomb 1 of Tell Dothan. I have been able to study the pottery which mentioned in **table 20**. It covered most of the types that have been found in the tomb in the 5 different levels, includes bowls including (small, medium, large, carinated), and the imported or imitated pottery, cooking pots, kraters with three different types, jars, biconical jars, jugs, dipper juglets and juglets, pyxides, stirrup jars, flasks, chalices, and oil lamps, in the 5 levels of the tomb.

Tomb 1 deposits has been divided into 5 sealed levels, each of those levels is dated to a certain period of time spanning from Late Bronze Age IIA (levels 5 and 4). Late Bronze Age IIB (level 3). The transition Late Bronze Age IIB and beginning of the Iron Age I (level 2) and Iron Age IA (level 1). This given chronology is relative, was made in light of the pottery typology criteria of the excavators at firsthand when the tomb was excavated. In a later published article by Cooley and Pratico they have given an example of the collection of pottery from different types, with a classification that matches the dating that has been suggested here to the whole assemblage of tomb1. In the following we will treat each subject of the pottery studying factors starting with fabric, technology, surface treatment including colors and decoration, measurements of the pots such as width, length, the diameter of the rim, body and base. Subsequently we provide a typological description of the pottery collection as well as a catalogue to show organized in terms of the levels and the general forms of the pottery.



The pottery collection, the concern of this study all comes from tomb 1 in Tell Dothan. It includes approximately 3 thousand vessels, all of which are complete and semi-complete, the types and sub-types of the collection are as following:

- 1- Bowls
- 2- Unnumbered Bell-Shaped Bowl
- 3- Milk, Carinated, and Imported Bowls
- 4- Cooking Pots
- 5- Kraters and Multi-Handled Kraters
- 6- Krater-Mugs
- 7- Jars
- 8- Biconical Jars
- 9- Jugs
- 10- Dipper Juglets and Juglets
- 11- Pyxides
- 12- Stirrup Jars
- 13- Flasks
- 14- Chalices
- 15- Oil Lamps

These pottery types were found in five different layers in tomb 1:

Level: (5) and (4) Late Bronze IIA (1400-1300).

Level: (3) Late Bronze IIB (1300-1200).

Level: (2) transitional between Late Bronze IIB and Iron Age I.

Level: (1) twelfth century. (Iron Age I A, 1200- 1150).

**Bowls:** 118 bowls in the collection that has been selected from the total of about 607 bowls. All of which are divided into small medium and large bowls, deep and shallow, and subdivisions of the types, the majority are hemispherical, rounded, and bi-conical, very few are carinated. There is also some bowls of the Milk bowl type and the shallow wide plates. The most common bases are the ring and disk bases. Some bases are concave and rounded.

**Unnumbered Bell-Shape Bowl:** the bowl is missing its registration tag, but what makes it important to the study is that it's the only one of its type, and it resembles the Philistine Bell-shape bowls that have been found at sites such as Tell es-Safi, Khirbet el-Muqanna (Ekron), Gaza and other sites. I'm in favor of dating this bowl to the level one of the tombs because this time became popular during the Iron Age I.

**Milk, Carinated, and Imported Bowls:** these bowls types are distinctive by the fabric and origin, on one hand; the bowls carry the traditions of the Middle Bronze such as the carinated bowls. On the other hand, it represents the imitation or importation such as the Milk bowl which is a foreign shape influenced by trade relations in the Late Bronze Age.

**Cooking Pots:** Very few cooking pots were found in the tomb, about 8. The cooking pots are the common type in the Late Bronze/Iron I, it is closed, with carinated shape, a triangular-shaped rim, and a rounded base. One of them is a small, unequal bi-conical shape, used, and with a rounded base and unfeatured triangular shape rim.

**Kraters and Multi-Handled Kraters:** 47 kraters have been selected from uncertain number of finds, because the type is spared in several as mentioned elsewhere in the paper, and also no certain number has been given in the article of Cooley and Pratico 1995, however, there are three main types in the collection:

- Multi-handled Krater, this type of the krater has multi handles ranges from 4 to 16, the krater itself is most of the time of large size and the lower part of the krater is commonly longer than the upper part.
- Simple shape Kraters: this sub-type is commonly open, with a deep bowl shape and bi-conical. With two common base type, disk and ring.
- Footed kraters: a few examples of this sub-type, which is a deep bowl shape krater placed on a tall trumpet base, it seems almost like a large Chalice.

**Krater-Mugs:** This type of krater is unique in its shape, a very few examples are known, the main characteristics of this vessel is the straight walls, with a carination in the middle of the body. The ring or flat base. and the placement of a loop handle vertically rim to body which gives it the shape of a mug. Very few examples as two handles attached.

**Jars:** about 50 jars in the collection, it is divided into three main types:

- Canaanite jar: this type is characterized by the tall, thin body, with a wide flat shoulder, and a thick pointed base, this type known to be for sea trade purposes.
- Rounded and Ovoid storage jars: this type of jar is with two loop handles, and a rounded base, commonly known for household use.
- Stirrup Jars: This type of typical imported Mycenaean, fine clay and decorated.

**Biconical Jars:** 46 smaller size Jars, with loop handles and ring or disk bases. The name of this type of jar is driven from the biconical shape that is formed in the middle of the body, which makes the pot's wider area in the middle of the body. Different types of rims and bases can be found, as well as, the placing of the handles, some of the jars have a spout attached to the shoulder of the pot. The biconical shape can be sharp or more rounded.

**Jugs:** About 483 jugs and juglets were found in the tomb of two different sub-types:

- Regular large jugs: This type of jug is the most common in the collection, it is a large, rounded shape with tall neck and has a ring or disk or flat base, with mostly one or two handles attached rim to shoulder in the later layers, and shoulder to body in the earlier layers of the tomb.
- Strainer and spouted jugs: Not very common in the tomb finds, but its main feature is the strainer on the spout and the basket shape handle which is attached rim to rim. The base type is mostly disk and ring bases.

**Dipper Juglets and juglets:**

- Dipper juglets: a type that is a descent of Middle Bronze Age, it is tall and wide, with rounded base, and one loop handle, and a trefoil rim shape.
- Small juglets: these are with a small size, ovoid and rounded shape with tall neck and a loop handle attached rim to shoulder.

**Pyxides:** About 86 were selected out of 567 pyxides uncovered in the tomb. The type is only one, not other sub-types but there are several characters and details which can be distinguished:

- The base: The base of this type can be found in a ring, disk, flat and rounded bases, affected by the chronological factor.
- The body: there are two main scales, short and tall.
- Body shape: some pyxides have sharp edges, and some more gently rounded.
- Handles: two types are found, loop handles and knop handles.
- Size: it ranges from big (width 22 cm, height 18 cm : to small size (width 9 cm, height 7cm).

**Stirrup Jars:** 10 jars have been studied, this type of pottery is originated in the Late Bronze Age. It's very well known to be an imported type from Cyprus, main characteristics of this vessel are the small rounded or carinated shape, with an opening like a trumpet placed on top of the vessel straight up. A basket shaped handles with a led shape in the middle. Usually decorated with horizontal thick brown or red bands on all over the body, the handle and the trumpet. Very few examples have been found at tomb 1, with none of them belongs to level 1. Total of 10 vessels is included in the current study.

**Flasks:** 16 flasks have been selected out of 57 have been found in all the five layers of the tomb, some are small, and some are very large. The flasks are the traditional shape that has been found almost everywhere in Palestine during the Late Bronze and Iron I. it has the lentoid shape, with tall or short neck, wide rim diameter and two loop handles attached vertically rim to shoulder. One of the flasks (№ 2363) is very distinctive in the fabric, the appearance of dense basalt girts in the clay suggests a northern origin (Hauran) south of Syria.

**Chalices:** 29 chalices have been selected from the 119 that have been found in the tomb, they were made by a rounded bowl attached to tall trumpet or footed base, and it takes the shape of mushroom-like chalices it is divided into two main sub-types:

- Short Chalices: these are short chalices made out of a rounded shallow or deep bowl, attached to a trumpet or footed base.
- Tall Chalices: tall body, the bowl shallow/deep is attached to a tall footed or trumpet bases, and are known more to be earlier.

**Oil Lamps:** 52 lamps have been selected out of about 578 which were found in the tomb in all five layers:

The common characters of the lamps in the five layers of the tomb are the one side pinch, shallowness, and rounded base. It is hard to make a clear distinction between early and late lamps, but in general the earlier lamps are larger and deeper, all are made out of a rounded bowl folded from one side. One of the oil lamps may have a foot (missing) but it's distinctive than the rest of the in the collection.

#### **IV.2. Fabric, Texture, inclusions, the clay of the collection**

This primary classification has nothing to do with the typology of the pottery, It is a classification of the types and the groups of fabric. The numbers used to the pottery is the original registration numbers which have been given during the excavation of the tomb. I have also found out that the five levels of the tomb were not excavated in order. Some of the lower level pots are given first numbers, which means that at some point the excavators had excavated in props and trenches in which the five levels were sometimes excavated at the same time, this will be clarified below.

The pottery collection has been examined for fabric nature, two main factors have been studied, the nature of the clay in terms of type, color, touch and composition, it was examined both on the surface and in the section. Another factor for studying the fabric was by observing the inclusions in the clay by breaking the pottery and observing the section in order to find out the inclusions measure, nature, size, color, intensity, type, shape and homogeneity of it in the clay composition, with pictures to show the section in the main fabric groups. Two methods have been used for the recording of the fabric composition, the counting of the inclusions as well as the percentage of them in the section besides color, shape, size, and type which determined the fabric classification.

The area of Tell Dothan is consisting of two geological zones and formations according to sheet 1 of the geology map survey published by A. Sneh, Y. Bartov, and M. Rosensaft in 1998. The area of Tell Dothan and the valley are of two types, the Tell is located in the (et) horizon which consists of the rock type of **Timrat Fm.;** **Meroz and Yizre'el fms.** (Limestone, chalk, chert; 380m) – Lower-Middle Eocene.

While the valley is located in the (q) horizon which is **Alluvium** (Gravel, sand, silt, loess) – Quaternary. **Fig 33.** illustrates the distribution of the two geological formations in the area of Tell Dothan.

In the study of the soil of the Tell Dothan surroundings 2005, Master *et al* have found out that the area consists of several types of soil, which was formed of the two geological formations which I have mentioned above. Those soil types are common in the tell Dothan valley which is considered to be the raw material for the pottery production at Tell Dothan and the sites nearby, the types are Terra Rossa with lime, Mediterranean Brown Forest, Rendzina mountain, Vertisols, Allovial with lime, and Colluvial-alluvial (Master *et al.* 2005: 15-18). **Fig 34.** illustrates the distribution of the soil types of Tell Dothan area.

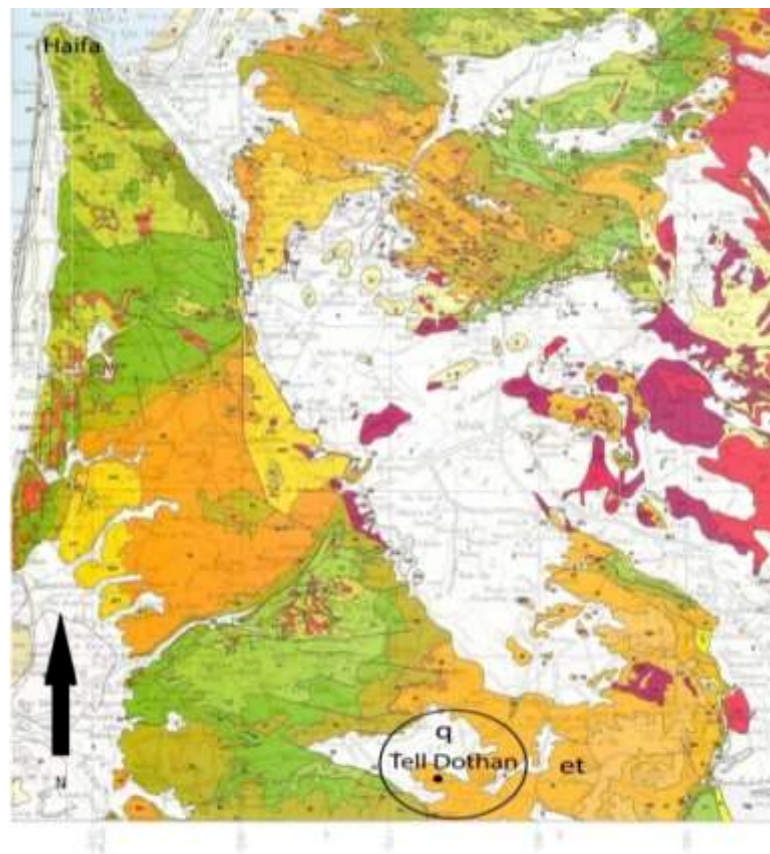


Fig 33. Distribution of the two geological formations in the area of Tell Dothan. After Sneh; Bartov; and Rosensaft 1998: sheet 1

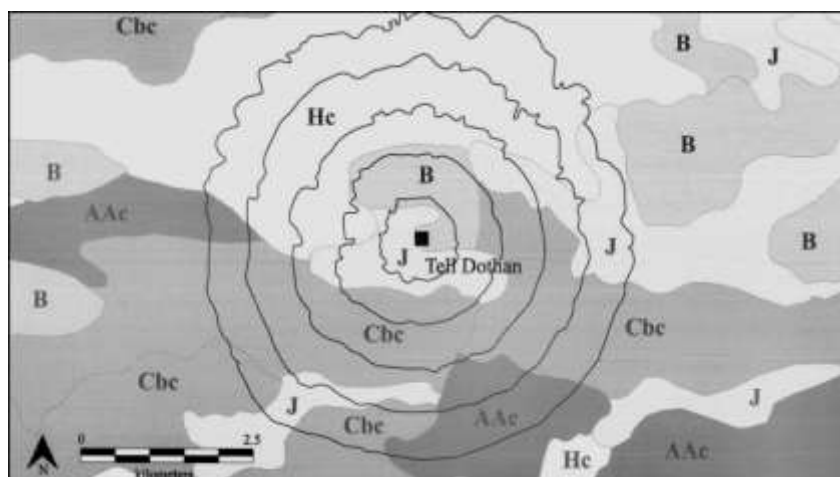


Fig 34. Distribution of the soil types of Tell Dothan area, AAc: Terra Rossa with lime, B: Mediterranean Brown Forest, cbc: Rendzina mountain, G: Vertisols, He: Alluvial with lime, and J: Colluvial-alluvial. After Master 2005: f. 3.1, 3.2, pp. 17.

In light of the above, we have conducted the examination of the pottery fabric with the results supporting that the pottery is made in a great majority out of local clay i.e. the Marl Clay, which was gathered from the site itself or from the surroundings. The fabric of the collection consists of two main obvious clay types, one of them is a pinkish yellow-white, generally fine touch. The other is a grayish color with coarser touch. On the other hand, the decoration, polishing and brushing were applied to treat the pots not very often, it is usually a simple treatment which left the surfaces of the pots open to be worn out in most of the cases and allowed to see the inclusions beneath the surface which is very common in the collection.

The buff, fine clay group, which the collection majority is consisted of, this group has pink, yellow and white colors. Had mostly fine, dense inclusions, with white (chalk) appears on the surface, the clay may have Alluvial with lime and mixed with chalk.

The gray coarse clay group, which is heavy, thick and has the red or gray color, coarse, dense black inclusions (Basalt) appeared only in one pot.

### **Fabric Groups and variants**

In the examination of the collection, we have been able to identify 8 fabric groups, the main group is group 1 (505 vessels, 93.03%) which is the most dominant one with 7 variants within it. Group 2 (8 vessels, 1.04%) is the second largest group

with 2 variants. The other 6 groups are group 3 (3 vessels, 0.05%), group 4 (11 vessels, 2%), group 5 (1 vessel, 0.01%), group 6 (8 vessels, 1.04%), group 7 (3 vessels, 0.5%). Group 8 (5 vessels, 0.9%) (are all minority groups and which represents a few examples of the types which are not very popular in the whole collection, the group described as follows:

**Fabric Group 1:** it includes pottery from all types (bowls, cooking pots, kraters, jars, jugs, pyxides, flasks, chalices and oil lamps) and from the 5 different levels. It is characterized as being made out of marl clay (alluvial with lime) with dense big chips of chalk include white particles in the section and on the surface as well as in the middle texture of the clay and no sand. The group has variations and according to these variations which are the core, firing, inclusions, the surface treatment and the clay nature we have made sub-groups or variants these are 7 variants 1, 2, 3, 4, 5, 6, 7.

**Fig. 35.** illustrates the inclusions as photographed with a microscope.

**Fabric Group 1: Variant 1:** characterized by being the most common variant: medium clay size, no core, white particles with Alluvial with lime and dense chalk chips and homogeneous break. It includes dense inclusions of more than 30%, 1 to 2mm size. (187 vessels, 37%).

**Fabric Group 1: Variant 2:** this variant is different than variant 1 by the firing quality which is less than 1, with a gray core in the section. Characterized by being made of Alluvial with lime and thinner clay mixture, thin to medium, dense and compact with white inclusions 1mm between 8 to 10 particles and about 2 to 3 are bigger in size, gray core with less firing quality than variant 1 (177 vessels, 35%).

**Fabric Group 1: Variant 3:** The clay is red out and inside, with lots of white particles (chalk) more or less disappear in the section and the surface. Treatment of the surface with slip, thick walls. It is not clear if the clay is different or of the low firing quality than variant 1 with inclusions size of about 1mm, and 10 to 20% (45 vessels, 8.09%).

**Fabric Group 1: Variant 4:** very dense clay, homogenous with very few white particles (chalk), this is probably the difference between variant 1 and 4. With some bowls treated with a knife on the upper part to make it thinner, it has very thin texture. Less than 1mm size and less than about 5% inclusions (21 vessels, 4%).



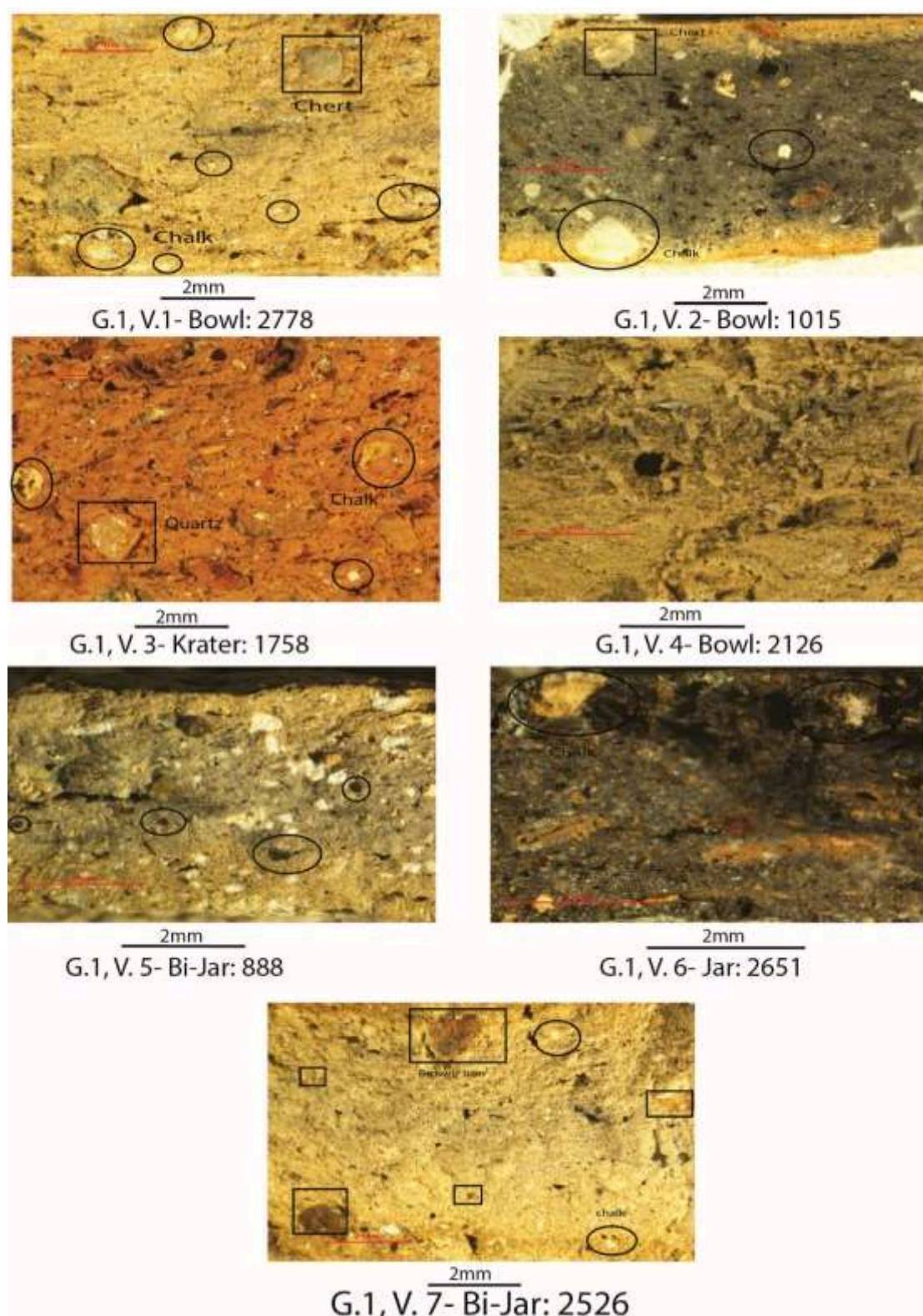


Fig 35. Different variants of group 1 fabric.

**Fabric Group 1: Variant 5:** Very similar to variant 1 but with a lot of black small particles less than 0.5mm, with chalk ships of about 1mm, and 20%, (grog or Iron) (23 vessels, 4.05%).

**Fabric Group 1: Variant 6:** over fired, with metallic nature, reduced, the kiln closed at the end, this kind of firing gives more strength to the pots with the dense white chalk chips of 1mm more than 20%. (4 vessels, 0.07%).

**Fabric Group 1: Variant 7:** white and brown (iron or grog) inclusions, sometimes dense, sometimes less density with the dense less than 0.5 mm size white chalk chips. And about 10% (35 vessels, 6.09%).

Another 7 fabric groups have been identified and examined, these fabric groups are each different, with specific and distinct characteristics, below I present those groups, and **fig. 36.** illustrated the general fabric type with photos under the microscope.

**Fabric Group 2:** different color of the clay (brownish-gray) with very fine clay, very smooth surface, and very thin section (2mm). This is known only for the milk bowls in the collection. Another character is that the white inclusions can't be seen on the surface, only in the section. this group is divided into two variants. Although the group fabric is fine and different than group 1, but it shows a local origin of the clay.

**Fabric Group 2: Variant 1:** is smoother clay nature than variant 2, with very small inclusions less than 0.1mm and very fine clay. The inclusions are few, less than 5%, and less than 0.1 mm in the section.

**Fabric Group 2: Variant 2:** rougher clay, some inclusions can be seen in the section and on the surface of the vessel. Dense inclusions in the section, more than 20%, with less than 1 mm in size.

**Fabric Group 3:** the group is a little similar to variant 3 in group 1, but sand and quartz can be seen in the section, with black and white particles, and it all takes the red color. The difference from variant 3 in group 1 is that the existence of a different color and the black particles and better fired, with different clay type (black particles are not found in variant 3 in group 1 nor quartz). The inclusions are dense more than 20%, and mixed big more than 1 mm and small particles less than 0.1mm. very few pots have been labeled to this group coming mainly from the pyxides.

**Fabric Group 4: Variant 1:** is a little thick and heavy stirrup jars which are probably an imitation, with a decoration of less quality than in variant 2. The inclusions are very few, less than 2%, and less than 0.1 mm size in the section.

**Fabric Group 4: Variant 2:** is defined as being stirrup jars with thinner walls and clay with almost no inclusions, with good quality decoration. Dense inclusions about 10%, with very small size less than 0.1 mm.

Group 4 is completely different than group 1 and the other groups because it is described as imported or imitated defined by the quality of the clay, which the pyxides have been made from, the whole general shape, and the well-done surface treatment. The group has two variants, the variant 1 is a little thick and heavy which is probably an imitation, the variant 2 is defined as being with thinner walls and clay with almost no inclusions. Due to the chalk chips it is probably imitated, the clay is very fine but it's local.

**Fabric Group 5:** The basaltic inclusions are very dense with several size and shape, and the white particles are few. The inclusions are dense, with about 20%, and mix of 1mm and less in the size. It has a different kind of inclusions. It is maybe a mixing of the clay (Only one flask has been found in the entire collection) which suggests that that flask have been imported to the site from the north Volcanic (basalt) inclusions probably from the Hauran region.

**Fabric Group 6:** Cooking pots, the traditional texture and fabric of cooking pots in Palestine at this period, rough clay, with a pinkish color, smooth surface, carbon traces, thin walls, and thick rounded base, dense and several sizes of quartz inclusions in the section. This was attested in the 8 cooking pots which have been examined. The inclusions in the section are very dense quartz more than 30%, with a size of about 1 to 2 mm, very few small chalk particles.

**Fabric Group 7:** The nature of the clay is sandy and gritty, which probably suggest that the jars since its function is trade have been brought from the coast to the west of Tell Dothan. Inclusions are very dense, more than 50%, with the size of about 1mm, very homogenous sandy clay and inclusions, which known as the Canaanite jars which have a very homogenous composition of the clay, and inclusions which are of sand.

**Fabric Group 8:** consists of bowls and jugs that have a different clay, very fine, no or very few inclusions, less than 2%, this group is probably made of foreign clay, or maybe is imported from a different territory, Cyprus, because not only the clay is



different, but the shape of the pots is of what is known as the base ring wear which is originated in island of Cyprus, which consist of ring base pots such as jugs and bowls.

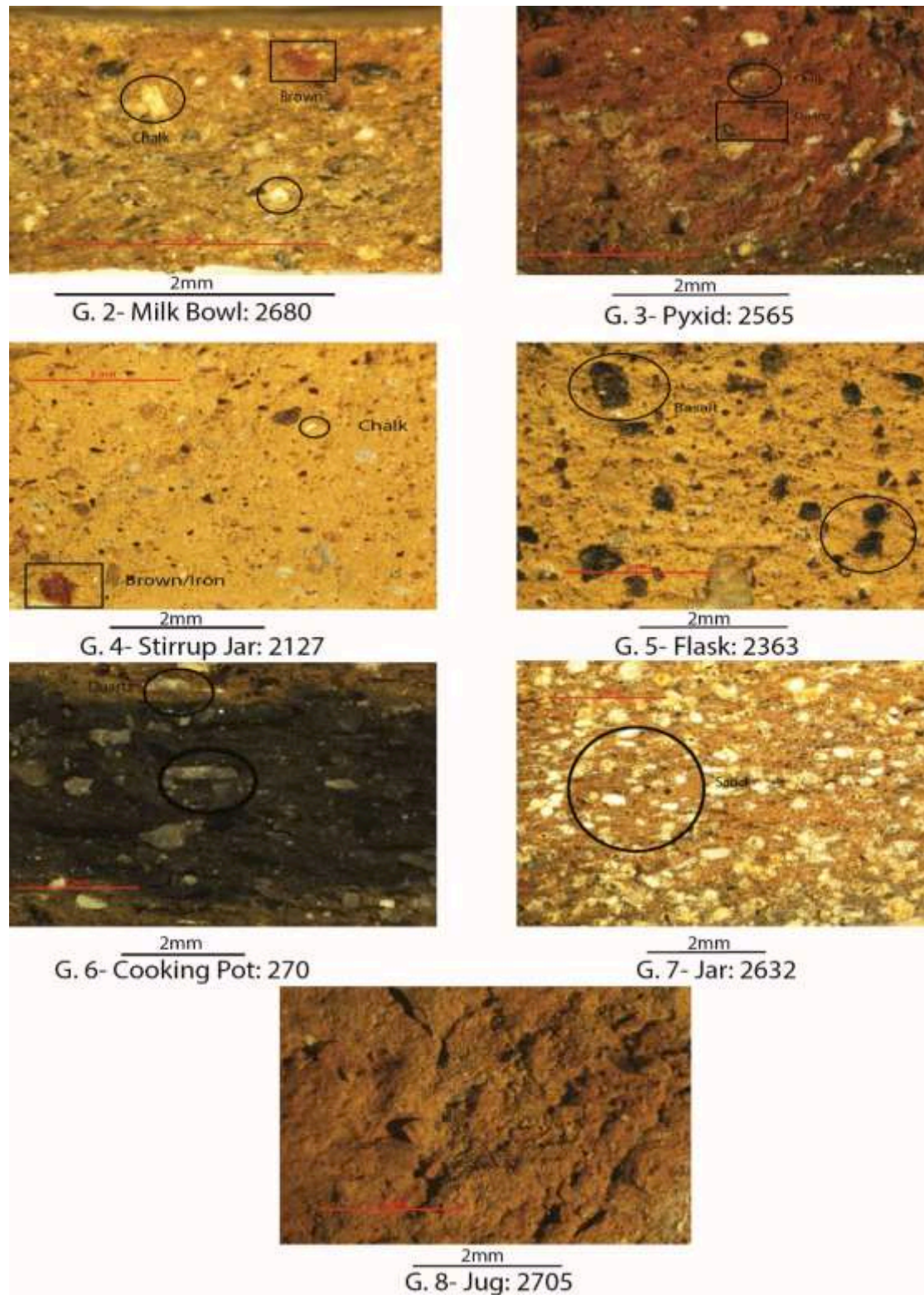


Fig 36. Inclusions of the other 7 fabric groups in the collection

All the collection under the study has consisted of these above fabrics, most of the types are distributed on the fabric groups, for example, in group 1 with its 7 variants, biconical jars, bowls, flasks, chalices, jars, jugs, juglets, dipper juglets, kraters of all types, oil lamps, and pyxides have been made, which is an indicator that the majority of the pottery of tomb one has been made of local clay which is available in the area and is simply made. The rest of the groups have distinguished fabrics which are mostly finer and with better quality, for example, group 2 is only found in the milk bowls which were better treated and thinner than the group 1 pottery. Although it might have been locally produced, group 4 which the stirrup jars only have been made out of for special treatment. Group 5 with only one flask that most probably have been imported, group 6 for only the cooking pots, group 7 for only the Canaanite trade jars, and group 8 which is for the ring base ware which is also suggested to be imported like group 7.

Another observation about the fabrics of the collection pointing out that the pottery of the earlier levels like level 5 and 4 have more of the group 1 with variants 3, 4, 5, 6, and 7 than the variants of 1 and 2. This probably means that the while chalk chips have been used in later levels, with a purpose of utilizing the nearby recourses, with bear in mind that the pottery of the earlier levels are made of better quality than the pottery of the levels 2 and 1. The quality of the pottery in fabric and treatment is relatively not high but the collection itself it can be noted, generally, the pottery of the levels 5 and 5 are taken care of more than the pottery of level 3, 2, and 1, which is why the fabric is generally better in group 1, variants 3, 4, 5, 6, and 7. As well as a very important difference, the pots walls are thicker in the variants 2 and 3 than that of the rest of the variants of the fabric group 1.

Below **table 21.** presents the list of the pottery vessels according to typology, with each of its registration number followed by the fabric group and variant that each vessel belongs, each of the pottery vessels belongs to the levels according the excavation number that has been given, no separation in the table between levels.

<p><b>Level 5</b></p> <p><u>Bowls:</u></p> <p>2538: G.1, V.2 2541: G.1, V.2 2544: G.1, V.2 2551: G.1, V.2 2558: G.1, V.7 2597: G.1, V.6 2601: G.1, V.2 2609: G.1, V.2 2616: G.1, V.4 2628: G.1, V.1 2630: G.1, V.2 2716: G.1, V.5 2724: G.1, V.1 2758: G.1, V.2 2761: G.1, V.2 2765: G.1, V.1 2778: G.1, V.1</p> <p><u>Milk, Carinated, Imported Bowls</u></p> <p>2574: G.2 2612: G.1, V.5 2615*: G.1, V.7 2615: G.8 2677: G.2, V.2 2680: G.2 2731: G.2, V.2 2775: G.8 2776: G.1, V.2</p> <p><u>Unnumbered (Bell-shape Bowl)</u></p> <p>G.1, V.2</p> <p><u>Cooking Pots:</u></p> <p>2588: G.6</p> <p><u>Kraters</u></p> <p>2575: G.1, V.7</p>	<p><u>Multi-Handled Kraters</u></p> <p>2621: G.1, V.4</p> <p><u>Krater-Mugs:</u></p> <p>2543: G.1, V.7 2687: G.1, V.5</p> <p><u>Jars:</u></p> <p>2543: G.1, V.4 2632: G.7 2651: G.1, V.6</p> <p><u>Biconical Jars</u></p> <p>2582: G.1, V.7 2649: G.1, V.3 2709: G.1, V.7 2741: G.1, V.3</p> <p><u>Jugs:</u></p> <p>2569: G.1, V.2 2583: G.1, V.4 2592: G.1, V.5 2610: G.1, V.7 2613: G.1, V.2 2622: G.1, V.3 2626: G.1, V.2 2627: G.1, V.2 2643: G.1, V.4 2671: G.1, V.3 2676: G.1, V.1 2705: G.8 2711: G.1, V.2 2759: G.1, V.7 2763: G.1, V.1</p> <p><u>Juglets:</u></p> <p>2561: G.1, V.5 2691: G.1, V.1 2755: G.1, V.2</p>	<p><u>Pyxides</u></p> <p>2550: G.1, V.7 2559: G.1, V.5 2564: G.1, V.2 2565: G.3 2629: G.1, V.5 2690: G.3 2691: G.1, V.2 2696: G.1, V.7</p> <p><u>Flasks</u></p> <p>2641: G.1, V.3 2706: G.1, V.6 2742: G.1, V.2</p> <p><u>Chalices:</u></p> <p>2580: G.1, V.2 2584: G.1, V.6 2636: G.1, V.1 2670: G.1, V.1</p> <p><u>Oil Lamps :</u></p> <p>2591: G.1, V.6 2598: G.1, V.2 2612: G.1, V.1 2654: G.1, V.3 2675: G.1, V.3 2683: G.1, V.4 2717: G.1, V.1 2757: G.1, V.7</p> <p><b>Level 4</b></p> <p><u>Bowls:</u></p> <p>724: G.1, V.2 731: G.1, V.7 739: G.1, V.4 805: G.1, V.1 806: G.1, V.1 810: G.1, V.1 833: G.1, V.3</p>	<p>844: G.1, V.1 918: G.1, V.1 2280: G.1, V.3 2281: G.1, V.3 2289: G.1, V.1 2293: G.1, V.2 2306: G.1, V.7 2347: G.1, V.1 2352: G.1, V.7 2356: G.1, V.1 2377: G.1, V.3 2391: G.1, V.7 2401: G.1, V.2 2403: G.1, V.2 2416: G.1, V.1 2423: G.1, V.2 2466: G.1, V.2 2490: G.1, V.2 2505: G.1, V.1</p> <p><u>Milk, Carinated, Imported Bowls</u></p> <p>2470: G.1, V.1 2496: G.1, V.5 2498: G.2, V.1</p> <p><u>Cooking Pots:</u></p> <p>2314: G.6 2331: G.6 2481: G.6</p> <p><u>Multi-Handled Kraters</u></p> <p>744: G.1, V.1 2308: G.1, V.2 2399: G.1, V.2 2427: G.1, V.1 2439: G.1, V.1</p> <p><u>Krater-Mugs</u></p> <p>737: G.1, V.7 2338: G.1, V.1 2342: G.1, V.2 2395: G.1, V.7</p>
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2415: G.1, V.2 2426: G.2, V.1  <u>Jars</u>  2412: G.1, V.1 2543: G.1, V.4  <u>Biconical Jars</u>  888: G.1, V.5 898: G.1, V.3 2291: G.1, V.4 2340: G.1, V.1 2351: G.1, V.2 2411: G.1, V.1 2431: G.1, V.5 2463: G.1, V.2 2479: G.1, V.2 2486: G.1, V.1 2526: G.1, V.7 2534: G.1, V.2  <u>Jugs</u>  894: G.1, V.1 895: G.1, V.5 2266: G.1, V.2 2337: G.1, V.1 2351: G.1, V.3 2410: G.1, V.1 2422: G.1, V.2 2424: G.1, V.1 2437: G.1, V.2 2478: G.1, V.1  <u>Dipper Juglets</u>  852: G.1, V.7  <u>Pyxides</u> 2283: G.1, V.5 2296: G.1, V.2 2299: G.1, V.1 2328: G.1, V.2	2372: G.1, V.5 2392: G.1, V.1 2393: G.1, V.1 2407: G.1, V.3 2453: G.1, V.7 2484: G.1, V.3 2530: G.1, V.1 2534: G.1, V.7  <u>Flasks</u>  2363: G.5  <u>Chalices</u>  2285: G.1, V.1 2316: G.1, V.1 2321: G.1, V.2 2439: G.1, V.1  Oil Lamps  761: G.1, V.2 870: G.1, V.1 872: G.1, V.2 2284: G.1, V.2 2332: G.1, V.1 2336: G.1, V.2 2370: G.1, V.1 2418: G.1, V.4 2472: G.1, V.2 2485: G.1, V.4 2500: G.1, V.1 2504: G.1, V.2 2528: G.1, V.4   <b>Level 3</b>  <u>Bowls:</u>  523: G.1, V.2 543: G.1, V.1 702: G.1, V.1 1902: G.1, V.2	1970: G.1, V.2 2006: G.1, V.2 2032: G.1, V.4 2037: G.1, V.4 2054: G.1, V.2 2070: G.1, V.1 2073: G.1, V.2 2086: G.1, V.5 2091: G.1, V.2 2092: G.1, V.1 2124: G.1, V.3 2126: G.1, V.4 2159: G.1, V.1 2175: G.1, V.2 2198: G.1, V.1 2210: G.1, V.3 2220: G.1, V.2 2226: G.1, V.1 2227: G.1, V.2 2242: G.1, V.1 2248: G.1, V.2 2257: G.1, V.1 2258: G.1, V.2 2259: G.1, V.2  <u>Milk, Carinated, Imported Bowls</u>  1943: G.8  <u>Cooking Pots</u>  1990: G.6 2195: G.6  <u>Kraters</u>  2043: G.1, V.3 2154: G.1, V.2  <u>Multi-Handled Kraters</u>  1866: G.1, V.1 1881: G.1, V.3	2025: G.1, V.2 2122: G.1, V.3  <u>Krater-Mugs</u>  537: G.1, V.2 545: G.1, V.2 1996: G.1, V.4 2071: G.1, V.2 2108: G.1, V.2 2143: G.1, V.1 2146: G.1, V.2 2204: G.1, V.1 2205: G.1, V.1 2236: G.1, V.7  <u>Jars</u>  1942: G.1, V.2 2105: G.7  <u>Biconical Jars</u>  534: G.1, V.1 1883: G.1, V.1 1963: G.1, V.1 1964: G.1, V.2 1982: G.1, V.1 2017: G.1, V.1 2023: G.1, V.1 2047: G.1, V.1 2072: G.1, V.1 2120: G.1, V.5 2151: G.1, V.2 2238: G.1, V.1 2263: G.1, V.2  <u>Jugs</u>  554: G.1, V.2 647: G.1, V.1 2087: G.1, V.2 2107: G.1, V.1 2131: G.1, V.1 2141: G.1, V.2
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2142: G.1, V.2 2168: G.1, V.2 2172: G.1, V.2 2207: G.1, V.1 2209: G.1, V.1  <u>Dipper Juglets</u>  2063: G.1, V.3  <u>Juglets</u>  2113: G.1, V.5 2225: G.1, V.1  <u>Pyxides</u>  576: G.1, V.1 584: G.1, V.1 615: G.1, V.1 668: G.1, V.2 681: G.1, V.2 718: G.1, V.7 2011: G.1, V.1 2019: G.1, V.1 2039: G.1, V.2 2052: G.1, V.2 2067: G.1, V.1 2084: G.1, V.1 2089: G.1, V.1 2134: G.1, V.1 2145: G.1, V.2 2177: G.1, V.1 2184: G.1, V.1 2187: G.1, V.2 2214: G.1, V.1 2215: G.1, V.1 2274: G.1, V.1 2277: G.1, V.2 2278: G.3  <u>Stirrup Jars</u>  1975: G.4 2031: G.4, V.1	2044: G.4 2127: G.4 2218: G.4 2217: G.4, V.2  <u>Flasks</u>  1928: G.1, V.2 2083: G.1, V.3 2116: G.1, V.3  <u>Chalices</u>  673: G.1, V.1 1924: G.1, V.1 1925: G.1, V.1 1997: G.1, V.2 2000: G.1, V.1 2018: G.1, V.1 2020: G.1, V.1 2022: G.1, V.1 2097: G.1, V.1 2155: G.1, V.2 2157: G.2, V.1  <u>Oil Lamps</u>  642: G.1, V.1 677: G.1, V.2 1954: G.1, V.2 2045: G.1, V.1 2095: G.1, V.1 2110: G.1, V.1 2132: G.1, V.1 2158: G.1, V.1 2222: G.1, V.2 2270: G.1, V.1 2271: G.1, V.1  <b>Level 2</b>  <u>Bowls</u>  296: G.1, V.4 311: G.1, V.1 471: G.1, V.7 1492: G.1, V.1	1543: G.1, V.1 1577: G.1, V.1 1680: G.1, V.4 1691: G.1, V.1 1693: G.1, V.1 1695: G.1, V.7 1724: G.1, V.2 1736: G.1, V.2 1776: G.1, V.7 1785: G.1, V.2 1786: G.1, V.7 1834: G.1, V.3 1839: G.1, V.4 1848: G.1, V.2 1865: G.1, V.2 1870: G.1, V.1 1879: G.1, V.1 1896: G.1, V.2  <u>Milk, Carinated, Imported Bowls</u>  1568: G.8  <u>Cooking Pots</u>  270: G.6 1846: G.6  <u>Kraters</u>  341: G.1, V.2 1758: G.1, V.3 1798: G.1, V.2  <u>Multi-Handled Kraters</u>  339: G.1, V.1 1434: G.1, V.1 1546: G.1, V.2 1612: G.1, V.3 1646: G.1, V.2 1704: G.1, V.1 1722: G.1, V.2 1753: G.1, V.1	1761: G.1, V.2 1866: G.1, V.1 1881: G.1, V.3  <u>Krater-Mugs</u>  240: G.1, V.1 460: G.1, V.1 1552: G.1, V.7  <u>Jars</u>  479: G.7  <u>Biconical Jars</u>  1510: G.1, V.5 1524: G.1, V.1 1589: G.1, V.1 1590: G.1, V.1 1645: G.1, V.1 1674: G.1, V.2 1692: G.1, V.1 1764: G.1, V.1 1769: G.1, V.3 1883: G.1, V.1  <u>Jugs</u>  250: G.1, V.2 292: G.1, V.2 343: G.1, V.2 397: G.1, V.2 1396: G.1, V.1 1500: G.1, V.1 1527: G.1, V.2 1549: G.1, V.1 1551: G.1, V.1 1679: G.1, V.1 1681: G.1, V.4 1754: G.1, V.2 1782: G.1, V.1 1806: G.1, V.3 1855: G.1, V.2
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1875: G.1, V.3 1890: G.1, V.2	1794: G.1, V.2 1862: G.1, V.3	1167: G.1, V.1 1168: G.1, V.2 1199: G.1, V.7 1200: G.1, V.2 1238: G.1, V.2 1248: G.1, V.2 1271: G.1, V.2 1275: G.1, V.2 1305: G.1, V.2	<u>Biconical Jars</u>  56: G.1, V.5 108: G.1, V.5 1170: G.1, V.2 1216: G.1, V.1 1300: G.1, V.5 1313: G.1, V.7 1340: G.1, V.2	1128: G.1, V.1 1129: G.1, V.2 1136: G.1, V.2 1176: G.1, V.5 1257: G.1, V.1 1293: G.1, V.2 1303: G.1, V.1 1327: G.1, V.7 1334: G.1, V.2
<u>Dipper Juglets</u>  345: G.1, V.5 1595: G.1, V.3 1813: G.1, V.2 1884: G.1, V.2	<u>Chalices</u>  285: G.1, V.2 1440: G.1, V.2 1461: G.1, V.1 1480: G.1, V.1 1816: G.1, V.2	<u>Kraters</u>  182: G.1, V.2 1161: G.1, V.2 1214: G.1, V.1 1335: G.1, V.1	<u>Jugs</u>  978: G.1, V.2 996: G.1, V.2 1065: G.1, V.1 1070: G.1, V.1/2 1075: G.1, V.1 1133: G.2, V.1 1160: G.1, V.2 1188: G.1, V.2 1189: G.1, V.1 1277: G.1, V.2 1288: G.1, V.1 1310: G.1, V.4 1324: G.1, V.2	<u>Flasks</u>  1131: G.1, V.7 1206: G.1, V.3 1225: G.1, V.1 1268: G.1, V.1
<u>Pyxides</u>  457: G.1, V.3 505: G.1, V.1 1351: G.1, V.7 1356: G.1, V.2 1426: G.1, V.1 1431: G.1, V.1 1432: G.1, V.1 1453: G.1, V.1 1484: G.1, V.2 1495: G.1, V.2 1516: G.1, V.7 1544: G.1, V.1 1573: G.1, V.1 1639: G.1, V.1 1647: G.1, V.1 1672: G.1, V.1 1673: G.1, V.2 1687: G.1, V.1 1703: G.1, V.2 1706: G.1, V.1 1788: G.1, V.1 1882: G.1, V.1	<u>Oil Lamps</u>  299: G.1, V.2 407: G.1, V.2 428: G.1, V.1 1409: G.1, V.1 1575: G.1, V.4 1603: G.1, V.1 1611: G.1, V.1 1614: G.1, V.2 1620: G.1, V.1 1642: G.1, V.1 1827: G.1, V.4	<u>Multi-Handled Kraters</u>  114: G.1, V.2 924: G.1, V.3 966: G.1, V.2 972: G.1, V.2 1006: G.1, V.2 1050: G.1, V.2 1099: G.1, V.3 1125: G.1, V.7 1218: G.1, V.2 1224: G.1, V.5 1239: G.1, V.2 1246: G.1, V.2 1272: G.1, V.5 1273: G.1, V.3 1290: ? 1292: G.1, V.3 1314: G.1, V.3	<u>Juglets</u>  101: G.1, V.5 116: G.1, V.2 1302: G.1, V.2	<u>Chalices</u>  926: G.1, V.7 934: G.1, V.7 1220: G.1, V.1 1242: G.1, V.1 1255: G.1, V.7 1337: G.1, V.7
<u>Stirrup Jars</u>  1852: G.4 1892: G.4, V.2	<b>Level 1</b>  <u>Bowls</u>  69: G.1, V.2 180: G.1, V.2 918: G.1, V.1 937: (2): G.1, V.3 937: G.1, V.2 959: G.1, V.2 965: G.1, V.2 1010: G.1, V.2 1015: G.1, V.2 1019: G.1, V.1 1024: G.1, V.3 1036: G.1, V.7 1081: G.1, V.2 1093: G.1, V.2 1108: G.1, V.3 1162: G.1, V.2	<u>Krater-Mugs</u>  927: G.1, V.2	<u>Pyxides</u>  145: G.1, V.2 936: G.1, V.1 948: G.1, V.1 1000: G.1, V.1 1004: G.1, V.1 1025: G.1, V.1 1034: G.1, V.2 1045: G.1, V.2 1091: G.1, V.1 1096: G.1, V.1 1097: G.1, V.1	<u>Oil Lamps</u>  57: G.1, V.1 121: G.1, V.1 168: G.1, V.2 196: G.1, V.1 968: G.1, V.1 1088: G.1, V.1 1172: G.1, V.1 1200: G.1, V.3 1329: G.1, V.3
<u>Flasks</u>  1405: G.1, V.1 1714: G.1, V.3 1757: G.1, V.3		<u>Jars</u>  1201: G.1, V.1		

Table 21. The pottery collection fabric groups and variants for each pot according to level.

### IV.3. Shaping

The selected pottery collection for this study has shown different sizes and shapes of pottery types, accordingly, each size of type has been produced throughout certain technology, depending on wheel marks and other manufacturing traces have been used for observing the methods that have been utilized in building a vessel. The main two methods that have been used are the wheel made with a great majority of pottery made out of this technology, mostly for smaller pots such as pyxides and oil lamps, as well as jugs and other small pots. The second method is the coiling method which has been used to form the large parts of the large pots such as jars or large kraters. Handmade pots are very rare in the collection, while chalices and flasks have been formed by two or more methods combined together in the classic way of building flasks, oil lamps have been formed on the wheel and pinched from one side later to form the nose or the channel of the lamp. The attachment of handles and spouts had occurred in the collection regularly and very commonly, in addition to the attachment of the ring base for some of the forms in the kraters and the large bowls.

All the biconical jars, bowls, cooking pots, jugs, juglets and dipper juglets, which have been selected for the study have been all thrown on a fast wheel technology, the attachment of the handles wither one or two handles have been added to the pot after drying. The bowls were most of the time wheel thrown with a heavy base and relatively thin body walls, the large bowls, on the other hand, had a bar handle attached horizontally at the top of the bowl before firing, mostly a small and short handle, with one wishbone attached to the milk bowls and some of the base ware bowls, with a few horizontal loop handles attachment. On the other hand, the chalices have been manufactured in two ways, first, the bowl which has been thrown on the wheel, and the base which is thick, and later both parts have been attached sometimes with no hand traces appear, and sometimes rough hand attachment is clear on the surface. The Cooking pot is made with the same technique as the bowls with a heavy base and slightly thin walls, the juglets and dipper juglets are few in the collection but all made of the wheel while handles were attached later during the drying process.

The 16 flasks that have been studied were made in two stages, which is the classic way to form it, first, two bowls have been thrown on the wheel with the same size. A neck then was formed on the wheel, after that the two bowls were attached in

a lentoid shape with a space on top to allow the attachment of the neck. Finally two handles were attached neck to shoulder. The rounded jars have been made by coils technique which forms the whole body of the jar except the neck and rim which mostly made on the wheel and then attached to the body. The Canaanite jars are made by the same technique, with only one difference that the upper shoulder of the pot is made on the wheel which created a sharp edge or angle in this area down to the body, and then thick vertical handles attached to the body.

Jugs are made on the wheel, with handles attached and a pinch of the opening which made while forming on the wheel as well as, attaching handles in several areas of the pot according to the shape and size of the jug. The krater-mugs shape pots were also made on the fast wheel, with a handle attached to the body during forming or after drying with thick bases and thin walls, the krater collection has a variety of types; the simple type which made on the wheel of the krater doesn't have a tall base which looks like a huge chalice, otherwise it's an attachment process for the two parts. The multi-handled kraters are having a large size which proposes a mix of techniques depend on the feature of the pot, usually, this type of vessel is coiled made with a thick base, and an opening formed on the wheel. Other types have a pedestal pendant which also has been attached to the lower of the pot with handles for the attachment of the body with the pedestal.

The oil lamps in the collection were all made by throwing on the wheel as a bowl shape, and then it was pinched from one side to form the nose of the lamp. The pyxides are of several sizes and were all thrown on the wheel, most of them have thick bases, two handles have been attached to the body during the forming of the pot, on the other hand, painting decorations have been applied to the pots exterior body surface, the decoration may have been applied before firing the pots. The stirrup jars have been also wheel thrown with thick walls, and the attachment of the stirrup handle and the vertical spout was made after forming the pot, with decoration, applied before firing.

#### **IV.4. Firing**

The firing process ranges from poor to over fired in the collection, depending on the section features such as if the section has no core or if it has the thickness of the section and the thickness of the core, accordingly and with the use of the standards

that have been put by Clive Orton *et al.* in *Pottery in Archaeology*. The firing levels have been classified into 10 degrees in light of certain observations of the firing process which is classified according to core variations which determines the condition in which the pot was fired in terms of oxidization, organic presence and level of burning, core existence, reduction level, core's nature; sharpness, thickness and diffusion, color of the core, and the speed of which the pot was cooled in the air. These standards were generated over 11 degrees starts with no core in the section, no organics and the pot completely oxidized which is number (1), the final degree (11) characterized by being reduced and cooled rapidly in air.

Most of the pottery collection was sorted under the above classification, the 90 (16%) of the 541 pots have not been examined due to the intact body which did not allow the opportunity to check the section. According to the classification of Picon, there are three modes of firing which each produce a color when it is applied in firing, Mode A which is affected by the atmosphere during the closing of the oven at the last stage, in addition the nature of the clay, it produces red and black, Mode B, similar to mode A but produces only black when the pot is not well fired, mode C in which the pots are not affected by the covering because the inclusions are sandy (Picon 1973: 55-83). For Tell Dothan collection, it appears that it's not a sandy clay, it doesn't have the red core color and the cores when it's not well fired are gray and it's a marl clay, thus, it fits Mode A and B. with very few pots of mode C. The result of the pottery examination for firing degrees came as follows:

- 1- 185 vessels (34%) out of 541 vessels have been labeled with level (1) which is characterized by having fine-textured clays, oxidized during the firing process, and organics not originally present, no core.
- 2- 14 vessels (2.05%) have been labeled to level (2) characterized by being coarse-textured clay, oxidized, and organics may or may not have been originally present, no core.
- 3- 12 vessels (2.02%) have been labeled to level (3) characterized by being fine-textured clay, oxidized, organics originally present, with diffuse core margins.
- 4- 11 vessels (2%) have been labeled to level (4) characterized by being coarse-textured clay, oxidized, organics originally present, with diffuse core margins.

- 5- 4 vessels (0.07%) have been labeled to level (5) characterized by being fine-textured clay, reduced, and organics not originally present, diffuse core margins.
- 6- 17 vessels (3.01%) have been labeled to level (7) characterized by being fine-textured clay, reduced, and organics organically present, diffuse core margins.
- 7- 4 vessels (0.07%) have been labeled to level (8) characterized by being coarse-textured clay, reduced, and organics may or may not have been originally present, no core.
- 8- 173 vessels (31.09%) have been labeled to level (9) characterized by being fine-textured clay, reduced and cooled rapidly in air, with sharp core margins.
- 9- 19 vessels (3.05%) have been labeled to level (10) characterized by being fine course-textured clay, reduced and cooled rapidly in air, with sharp core margins.

The pottery collection as has been illustrated above has the largest group of vessels that have been well-fired and oxidized, with no core. The next group is the pots with sharp reduced and have sharp core margins, in addition to that, 391 (86%) out of the 451 examined vessels are fine-textured clay made, 48 (10.06%) of the vessels made with coarse-textured clay. the two moods of firing indicate that the clay nature plays an important role in the firing process, organics have been used present or not present equally in the collection and that the firing process was not similar in the collection. In addition to that, air bubbles have been frequently noticed on the surface and the section of the pots mostly on the jugs and the large vessels which may indicate the poor firing and the large amount of salt in the clay.

#### **IV.5. Surface treatment**

As mentioned above, the surface of the pottery in most cases have traces of materials that has not been burned, it has been caused by the overfiring conditons which in effect damages and cracks with holes in the surface and showed that it's not treated well, noticed are small and large air bubbles, organic negative traces and cracks in the pottery vessels walls, which all give an impression that the pottery was not aimed to be used for daily life use. Other notice the weathering of the surface of some vessels which may have been decorated or slipped organically but due to weather or long period of resting in the tomb and then in different circumstances,

since excavation may have made them worn out and causing the loss of its original state of manufacturing.

In general, the great majority of the pottery in the collection have not been treated well, i.e. no burnishing was applied. Few examples of polishing and few examples were trimmed with tools such as a knife, slip is also very rare, but the majority of the treatment was the decoration of painted bands and circles on several pottery types such as pyxides, milk bowls, stirrup jars, kraters and multi-handled kraters, a few jugs, flasks and juglets, a few biconical jars and the painted decoration is completely absent from oil lamps, bowls, jugs, cooking pots and chalices.

The items that have been polishing-treated are mostly the imported/imitated pottery vessels such as milk bowls, base ware pots such as bowls, and very few jugs. The 5 milk bowls which were common during the early phases of the Late Bronze and which mostly came from the 5<sup>th</sup> phase of tomb 1, are all well-polished and decorated. In addition to the mild bowls, one chocolate-on-white (Mycenaean) bowl also have been polished, in the group of the 10 stirrup jars, two were polished and probably burnished, the rest of them had decorations but the surface had worn out, and the painting bands had disappeared also in some cases. A few vessels of the base ware have been found with a very fine texture and have been well surface treated.

The slip was applied mostly on the vessels that have been decorated with lines. The slip is most of the time of white color applied to the exterior surface of the pots in order to make it as a background or a foundation for the application of the painted lines or bands which I will talk about later.

#### **IV.6. Color of the pottery**

Using the Munsell color chart in examining the colors of the collection. The following observations have been obtained, 4 colors have dominated the collection, the Pink 7/4 HUE 5 YR. with one variation is the most dominated with about (30%), White 8/2 HUE 10 YR, (which is known as the buff ware color pottery) is the second most dominated with about (18.4%). The Reddish Yellow 7.6 HUE 7.5 YR. is about (17%), the fourth color is the Very Pale Brown 7/4 HUE 10 YR. with about (13%) of the collection. Other colors have occurred with less significant percentage such as

gray, red, brown with a few variants. The four colors which have been mentioned are distributed almost equally to the different types of the pottery vessels, which throws light on the homogeneity in the clay. Moreover, another indication is that there is a relation between the colors and the degree of firing with the most notable are the white and the pink colors; in most cases, pottery with white color are the oxidized ones with firing level (1) and pottery with pink color are the less well fired and reduced with level (9). The other two colors may represent the different levels of firing in between levels 1 and 9 as well as the over-firing pots which are rare and usually have a gray color for the surface and the section.

On the other hand, a few pots have shown different colors such as red, light red, weak red, dusky red, gray, dark gray, and dusky gray, and those pots are mostly been effected not by firing but by the origin of the clay such as the Canaanite jars. The base ware pots, the flasks at some extent, the cooking pots, few pyxides, and slightly less in the stirrup jars. Which probably represents about (4%) of the whole collection.

#### **IV.7. Decoration of the pottery**

The 541 vessels have a variety of different manufacturing characteristics, such as types, shapes, fabric, firing, color, measurements and decorations. 136 (25%) pots out of the whole collection had been decorated with several decorative aspects such as painting, molding, attaching decorative parts, dotting holes in the clay and handles. Main two colors of the painted decorations, composed of red which is the most dominated, and brown. Other colors such as gray, yellow, white, and black are very rare. The great majority of the decorated pots are the pyxides which out of 86, 66 pyxides have been decorated. Other notable vessels are the multi-handled kraters with molding and attaching parts. A few biconical jars and bowls and jars have been decorated with painting bands, as well as, the painted decoration of all the stirrup jars, milk bowls and some of the base ware vessels.

The patterns of the decoration on the pyxides are limited in all the cases to geometric painted lines which run horizontally and vertically on the surfaces of the rims, handles, shoulders, bodies and bases, creating circles, triangles, squares, bands of thin or thick lines, net-shaped and straight lines, and sometimes irregular shapes

and lines. In two cases the whole body is covered with a net-shaped decoration. Moreover, the majority of the coloring of the pyxides was red, light red, brown, and light brown. Those symbolic decorations on the pyxides, in my opinion, present some kind of funerary practices, bearing in mind the burial context that these pots have been used in. The decoration of the pyxides is almost equal in the quantity in the 5 levels of the tomb which reflects a tradition lasted for several centuries at Tell Dothan and which have been influenced by the greater culture of the region.

Two small biconical jars have been decorated with geometric, flora and fauna themes one of the pots have been painting decorated with a tree motif on the two sides of the body, as well as geometric themes of net shape on the upper body, and horizontal bands on the shoulder and the body. The other jar is decorated with a tree motif as well as an animal (a goat) eating from the branches of the tree **fig. 37**. illustrates **pl. 50.4**. the themes of decorations of a small biconical jar. Both symbolic meaning we have illustrated in the previous chapter.



Fig. 37. Decorative motives on a small biconical jar 1883, level 2 of tomb 1 (G. Nagagreh)

Other themes of decoration from the collection are known on the stirrup jars with colors of red, gray and brown. The themes of the decoration are geometric as mentioned above, influenced by the Aegean world pottery decoration in the Late Bronze Age, but the quality of the decoration is not of high as the originals, which makes it clear that the stirrup jars at Tell Dothan were imitated from the Aegean world at that period not only by decoration, but by clay type.

The milk bowls (white slip) were decorated in the style of the white slip II, less decorative themes, consist of lines that run over certain parts of the body of the bowl. In the case of the 5 bowls of the collection, only one was typical white slip II



decorated with good and clear quality of the decoration, the rest of the bowls are white slip II decorated but with a low quality, I suggest the imitation process of manufacturing and decorating those bowls, **fig. 38. Pl. 16.3.** illustrates the type of decoration for the milk bowls at Tell Dothan tomb 1.



Fig 38. White slip II on the milk bowl 2677, level 5, tomb 1 (G. Nagagreh)

Three bowls have been studied in the collection, one of them is the so-called chalcocite on white/Mycenaean bowls with a decoration of one thick grayish band on the central of the body external and one on the central body internal. The bowl is missing the base, but one of the distinctive features of the bowl are the two horizontal handles (kaserola handles shape). The other bowl is missing the excavation number but from the type of the bill-shapes bowls (or early Mycenaean type) which are known in the Iron Age lowlands "Philistine pottery" with a decoration of geometrical lines and bands running vertically on the upper part of the body with two bands on the very lower part near the base, the vertical lines are thin and diagonal covering all the upper part of the bowl, with two horizontal handles. The third bowl as a small shallow bowl which might have been imported, one of the very rare examples of importation due to clay and shape, the bowl is decorated with geometrical thick lines.

A few jugs and juglets have been decorated with net shape bands and lines that placed on the shoulder and all over the upper half of the body, and sometimes only two to three thick horizontal lines on the upper part of the body and the shoulder, the same occurred on the storage jars.

The multi-handled kraters in addition to the painting decoration of thick and thin horizontal and vertical bands, net and wavy lines, and floral themes with an unknown type of tree on one of the kraters. The multi-handled kraters have other decorative themes such as the attaching of additional parts i.e. multi handles, pedestal pendants with a mold decorated pedestals sometimes in spiral/shill-shape decoration,

such as in the **fig. 39.** and **pl. 37.2.** which illustrates a unique decoration on a multi-handled krater.



Fig 39. Decoration on one of the multi-handled kraters 966 in tomb 1, after (Cooley and Pratico 1995: 177, Fig. 22.3)

14 out of 16 flasks that have been included in the collection have decorative themes, the flasks wither small or large had the same decorative principle in the five levels of the tomb. The flasks are decorated sometimes with white color background/foundation, and brown/red/pale yellow colors lines in concentric circle-shape on the two faces of the pot, sometimes painted dots are found on the rim.

#### IV.8. Dimension and Size

Generally, the dimensions of the pottery in the collection are not significantly varied, instead, in most cases especially regarding the same type of pots within the 5 levels, the dimensions are very similar, not standardized but relatively the same sizes, this gives a feeling that a standardized dimension was applied. On the other hand, the prime function of most of the vessels for funeral purposes may have played an important role in the potter's decision to use one scale over the time span of pottery production for the tomb along with the use of the tomb itself.

Most notable types for the frequency of the production and standardization of dimensions are the krater-mugs, biconical jars, jugs, pyxides, chalices, and oil lamps throughout the 5 levels. The fact that these types have been produced in large numbers compared to other types, making it possible to attempt in finding differences in each level as well as, attempting to examining if there is an evolution or big change in the production. In this section, I look at dimensions spastically, while in the typology section, shape, formation, and characteristics will be looked at.

Relative measurements will be taken into account in this section as the process of precise measurements will be illustrated in the pottery catalog where it will be clear and available to comparisons. As mentioned above, certain types are comparable. In addition, certain measures are considered in this section, the rim (opening) diameter, rim thickness, the vessel height, maximum body diameter, and base diameter, with an exception for the oil lamps where the nose and the bowl are measured. The following **table 22.** illustrates the measurements of different types of the pottery that have been processed

Measurements	Krater-Mug	Biconical Jars	Jugs	Pyxides	Chalices	Oil Lamps
Max. Height	20cm	24cm	30cm	22cm	17cm	8cm
Min. Height	9cm	13cm	16cm	8cm	11cm	4cm
Max. Rim Ø	22cm	14cm	11cm	9cm	19cm	19cm
Min. Rim Ø	11cm	7cm	7cm	5cm	12cm	13cm
Mix. Body Ø	25cm	27cm	25cm	17cm		
Min. Body Ø	13cm	16cm	13cm	8cm		
Mix. Rim thickness	1.1cm	1.1cm	1.1cm	0.8cm		0.8cm
Min. Rim thickness	0.5cm	0.4cm	0.4cm	0.4cm		0.4cm
Max. Base Ø	10cm	11cm	11cm	12cm	15cm	
Min. Base Ø	6cm	5cm	7cm	5cm	7cm	

Table 22. Main dimensions of maximum and minimum sizes. (Ø for the diameter)

It was hard to find big differences between the pottery types in each level, however, careful and relative – due to the nature of the collection – observations on the sizes allowed me to grasp very slight differences in the sizes of pottery in the 5 levels. 22 krater-mugs in the collection that have been measured with a relative median size as fellows. The height of the krater-mugs of levels 3 and 4 is at about 16cm is greater than the height of the levels 2 and 5 which is about 14cm, level 1 on the other hand had produced only one similar to those of level 2 and 5. Rim diameter of the krater-mugs of levels 3 and 4 of is at about 18cm larger than those of level 2 and 5 which is about 16cm with level 1 on the same scale. Rim thickness is relatively the same of all level at about 0.9cm. Body maximum diameter is larger in levels 3 and 4 with about 21cm, and about 19cm for levels 1, 2 and 5. The base diameter is similar in all levels at about 10cm.

The 46 biconical jars have a median size-frequency for the height of about 17cm in level 1 and 2 and 20cm height in the levels 3, 4, and 5 which makes the biconical jars taller in the levels 3, 4, and 5, while rim diameter is larger at 11cm in levels 3, 4,

and 9cm in levels 1 and 2. Maximum body diameter is larger in the levels 3, 4, and at 21 cm and 18cm in levels 1 and 2, the base diameter 10cm and the rim thickness 0.8cm is relative with the same measurements for all levels.

Among the 67 jugs in the collection, there are types that have a standard shape found in the 5 levels of tomb 1, which have some slight modifications that I will illustrate in the typology, and there are jugs with distinctive shapes that have not appeared and all the levels. Thus, relative measurement frequency have been made with the following, rim diameter in levels 1, 2 and 3 are larger at 11cm than levels 4, and 5 at 10cm. the height of the jugs in levels, 1 and 2 is about 24cm greater than height in levels 3, 4, and 5 at 22cm relatively. Rim thickness is almost the same in all levels at 0.8cm, maximum body diameter is greater in levels 1 and 2 at about 21cm than in levels 3, 4, and 5 at 19cm, while base diameter relatively very close in all levels at about 10cm.

86 pyxides were measured for this study, the pyxides of the tomb are of three sizes, large, medium and small in all the levels, but in general, the median measurement is as fellows, rim diameter in all levels is approximately similar at about 10cm for the large pyxides in all level, except level 5 with small size pyxides. The medium size in all levels is about 7cm, and 5cm rim diameter for the small pyxides in all levels. Same with the height, three sizes with a note that the height of levels 1 and 2 is generally greater at about 15cm than levels 3, 4, and 5 which is about 10cm. Rim thickness for the 5 levels is the same at about 0.6cm. bases in levels 1 and 2 are larger than levels 3, while levels 4 and 5 with almost rounded bases in most of the cases.

The dimensions of the 29 chalices have shown that the rim diameter is larger in the levels 3, 4, and 5 at about 16cm, while 14cm in levels 1 and 2. The height seems to be bigger in level 3 than the rest of the levels at 17cm while the rest of the chalices in the other 4 levels measured relatively at 14cm in most of the cases. Base diameter is larger in levels 1, and 2 at 10cm, while relatively 9cm in the relative frequency.

52 oil lamps have been measured for maiden size taking in account rim diameter, maximum height or depth, rim thickness, nose and bowl length. The lamp diameter is larger in levels 2, 3, 4, and 5 at approximately 17cm, while at about 15cm in level 1. The lamps of levels 1 and 2 are shallower at about 5cm than lamps of levels 3, 4, and 5 which is about 7cm deep. Rim thickness is relatively the same at about

0.5cm, the nose length of level 1 and 2 is greater 6cm than that of levels 3, 4, and 5 which is about 5cm, the bowl of the lamp is shorter in levels 1 and 2 at about 9cm, than that of levels 3, 4, and 5 which is 11cm.

The rest of the collection is consist of bowls, cooking pots, dipper juglets and juglets, flasks, jars, milk bowls and imitated/imported bowls, kraters and multi-handled kraters, and stirrup jars. These types have shown no standardized dimensions in which it did not allow a size comparative. With that being said, a general note will be given to those types which match the measurements of the comparable types above. The bowls in the 5 levels are of 3 sizes; large with an average of 28cm in width and about 14cm in depth. The medium size for the bowls is about 18cm in width and 10cm in-depth, the small bowls width average is about 13cm, while the depth is about 7cm. On the other hand, 8 cooking pots with, a large one about 28cm wide, and about 16cm deep, medium ones with an average of 20cm wide and 11cm deep, the small cooking pots are 14cm wide and about 7cm deep. Dipper juglets have almost the same measurements at about 24cm deep and about 8cm rim diameter. The juglets are of different types, while the 16 flasks shown three sizes as most of the collection different types. A very large and unique flask measured at 45cm in depth and 12cm rim diameter, the rest of the flasks are of smaller sized 15cm deep of the medium size, and about 12cm deep of the smallest flask in the collection.

Large storage jars and Canaanite jars are included in the collection, all of a large size, the average width is about 36 cm and rim diameter are about 8cm. Kraters are of medium size with width at about 30cm and about 16cm depth. Most of the multi-handled kraters of a standardized size with average width at about 28cm, with width at about 20cm. almost all the 10 stirrup jars have the same height at about 11cm, with maximum body diameter at about 10cm.

In conclusion, it appears that it's hard to assume a clear picture of the pottery evolution in terms of size, nevertheless, some of the examined types are slightly larger in certain levels and smaller in others, all in all, levels 1 and 2 showed more similarity than levels 3, 4 and 5 which sheds a light on the chronology of the collection which can be relatively understood not only through measurements but with other fractures which all can lead to a certain result.

#### **IV.9. Description, typology and seriation of the pottery collection<sup>14</sup>**

In the following section, the pottery collection will be presented in order of types and levels, I will start the typology by reviewing the types, each one in the 5 levels of tomb 1, the types will be discussed according to several criteria including size, body shape, rim formation and orientation, base type, placement of attached parts for the pot in the 5 levels, and mentioning some unique treats in the types which differentiates them according to each level. For each type will be an introduction, followed by a detailed description with reference to common finds in other sites in the region. Fabric and measurements will also be included in this section for the pots. The description typology will be as well supplemented with a catalog in which all the pottery that I will discuss, also will be illustrated. In addition to that, the pottery order is started with the open types such as bowls, cooking pots, kraters, multi-handled kraters, krater-mugs. The second types are the closed types such as storage jars, biconical jars, jugs, juglets, dipper juglets, pyxides, stirrup jars and flasks, the third group is the open shape which was used for lighting and incense burning such as chalices and oil lamps. Each of the three groups includes the distinctive pots such as imported, decorated or shape differences.

The scale that will be used in the catalog is the 1/3cm for all the vessels except the flasks which 1/4 cm will be used. 88 plates with 38 tables are included for the pottery collection, with numbering a serial number (1, 2, 3, etc.) for the pots in the plates, and the original excavated numbers, type, color and fabric group are included in the supplemented table for each plate.

##### **IV.9. 1. Bowls: (pls. 1-16)**

A total of about 607 bowls have been found in the 5 levels of the tomb 1. 117 of the bowls have been included in the current study. Several types and sup-types are present in the collection, the bowls of this collection consist of small bowls, medium-size bowls, deep bowls, large flat bowls (plates), biconical bowls, rounded, hemispherical and carinated bowls. The great majority of the bowls in all levels are

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<sup>14</sup> For numbers and general classifications of the pottery see table 16 pp. 126, and table 20 pp. 148.  
For fabric groups see table 21 pp. 166, for dimensions see table 22 pp. 176.

open types, with four main base types; ring, disk, flat and rounded bases. The bowls will be described morphologically and in addition to the seriation which will be done by searching the common types in other sites in order to give the relative dating for the collection with each level relative chronology. The order of the typology will be from the lower level 5 in tomb 1 which is relatively dated to the Late Bronze IIA, down to level 1 which is dated to the Iron Age I.

**Bowls,** Level 5: (pl. 1, 2) 17 medium size bowls have been included in the present study, the bowls are of fabric group 1, with variants: 1, 2, 4, 6 and 7. Those bowls measurements are varying from 13 to 25 cm in opening delimiter, and 5 to 12 cm in height. Two main types are present, the rounded-hemispherical bowls with thin rims and thick bases. The rims are simple rounded, or simple (pl. 1: 1-9, 2: 1-3). Some of them having an invert on the top bowl 7, the bases are disk bases and disk concave bases, with a flat base for bowl 1 in plate 2. This type of bowls has been found in several sites (Guy 1938; Loud 1948: pl. 65: 5, 6, 11-18; Tufnell 1958: pls. 70-72; Yadin *et al* 1958: pls. LXXXV, LXXXVII, XCI, CV, CXIV, CXIX, CXLIII; 1960; 1961; Amiran 1969: pl. 38: 1, 22; McGovern 1986; Franken 1992: 48: fig. 4-8: 15-16, fig. 4-14: 2; Bunimovitz and Finkelstein 1993: 137, fig. 6.30; James and McGovern 1993: fig. 43: 1; Fischer 2006: fig. 156; Gadot, Yasur-Landau, and Ilan 2006: 175: fig 12.2: 6, 10; Mullins 2007: pl. 67: 4, pl. 70: 1; Martin 2013: 413: fig: 10.11: 1-8; Duff 2015: plates: 33-36; Ben-Tor *et al.* 2017: fig. 7.132: 1, 2, 4,-5, 12, fig. 7.135: 1-9; Mullins and Yannai 2019: 171: fig. 3.1: 5, 9) and some new sties around Tell el-Qedah/ Waqqas (Hazor) (Katz 2020) (it also have traces in the Middle Bronze Age (Bonfil 2019) due to the semi-vertical upper body walls. It may have the tradition of the Middle Bronze Age carinated bowls, these bowls in this collection appears to have the carination disappeared with a slight angle or a rounded inverted instead.

The bowls in (pl. 2- 5, 6, 7, and 8) are open everted hemispherical, and shallower than the bowls in plate 1, with body sloping without angles or carinations, with a wide opening. The most prominent feature is rim folding and thickened interior, with sharp rim lip, And with concave or disk bases. (Guy 1938; Yadin *et al.* 1958: pls. LXXXVII, XCIV, CIII, CXXV; Amiran 1969: pl. 38: 10-11, 20; McGovern 1986; Franken 1992: 54: fig. 4-14: 2; Bunimovitz and Finkelstein 1993: figs 6.30, 6.31, 6.32; Fischer 2006: fig. 156; Yannai 2004: 1081, fig: 19.12: 1-3, 7;

Mullins 2007: pl. 49:3, pl. 74: 4-5; Martin 2013: 413: fig. 10.11: 1-8; Seger 2013: 297: plate. 15: 15-17; Duff 2015: Plate: 36: 5-8, plates: 37-40; Mullins and Yannai 2019: 175: fig. 3.3: 1, 4). The dating of the bowls of plate 1 and 2 matches the dating of Duff of stratum XIII in Tell Balatah Late Bronze IIA.

**Bowls,** Level 4: (pl.: 3-5) 25 bowls have been studied from level 4, the bowls of this level are of several types and sizes. The bowls of these plates are of group 1 fabric, variants 1, 2, 3, 4, and 7, the dimensions are 15 to 25 cm in opening diameter, and 6 to 12 cm height for pls. 3 and 4. 24 to 32 cm in opening diameter and 7,5 to 11 cm in height for pl. 5. The bowls are shallow hemispherical and rounded bowls in pl. 3 are similar to the bowls in the previous level in pl. 2. Pl. 3 similar to the previous plates in the current catalog. The bowls in pl. (4) are deep bowls with straight sloping body walls, and a thick round base (1, 2, and 3). Bowls (4, 5, 6, 7, and 8) are inverted and rounded body walls on the top with rounded bases and one of them with a concave base (bowl 7) another bowl 8 is with a disk base. The rims of the bowls are simple and rounded which are thickened exterior. With one flat rim of bowl 8. Deep bowls are also apparent in level 4, (bowls 9, 10, and 11) are deep bowls with a greater size than the rounded bowls, they have a high carination on the upper part of the body, with thickened rounded rim exterior, and a thick body walls sloping gently until the base, which are a ring and flat bases. Two of the bowls (9 and 10) are krater-like with high carination, bowl number (11) is a deep rounded bowl with thick walls.

The bowls of (pl. 5) are very wide, heavy plate-like bowls with inverted rims thickened internal, with thick and deep body walls, and tall thick ring and disk bases. Bowl number (6) is a shallow wide bowl on a high ring base. A common feature in bowls (4, 5, and 6) is the single small bar handle which probably has been attached on the rim horizontally for decoration purposes or a minor holding function (Tufnell, Inge, and Harding 1940: pls. XXXVII A, XXXVII B, XXXVIII A, XXXVIII B).

The bowls of pl. 3 resemble those bowls in Amiran (pl. 38) of the Late Bronze IIA, particularly bowl 14, and the other bowls in the same plate. The similarities are in the general open shape, with a difference in the bases, in Tell Dothan it's mostly flat, while in Amiran it has disk or ring bases (Amiran 1969: pl. 38: 14) while pls. 4 and 5 bowls are not found in Amiran. Bowls of these types in pls. 4 and 5 have been found in several sites (Tufnell 1958: pls. 70-72; Franken 1992: figs. 4-8: 16, 7-1: 6, 9;



Bunimovitz and Finkelstein 1993: fig. 6.31: 26, 6.32: 20, 21; Fischer 1997: fig. 5: 2-3, fig. 36: 1-2; Maeir 2004: fig. 1-2; 2006: fig. 254: 6-8; Seger 2013: pl. 34: 8; Panitz-Cohen 2009: pl. 1: 10; Ben-Tor *et al.* 2017: fig. 7.132: 1, 2, 4-5, 12, fig. 7.135: 1-9; Mullins and Yannai 2019: 177: fig. 3.4: 1, 6).

**Bowls**, level 3: (pls. 6-9) the bowls of level three are of a variety of types, sub-types, sizes and characters, it dates to the latest phase of the Late Bronze Age, featuring the end of the age. The bowls of these plates belong all to fabric 1 with variants 1, 2, 3, 4, and 5. Dimensions of the bowls differ, 12 to 25 cm opening diameter in all the bowls of the plates, the heights differ as well, 6 to 12 cm in plates 6 to 8, and 12 to 14 cm in height for plate 9. In pl. 6, the bowls are simple rounded and hemispherical bowls similar to the bowls of level 4, made with thin walls and relatively thick bases, slightly inverted bowls with angular inverted rims, thickened internal, and external for bowls (1 and 3). The rims usually are of a simple style, while bowl (7) with a flattened rim top internal. The bases of the bowls are dominated by rounded, flat and concave bases and a very short disk base like in bowl (9). The bowls of pls. 7 and 8, are plate-like bowls, deep, thick and wide, with carinations on the upper part of the body (Guy 1938: pl. 13: 1-6, 17-18, pl. 16: 4, pl. 19: 9, 12-13; Loud 1948: pl. 68: 12-20, pl. 69: 1-2; Tufnell 1958: pls. 70-72; Clamer 2004: fig. 20.20: 8-9, 20.23: 18, 20.24: 12; Fischer 2006: fig. 254: 8, 290: 2; Pantiz-Cohen 2009: pl. 8: 1, 12: 3, 14: 1, 17: 1619: 15-18; Arie 2013: fig. 12.77: 1, 4, Seger 2013: pl. 6: 6; Duff 2015: pls.: 69:4, 11, 74: 6, 75:4, 76: 9; Mullins and Yannai 2019: 171: fig. 3.1: 5, 9).

Bowls 1, 2, 3, and 6, of pl. 7 and bowl 4 in pl. 8 are with straight vertical rims, bowls 4 and 5 in pl. 7 are with a single bar handle attached horizontally to the rim of the bowl. In addition to that, bowls 4 and 5 of pl. 8 are with an angular inverted rim. The rims are simple and most of the time thickened internally, bowls 1 and 2 are thickened external. The bowls in pls. 7 and 8 have concave bases (1 and 2) disk base (3) and high ring bases for bowls 4, 5 and 6 in pl. 7 (Guy 1938: pls. 15: 14-16, 19: 14, 23: 7:12, 27: 16-17; Franken 1992: fig. 5-9: 3; Bunimovitz and Finkelstein 1993: fig. 6.31: 26; James and McGovern 1993: fig. 12-5; Yannai 2004: fig.19.12: 6; Mullins 2007: pl. 72: 1; Panitz-Cohen 2009: pl. 49: 6; Arie 2013: fig. 12.85: 1; Seger 2013: pl.13: 13; Duff 2015: pl.75: 13; Mullins and Yannai 2019: 177: fig. 3.4: 9).

These examples apply also for of pl. 8 bowls 1-5. Bowls of pl. 8 are of high ring bases for 1, 2, 3, and 5, and a thick disk base for bowl 4. Bowl 3 in plate 8 is of inverted nature, it has a closed opening almost like a rounded pot, with a sharp carination in the middle of the body, and a sharp internal angle with a thickened rim external. Bowl 6 is a hemispherical shape with a wide opening and shallow, the main character of the bowl is the thickened rim internal which makes it a typical Late Bronze Age IIA/IIB bowl as well as the concave base (Guy 1938: fig. 59: 1, fig. 60: 15-16; Pritchard 1963: fig. 9: 11, 13; Franken 1992: fig. 4-9: 19, fig. 7: 17: 96, 98; Bunimovitz and Finkelstein 1993: fig. 6.32: 7; Clamer 2004: fig. 21.2: 7; Fischer 2006: fig. 195: 1; Mullins 2007: pl. 49: 4, Panitz-Cohen 2009: pl. 12: 4; Martin 2013: fig. 10.21: 2-3; Seger 2013: pl. 8: 21, pl. 9: 17, pl.15: 3, 15, Duff 2015: pls. 76-77; Shalvi *et al.* 2019: fig. 6: 4.BL2a, BL2b; Mullins and Yannai 2019: 175: fig. 3.3: 4). Bowl 7 on the other hand, is a very small bowl with very thick and rough walls with ridges internal and base which is flat, the shape and thick walls of the bowl compared to its size suggest it's handmade.

Pl. 9 has 4 large deep bowls, krater-shape bowls, and the main feature in the bowls is the carination in bowls 1, 2 and 3. The bowls 1, 2, 3 as well are with thick disk base and a concave in bowl 2, the rims of bowls 1 and 2 are rounded and thickened external. Bowl 3 (Pritchard 1963: fig. 20: 22 of Middle Bronze origin) is of a carination and shape from the Middle Bronze Age traditions. Bowl 4 is with straight vertical body walls, with a gentle angle in the middle, and sloping gently to the base, with very thin walls and a thick ring base and a rounded ring thickened external. Examples of plate 9 are (Guy 1938: pls. 13: 16, 34: 10, 58: 2, 61: 14, 62: 30, 63: 25, 68: 12, 71, 73: 1-12; Pritchard 1980: fig. 9: 7; Franken 1992: fig. 5.6: 13, 13, fig. 5.9: 5, 7; Panitz-Cohen 2009: pl. 1: 12, 14: 7, 69: 4; Martin 2013: fig. 10.14: 4, 11, fig. 10.18: 7). These bowls types are not very common, which probably dated to the very end of the Late Bronze IIB.

**Bowls, Level 2:** (Pls. 10-12) 21 bowls are included in the catalog representing level 2 which dated to the transition between the Late Bronze and the Iron Ages. All belong to fabric 1 variants 1, 2, 3, 4, and 7. Dimensions of the bowls are 12 to 34 opening diameter and 5 to 12 cm height. The bowls of this level are of several types, the rounded, hemispherical, deep and plates, the bowls in this level have the traditions of the former level 3, 4 and 5. And also the continuity which will be presented in the

latest level 1. The bowls of this level are of everted opening with ring bases dominating. And of thickened rim external.

Pl. 10, bowls 1 to 7 are rounded shape bowls and with some slight differences in the body shape, while bowls 1 and 2 have an angle on the lower part of the body and a rounded base. Bowls 3, 4, 5, 6, and 7 are rounded with flat bases, the lower part of the body is thicker than the body walls, with simple rims, angular everted and inverted, thickened mostly internal, with ridges on the body internally. Bowl 6 is externally heavy and thickened walls. Bowls 8, 9, 10 and 11 of plate 10, have a ring base and relatively shallow with thin walls and thick bases, bowl 9 in pl. 10 is of t-shape rim which is angularly inverted, the other two bowls are of simple rims and angular inverted (Guy 1938: pls. 6: 20, 13, 16: 1-4, 19: 12, 28: 23-32, 32: 14-15, 20, 36: 1; Loud 1948: pl. 1-4, pl. 78: 2; Franken 1992: fig. 4.8; 15; Mazar 1982: fig.9: 1; Bunimovitz and Finkelstein 1993: fig. 6.12: 1-2; James and McGovern 1993: fig. 12: 5; Fischer 1997: figs. 5: 3, 7, 36: 1.B, 2006: fig. 156; Clamer 2004: figs. 19.36: 4-5, 20.10: 4-6, 20.15: 15, 20.19: 15, 20.20: 8-9; Panitz-Cohen 2009: pls. 25: 8, 39: 12-13; Ben-Tor *et al.* 2012: fig. 1.4. 1, fig.2.15: 1, 6, 8, fig. 2.17: 1-5; Martin 2013: fig. 10.11: 4; Arie 2013: figs. 12.74: 1, 12. 85: 1; Seger 2013: pls. 12: 8, 59: 1-2). Some of these bowls types are classified to Iron Age I in Amiran (1970: pls. 60-61). The bowls 1, 2, 3, 4, 6, and 7 of pl. 11 are deep bowls with several variations, the deep bowls are carinated on the upper body 1, 2, 3, and some are carinated in the middle of the body 4, 5, 6 and 7. The rims of the bowls are thickened external, and of a simple type. Bowls 6 and 7 of plate 11 are deep bowls with thick body walls, the bases of the bowls of two types, high ring bases which occurred more often than the disk base of bowls 3 and 4 of plate 11.

Bowls 1, 2, 3 in pl. 12, are wide and shallow plate type, are heavy with thick body walls and bases, one of them (bowl 3) is of a thick straight vertical rim and then sloping gently to the base and of a simple thickened rim. Bowls 4 and 5 are of the angular inverted rims, thickened internally, the bowls made of thick ring bases. Those bowls are deeper than the same type in the previous levels. Bowls 4 and 5 as well have a continued tradition of attaching a single horizontal bar handle on the rim, very small which was used for decorative purposes as mentioned elsewhere above. Another feature which worth mentioning is the form of the rims of the deep bowls, the rounded rim shape of the bowls 3, 5, and 6 of pl. 11 is characterizing the Iron Age in Canaan

which will be illustrated through the bowls of level 1 of tomb 1. On the other hand, the body shape of these bowls is a mix of being inverted and almost closed, and the carination which is an old tradition that goes back to the Middle Bronze and through the Late Bronze.

Level 2 has a mixed shape and characteristics in both the Late Bronze and the Iron Age I (Guy 1938: pls. 61: 14, 71, 73, 74: 12; Lamon and Shipton 1939: pl. 29: 110-111, pl. 30: 113-116, 122-123; Loud 1948 but in Pritchard 1963 fig. 9: 5 it belongs to the Late Bronze; James 1966: fig. 5: 13, 22: 3; Franken 1969: figs. 46, 49-50; 1992: figs. 7-16, 7-17; Rast 1978: fig. 1: 13-14, 16, fig. 3: 6-10, fig. 5: 1, fig. 7: 3, fig. 8: 5-6; Briend and Humbert 1980: pl. 81: 18-19; Finkelstein 1986: figs. 6: 8, 10: 15, 11; Bunimovitz and Finkelstein 1993: in Late Bronze and Iron Ages: figs. 6.30, 6.32, 6.46: 1; Fisher 1997: fig. 5: 7; Zimhoni 2004: fig. 25.2: 2, 6, 9; Fischer 2013: figs. 191, 280, 283; Martin 2013: figs. 10.21: 6-7, 10.25: 7-8; Arie 2013: figs. 12.64: 1-2, 12.67: 7, 12.72: 2, 12.85: 1; Seger 2013: figs. 6: 6, 27: 13).

**Bowls**, level 1: (Pls. 13-14) bowls of level 1 represent almost the same pattern as the earlier levels, all belong to fabric 1 with variants 1, 2, 3, and 7. Dimensions are 13 to 36 cm of opening diameter, 4.5 to 13 cm for the large bowls. But most of the bowls of these levels are similar to the minimum dimensions that have been given here. There are rounded, hemispherical, deep, and large bowls (plates) with a variety of rims and bases and body formations. Among the 22 bowls from this level, 9 are small, rounded and hemispherical bowls in pl. 13, bowls 1-9. The main characters of the bowls are the simple rim type, the thick bases and the rounded sloping rims inverted, with all being rounded bases except bowls 1 and 9 with concave bases. Bowl 1 is hemispherical shape open wide, with rounded rim thickened external, while bowls 2-9 are angular inverted with slight differences, bowl 2 is straight vertical with very slight invert and with the formation of body s-shape bowls 3 is slight vertical, 3 to 9 are rounded shape. Bowl 7 in pl. 13 is distinct with the horizontal attaching single small bar handle on the rim which is common in the Iron Age, as well as the former period.

The deep bowls of level 1 represented in pl. 13, bowls 10, 11, 12 and 13. The bowls are carinated in the middle of the body creating an inverted shape with thick walls and mainly high thick ring bases. The rims of these bowls are angular everted due to the flexure of the rim profile outward and the thickening of it externally. This

pattern is typical Early Iron Age. The rim is always and as usual in the collection is with a short and rounded shape.

The plates or the wide bowls are different than the previous levels, the bowls are deep with tall body walls, heavy and thick body walls and bases. The dominant base is the ring base in all of the bowls. On the other hand, all the bowls are angular inverted rim type, thickened internally. Some of the bowls like bowls 14 in pl. 13, bowls 1, 2, 3 and 5 in pl. 14 are rounded shape bowls, while bowls 6, 7, and 8 are angular on the top, with body sloping straight forming wide v-like shape bowls which makes the bowls deeper and wider than the rounded bowls and of an everted type. Bowl 7 has a small horizontally attached bar handle on the rim, like the examples I presented above, with the same opinion about the function of those rims. These bowls are a continuity of the same plate-shape bowls in the earlier level in the Late Bronze Age with slight differences especially in the size and the depth of such bowls in the early levels of the tomb up until level 1.

The bowls in (pls. 13 and 14) are of the curving walls internal in an inverted general look, these are supposed to be typical Iron Age as with the examples of different sites that have been published for the Iron Age strata of levels from tombs or from open air excavated sites such as (Guy 1938: pls. 40: 7, 62: 6-8, 25, 64: 13-19, 25, 69: 8, 70: 7-11, 72: 10-11, 73: 6, 75: 5; Lamon and Shipton 1939: pl. 30: 113-116, 119, 122-123; Loud 1948; Tufnell, Murray, and Diringer 1953: pl. 79: 4, 5, 17, Franken 1969: fig. 46: 5-9, 32, 34, 38, 57; Amiran 1969: pls. 60, 61; Rast 1978: IA: figs. 1: 13-14, 3: 6-11, 8: 4, IIB: figs. 13: 1-10, 17: 1-4, IIA: fig. 21: 1-2; Briand and Humbert 1980: pls. 79-81; Mazar 1982: fig. 9: 1, 5, 8; Chambon 1984: pl. 56: 10-11, 15 but late; Finkelstein 1986: figs. 9: 5, 10: 15, 11: 12, 16: 2, 18: 5, 20: 2-4, 24: 3-4; McGovern 1986; Bunimovitz and Finkelstein 1993: figs. 6.46: 1, 6.52: 1-3, 6.60: 2; Zimhoni 2004: figs. 25.19: 24-25, 25.25: 9; Clamer 2004: figs. 21.5: 17-18, 21.6: 22; Arie 2006: figs. 13.51: 1, 4, 5, 13.53: 1, 13.59: 1, 13.63: 1-2, 5, 13.66: 1-4, 13.75; 2013: fig. 12.1; Panitz-Cohen 2009: pls. 19: 19-20, 25: 8, 38: 1, 46: 2, 49: 6-7; Be'eri and Cohen 2012: figs. 12.2, 12.5: 4-8; Ben-Tor *et al.* 2012: fig. 1.4. 1, fig. 2.15: 1, 6, 8, fig. 2.17: 1-5; Fischer 2013: figs. 82: 1-2, 99: 3, 5, 191: 1-3, 5).

In Master *et al* 2005, the bowls which have been dated to the Early Iron Age are similar to those in the plates of level 2 and 1 (Master *et al* 2005: figs. 9.23: 1-2, 9.24:

1, 3, 6, 9, 9.26: 4, 10.53: 14, 10.54: 1, 10.56: 9, 14, 16), which probably dates the two levels to the Iron Age IA and IB.

There is another group of bowls which are considered to be markers for the dating of the period, mainly the carinated and the milk bowls in the Late Bronze Age as well as bowls of what so-called bill-shape bowls which all in all are reflecting previous manufacturing tradition or types that have been imported to the region or then imitated. In the following pls. 15 and 16, I will illustrate this group of bowls separately starting with the carinated bowls.

#### **IV.9. 2. Carinated bowls (pl. 15)**

Levels: 5, 4, and 3 (pl. 15) the 3 levels have 7 carinated bowls have been included in the collection belongs to fabric 1 variants 1, 2, 5 and 7. With dimensions 13 to 18.5 cm opening diameter, 7.5 cm height for all of the bowls. Four of them were found in level 5, 2 in level 4 and 1 in level 3. The separation of this type of bowls was made because this bowl is a marker for Middle Bronze Age bowls which has been certainly continued into the next phases of the Late Bronze and Iron Age. In the case of tomb 1 of Tell Dothan, the carinated bowls have been found only in the three early levels of the tomb, and none was found in the latest 2. Which in chronology, helps to date the levels with such a clear type. The bowls, in general, are angular everted, with sharp carination – except one bowl –, deep, with simple rounded rims, thin body and thick bases along with three different types of bases, disk, concave and ring bases.

Bowls 1, 2, and 3 in pl. 15, of level 5 are carinated in the middle of the body with angular everted rim and, and rounded lower body with short ring base of bowl 1, and disk base for bowls 2 and 3. Bowl 4 is of a straight vertical rim and a carination in the middle, with a rounded lower body until the concave base. Bowls 5 and 6 of level 4 are similar to bowls 1, 2, and 3. bowl 7 is from level 3 with simple rounded rim, a rounded carination in the middle, and a concave base, the carination of this bowl is much less sharp than the other bowls in the same plate. Bowls 1, 2, 3, 5, and 6 are very similar to the Middle Bronze Age carinated bowls, while bowls 4 and 7 are from a later development when the carination started to change and disappear with the other Middle Bronze influenced in the Late Bronze. The surface of these bowls is smooth and probably poorly polished exterior and interior, with finer clay than the other types of bowls in the collection. Similar bowls were included in (Guy 1938: pls.

19, 37, 42, 54; Loud 1948; Amiran 1969: pl. 39; Pritchard 1963: fig. 7: 7; McGovern 1986; Franken 1992: fig. 7.12: 10-11; Yannai 2004: fig. 19.46: 13; Master *et al.* 2005: fig. 7.15: 6-7; very similar to Late Bronze I in Gadot, Yasur-Landau, and Ilan 2006: fig. 12.2: 11, 13-16; Fischer 1997: fig. 36: 2.B; 2006: figs. 256: 5, 11, 257: 1-2; Mullins 2007: pls. 43: 14-17, 45: 19-20; Martin 2013: fig. 10.16: 4; Seger 2013: pl. 6: 4; typical Late Bronze IIA in Duff 2015: pl. 41; Mullins and Yannai 2019: 183: fig. 3.7: 1, 4, 10).

The presence of the carinated bowls in levels 5 and 4 is a good indicator for the dating of these two levels which put it in the Late Bronze Age. Since this type of bowls and other types were found in a reasonable number in those two levels it gives helps relatively dating level 5 and 4. And obviously this type of bowls have not been found in levels 2 and 1.

#### **IV.9. 3. Milk bowls, ring base ware, and varia (pl. 16)**

levels 5, 4, 3, 2, and 1 (pl. 16) Milk bowls: 5 milk bowls 1, 2, 3, 4, and 5 in pl. 16, of fabric 2, measured 13 to 18 cm in opening diameter and 7 to 9 cm height. 4 of them have been found in level 5 and 1 in level 4, this type of bowls is also a useful indicator for the dating of the early phases of the Late Bronze Age in Canaan and rarely appeared in the later periods. In addition to that, this type of bowls is also an indicator for an import or imitated process style of bowls according to archaeologists working in the region, with Cypriot origins.

The five milk bowls are all with a rounded body, thick walls and a rounded base. It's an open type with a slight inverted rim profiles, small and medium-size with a single wishbone handle attached to the rims, some of them are missing. The handles are rising above the bowls rim level in all the cases. According to the fabric, I suggest that the bowls are imitated and not imported, the clay in on hand is local but treated well, the decoration and the surface treatment, on the other hand, are not of the Cypriot typical milk bowls.

The surface of the bowls was polished externally and internally, good quality polishing, making the surface very fine. And the bowls were decorated with brownish color lines on the rims, bodies and handles, the decorated lines are thick, vertical on

the body, and horizontal on the upper part of the body below the rim tips. One of these bowls, bowl 3 was decorated with a typical decoration of White slip II, which is typical of the earlier periods of the Late Bronze Age. The decoration is done by applying a white slip on the body of the bowl, with later applying decorative bands of lines with a net or small square-shaped lines crossing to form the square shapes with thin lines. Bowl 5, was discovered in level 4 of the tomb as continued practice in the culture, the type of milk bowl is popular in the period and have been found in several sites (Guy 1938: pls. 19: 15, 30: 3, 47: 9, 60: 1, 64: 29, 67: 2-3; Tufnell, Inge, and Harding 1940: pls. XLIII A-B: 153-165; Loud 1948; Yadin *et al* 1958, 1960, 1961; Amiran 1969: pl. 53; Fischer 2006: figs. 164: 1, 177; Mullins 2007: pl. 47: 9; Panitz-Cohen 2009: pl. 3: 2; Yasur-Landau 2013: fig. 11.1; Duff 2015: pl.66; Artzy 2019: 361: fig. 4.2.10: 1-3, 363: fig. 4.2.11: 1-6).

The four ring-base ware bowls (pl.16: 6,7,8,9) that have been studied in the collection belongs to levels 5, 3, and 2. of fabric 8, measuring 7.5 to 17 cm opening diameter, 4 to 7.5 cm height. Those bowls 6, 7, 8, and 9 are of foreign origins, namely, Cypriot bowls. Small bowls and according to the fabric, they may have been imported, they are decorative bowls and the main character of these bowls is the conical shape with very thin walls, and a wishbone handle attached to the rims rising above the rim level. With variations in the base types, bowls 6 and 8 is with a ring base, straight vertical rim profile, and simple thinned, with bowl 8 decorated with painted bands on the rim exterior. Bowl 7 is very similar but with a smaller size, bowl 9 is smaller in shape with thicker walls and a rounded base, with missing wishbone handle directed downward, the bowl was found in level 2 which probably marks a change in the style or a good example of imitation style.

Bearing in mind that bowls 6, 7, and 8 surfaces were well treated, smooth and high-quality polishing treatment, with sandy clay, while bowl 9 is of rough touch, and the surface is not polished. Similar examples are found in (Guy 1938: pls. 35: 25, 64: 30; Tufnell, Inge, and Harding 1940: pl. XLIV B: 173-174, 176; Loud 1948; Pritchard 1963: fig. 8: 18; Amiran 1969: pls. 54: 10, 56: 10-11; Bunimovitz and Finkelstein 1993: fig. 6:38: 8; Biran and Ben-Dov 2002: fig. 2.66: 79; Brody 2008: fig. 27.16: A; Martin 2013: fig. 10.16: 12; Yasur-Landau 2013: fig. 11.2: 1-3; Artzy 2019: 360: fig. 4.2.13: 3, 4).



Bowl 10 belongs to level 2 of the tomb, fabric 1, 13.5 opening diameter, and 4.5 cm height. It's a hemispherical shallow small bowl, with a high ring base, rounded, straight sloping rim, simple rim profile, two horizontal loop handles attached to the rim. The bowl is painted with geometric bands on the lip of the rim, the handles and the surface ext. One brown line above the base, the second is in the body, vertical lines two side by side connects the two horizontal lines creates a shape of rectangular shape. The bowl suggested being of a foreign origin, with the type of the decoration it belongs to the ring base ware that originates in Cyprus. Few examples of this type in (Tufnell, Inge, and Harding 1940: pl. XXXVIII B; Amiran 1969: pl. 56: 2).

Bowl 11 is from level 3, fabric 8, measured 21 opening diameter, 11,4 cm height. This bowl is the type Cypriot which was known among other Cypriot types during the Late Bronze Age, mainly at the end of Late Bronze Age I and continued in II. Deep rounded, casserole-like shape, wide with horizontal two handles attached to the upper part of the body. not heavy, with thin walls flattened rim lip, straight vertical rim profile. thickened external. rounded or ring base (missing), high-quality clay, very fine. The bowl is well fired, decorated with a black thick line horizontally on the body lower ext. The handles are decorated as well. A thick black line painted horizontally interior the bowl on a white slip all over the body (Guy 1938: pls. 64: 28, 74: 17; Amiran 1969: pl. 55: 2; Yannai 2004: fig. 19.14: 9; ).

Bowl 12 is of fabric 1, variant 2, measured 20 cm opening diameter, and 18 cm height. It's missing the recording number, but due to the Mycenaean krater shape, it may have been from the earlier levels of the tomb, it is probably of Mycenaean influence but locally made. It is deep with biconical in the middle of the body. gently rounded lower. Almost straight walls upper body. the bowl is thick and heavy with a ring base. Two handles attached horizontally on the shoulder upper body, flattened rim profile, and angular everted, thickened external. The shape of the bowl is a closed type but opens at the very top. Decorated with brown vertical wavey lines, two horizontal thick lines on the neck and the middle of the body. The decoration of the Mycenaean IIIC or Philistine Monochrome style, simple and maybe of Late Bronze IIA or B or even in the Iron Age (Guy 1938: pls. 13: 24, 34: 9, 35: 30; Lamon and Shipton 1939: pl. 31: 155; Amiran 1969 after Guy: pl. 57: 12, 13; Stager *et al* 2008: fig. 15.11: 5, 15.12, 15.33: 2-3).

Throughout the above typological description of the 5 levels of the tomb, four main types of bowls were dominating, rounded, hemispherical, deep, and plate-like bowls, in addition to the milk and the carinated bowls. The bowls, in general, are open in levels 5 and 4, started to seem closed with inverted (folding in) angles on the top. In levels 3, 2, and 1, in addition to the size which is very slightly bigger in the later levels of the tomb. In the following, I will describe the other type. The examples from different sites in Palestine and Jordan that have been given to the bowls are applied to the rest of the collection with keeping in mind that some of the pottery types are only found or used in funeral circumstances such as the chalices, pyxides and stirrup jars.

#### **IV.9.4. Cooking pots: (pl. 17)**

Very few cooking pots have been uncovered in the tomb, not more than 10. The fact that the context is funeral may have affected the use of the cooking pots, with that being said, a total of 8 cooking pots have been included in the collection, coming all of them from levels 5, 4, 3, and 2. No cooking pots have been included from level 1. The researcher is not sure if no cooking pots have been found in level 1 or for the fact that the original collection is scattered in different institutions in three countries which didn't allow for finding the rest of the cooking pots. Generally, the 8 cooking pots are of fabric 8 with quartz inclusions, of carinated type, with rounded bases, vertical rims, and with different rim profile shapes. According to London the cooking pots of the Late Bronze Age of varied types, the shapes from tomb 1 are all of the Late Bronze which contend the same tradition during the Iron Age. The shallow, wide open carinated cooking pots have been found in several sites across ancient Canaan from the Late Bronze II until the Iron Age II (London 2016: 199-205, figs. 16.1: 2, 16.2: 1-2, 17.1: 1-3, 17.2: 2). A well-established typology of the cooking pots is made by Franken on Tell Deir 'Alla for Iron Age 1969, and the Late Bronze Age 1992 (Amiran 1969: pls. 42: 9-17, 75: 1-16; Franken 1969: figs. 49, 54, 59, 64, 69, 71, 1992: figs. 7.7, 7.10, 7.19, 7.21; Mullins and Yannai 2019: 205: fig. 3.20, 209: fig. 3.22).

**Cooking pots**, level: 5 (pl. 17) 1 cooking pot (1) coming from level 5, it is of a medium size 21 cm rim diameter, and about 11 cm height, with thick walls, open type, with tall rim, everted, with a simple rim profile thickened externally, the carination is high, leaving the upper part much shorter than the lower part, which is

the common style during the period, moreover, the base is rounded. The pot has been used with carbon traces.

**Cooking pots**, level: 4 (pl. 17) 3 cooking pots (2, 3, and 4) from level 4 were examined, they are of three different sizes, large, 28 cm rim diameter and 16 cm height, medium 16 cm rim diameter, 10.5 cm height, and small 12 cm rim diameter, and 6 cm height. Three of them are upper body carination, which makes the lower part taller than the upper, all with rounded base, angular everted rim, a rounded rim profile and thickened external. The body walls of the three pots are thick with a thicker base. Another feature that is common in the three pots is the semi-channel on the interior of the rim. Although short, but the thickening external with the channel interior formed the triangular shape of the rim.

**Cooking pots**, level: 3 (pl. 17) two cooking pots (5-6) coming from level 3, both with medium size, 5 is with 15 cm rim diameter, 7.2 cm height, pot 6 is of 18 cm rim diameter, and 7.8 cm height. Both resemble the cooking pots of levels 5 and 4, pots (5-6) are also sharp carinated on the upper part of the body, with rounded thick bases and an angular everted rim. Both thickened external rim profile, with squarish shape, the carination sharpness and the rim profile distinct them from the previous examples.

**Cooking pots**, level: 2 (pl. 17) pots (7-8) belongs to level 2, pot 7 is a medium size, 19 cm rim diameter and 9 cm height, with a sharp carination upper of the body, thick rounded base, with a straight vertical rim, thickened external, semi- triangular profile. While pot 8 is a small size 13.8 cm rim diameter, and 6.6 cm height, very light carination, straight vertical tall rim, slightly thickened external, with a thick rounded base. The difference between the two is the angle of the upper part of the body, as well as, the rim profile which is more prominently triangular in pot 7.

The carinated cooking pots are one of the key tools to date the Late Bronze and Early Iron Ages. It appeared during this period, with slight differences between each period and the next, the main indicator is the rim profile shape which is the main identity of this pot type. The 8 pots are typical of Late Bronze Age, with the common features of the carination, rounded base, as well as, the rim shape.

#### IV. 9. 5. Kraters: (pls. 18-23)

The kraters are very large bowls used for several functions, carrying food, or eating through, storing crops, or the daily household use, 15 simple shape kraters are included from the 5 levels of the tomb. They are generally of a deep bowl shape, an open type, with carination on the middle of the body. The body is also wide and deep, with thick walls. Most of the kraters of the collection are of carinated deep bowl shape, ring bases, some of the kraters are with two handles, and the majority is without handles. On the other hand, there is no neck for the krater types.

**Kraters**, level: 5 (pl. 18) all of them of fabric 1, variants 1, 2, 4, and 7. Two kraters from level 5, krater 1 is a large krater 36×24.6 cm, very deep and very wide, with a carination on the upper part of the body, and an angular everted rim, the krater has wide ridges all over the body, with a t-shaped rim profile, a shallow ring base, and two loop handles attached vertically shoulder to body. The krater is without a neck which is typical of the open pottery types. Krater 2 is of a smaller size 21.6×11.4 cm, with deep bowl shape, carinated from the middle of the body, thick walls, with a rounded rim profile, thickened external, with a thick disk base.

**Kraters**, level: 4 (pl. 18) kraters 3 and 4 in pl. 18 are from level 4, krater 3 is a unique shape similar to the krater-mugs of the collection as I will show below. The krater is with thin walls, deep and wide 22.8×14 cm, a very light carination is in the middle of the body, the walls upper until the rim is straight vertical which is not common. The rim is flattened straight vertical profile. The lower body is sloping gently until the base which is a disk base. Krater 4 is a carinated deep krater, very similar to krater 1, but with wide bottom 24×15 cm. The krater carinated in the middle with an angular everted upper part and a sloping gentle lower part, t-shaped thickened external rim profile, the body is thick, with a high, wide ring base.

**Kraters**, level: 3 (pl. 19) 2 kraters are included in the collection, of fabric 1, variant 3 the first krater 1 is a dull carinated krater in a deep bowl shape 30×21 cm, open and wide, with thick walls and a ring base, straight vertical and rounded rim profile. The upper part of the carination is straight vertical while the lower part is gently sloping. Two loop handles attached horizontally on the carination, the krater is similar to that of level 5 but the handles differentiate it. Krater 2 is a large deep bowl shape krater 30×33 cm, with a sharp carination, and a mouth nearly closed, with upright vertical

thick rim profile the krater is with thick walls and heavy placed on a tall wide footed trumpet base with ridges above the bottom, below I show other examples of the same type.

**Kraters**, level: 2 (pls. 20-21) 5 krater from level 2 were studied, all of fabric 1, variants 1, 2, and 3. The first three, 1, 2, and 3 are of the deep bowl shape krater, average measurements 30×20 cm, carinated with thick body walls, open types, with krater 1 carinated on the middle of the body and angular inverted upper part, slightly closing. The rim is thick t-shaped, straight vertical profile, with a thick high ring base, two loop handles attached horizontally on the carination similar to that in krater 1 in level 4. Krater 2 and 3 are similar with one difference is that krater 2 is with a carination and then a wide channel above the carination which caused the straight vertical form of the upper body. The krater is with a rounded thickened external rim profile, and a high thick ring base, same for krater 3 but with a slightly angular inverting upper part. Kraters 1 and 2 of pl. 21 are of the level 2 but with different shapes, krater 1 is a very deep bowl shape krater 29.4×28.5 cm, with thick walls and inverting, closing mouth, a rounded rim profile, placed on a thick short trumpet base with ridges. The krater here is a similar pattern to krater 2 in pl. 19. Krater 2 measured 25×18 cm, is with two loop handles attached vertically, the only pot of the type, it's deep and wide with decorations, thick body walls, square thick rim profile, inverting, straight vertical walls, with a sharp angle at the middle, a squarish type, placed on a high ring base.

**Kraters**, level: 1 (pls. 22-23) 4 kraters from level 1 will be described in the following, generally, of fabric 1, variants 1 and 2. They are carinated kraters, with the carination placed on the upper part of the pot, which makes the lower part longer. Krater 1 is a deep bowl shape krater 31×18 cm, inverted with an upright straight thick rim profile, closed type, placed on a short wide trumpet base, resembles kraters 1 and 2 in pl. 19 and krater 1 in pl. 21. Krater 2 in pl. 22 and kraters 1 and 2 in pl. 23 are of the deep bowl shape, average 30×17 cm. All carinated and the carination is on the upper part, which makes the lower part longer, the general shape of the kraters similar to the pattern of the previous kraters in all levels. The rim of krater 2 in pl. 22 is with a rounded thickened tall rim profile, and a ring base. Krater 1 and 2 of pl. 23 are similar to krater 2 of pl. 22, but krater 1 is more open and the carination is sharper and slightly rounded, while krater 2 is with less sharp carination and everted rim profile. The three kraters are with short ring bases.

The kraters in all levels maintained the general carinated deep bowl shape, slight variation with the place of the carination can be noticed particularly in kraters of level 1 which appeared to be placed higher on the body than the carination of the earlier levels. In addition to that, the earlier levels have a few examples of handled kraters.

The kraters have been used in several functions and have several sizes in the Late Bronze and Iron Ages (Amrian 1970: 134-135, 216). The krater type pottery has been found in many sites across all the periods in Canaan (Guy 1938; Lamon and Shipton 1939; Tufnell, Inge, and Harding 1940; Loud 1948; Yadin 1958, 1960; James 1966; Franken 1969, 1992; Rast 1978; Brined and Humbert 1980; Chambon 1984; Dever 1986; Finkelstein 1986, McGovern 1986; 2006; Seger 1988; Bunimovitz and Finkelstein 1993; Yannai 2004; Mullins 2007; Panitz-Cohen 2009; Fischer 1997, 2006, 2013; Arie 2006, 2013; Martin 2013; Duff 2015; Mullins and Yannai 2019: 193: fig: 3.12-17).

#### **IV. 9. 6. Multi-Handled kraters:** (pls. 24-37)

This type of pottery pots is marked mainly by the multi handles that have been attached to the body during the manufacturing. 32 pots of this type have been studied in the collection, the multi-handled kraters type is absence from level 5, while it is relatively in a small number in level 4, and level 3. The number increased in level 2 and was abundance in level 1. The general shape and feature of this type of pots is a large size, thick body walls, most of the time open everted type, the sharp carination on the middle of the body, the multi handles which reach 4 to 12 handles for each pot. The ring, trumpet and pedestal pendent are the three common base type of the multi-handled kraters. The size of such pottery type suggests that it might have been used for feasting, carrying food and crops, or storing goods.

**Multi-Handled Kraters**, level: 4 (pl. 24-25) four kraters have been studied from level 4, of fabric 1, variants 1 and 1. Average measurements 31×20 cm. They are large, wide, with thick walls, the carination of these kraters is in the middle of the body, it's sharp dividing the pot into two parts, the lower one which sloping gently rounded until the base, and the upper part which is everting on the top, with some of them with straight vertical such as krater 3 of pl. 24. Multi-handled kraters 1 and 2 of

pl. 24 are with short ring bases, while kraters 3 in pl. 24 and krater 1 in pl. 25 are with short wide trumpet bases. The rims are thickened rounded and square profiles. The four kraters are each with four thick, large handles attached rim to body.

**Multi-Handled Kraters**, level: 3 (pl. 25) one multi-handled krater from level 3 is included in the collection, of fabric 1, measured 31×21 cm. The krater in this level resembles the kraters of level 4, it is wide and deep, with a carination in the middle of the body. The lower part is rounded gently sloping to connect to the base, while the upper part is straight vertical, with a thick square rim profile, the base is a thick ring base. Four thick, long handles are attached rim to body.

**Multi-Handled Kraters**, level: 2 (pls. 26-30) 10 multi-handled kraters have been included from the tomb 1 assemblage, all of fabric 1, variants 1 and 2. They are of large size, deep, and thick body walls. The kraters are carinated, some of them are double carinated while others are single carination in the middle of the body. The double carinated kraters are the kraters of pls. 26 and 27, as well as krater 1 in pl. 28, those multi handled kraters are made with two sharp carinations. One in the middle of the body, semi-rounded carination, and the other carination is sharp on the top part of the pot, connected to the rim, the upper carination gives the inverted look to the kraters with the rim upright vertical profile, and rounded, it seems that the carination is part of the rim profile.

Kraters 1 and 2 of pl. 26 are 27×22 cm, with a pedestal pendent that carried the krater, but it's missing in krater 1, the pedestal pendent in krater 2 is a ring with three legs attached below the carination, it's thick and was made for decorative purposes. Kraters 1 and 2 of pl. 27 and krater 1 in pl. 28 are measured at average 28×22 cm, with tall thick ring bases. The rest of the kraters in pls. 28 to 30 are of a single carination, with straight vertical upper part or an inverted mouth, with thick squarish rim profiles that are thickened external or with a t-shaped ring profile. Krater 2 in pl. 28 is measured at 36×25 cm, similar to the other kraters in the same and previous plates. All of the kraters are with ring bases. In addition to that, the kraters of this level are with 4 to 12 handles attached rim to body or below rim to body such as krater 2 in pl. 29 is 27×21 cm, with 12 thick rounded handles. Very few examples of decorated multi-handled kraters in all the levels. Krater 1 of pl. 29 is 30×24 cm, is one of the few kraters that have painted decoration on the upper and middle part of the

lower body, it is decorated with both, geometric shapes horizontally and vertically, as well as, a motif of a female or a tree on the upper part of the body above the carination as a frieze. Kraters 1 and 2 in pl. 30 are of larger size but resemble the previous ones, krater 1 a deep bowl shape measured at 34.5×27 cm, with 8 handles attached rim to body. krater 2 is wide and short measured at 40 cm rim diameter and 23 cm height.

**Multi-Handled Kraters**, level: 1 (pls. 31-37) 17 multi-handled kraters were studied in the collection, all belong to fabric 1, variants 1, 2, 3, 5, and 7. they are measured at an average of 21 to 38 cm rim diameter, and about 18 to 38 height. They are all of the single carination types, the carinations is sharp in some pots and semi-rounded in others, this has affected the orientation of the upper walls of the kraters, while the opening of kraters 1 in pl. 31, 2 in pl. 32, 1-3 in pl. 33, 2-3 in pl. 34, 1 in pl. 35, and 1 in pl. 37 are inverted, the rest of the karters are everted or straight vertical walls such as kraters 2 in pl. 31, 2 in pl. 33, 1 in pl. 34, 2 in pl. 35, 2 in pl. 36, and 2 pl. 37, krater 2 in pl. 33 is with two carinations, the rounded one and a short, sharp on below the rim, it's a channel shape for decoration purposes. The rims are varied, they are rounded, thinned, t-shape and triangle shape thickened external or internal, the triangle shape rim profile is found in kraters 1-2 in pl. 31, 3 in plate 32, 1 in pl. 34, 1 in pl. 35, 2 in pl. 36, and 2 in pl. 37.

The pedestal pendant is more frequent in level 1 as well as, the trumpet and ring bases. Pedestal pendent bases are in kraters 3 in pl. 33, 3 in pl. 34, and 2 in pl. 37, this krater is decorated with a molded pedestal in shell shapes like capitals. The trumpet bases are also common in the kraters of level 1, they are relatively short, and wide in the bottom such as kraters 2 in pl. 35 which is the largest at 39 cm rim diameter and 39 cm height, kraters 1-2 in pl. 36, and 1 in pl. 37. The handles are ranging in the multi-handled kraters of level 1, they are 4 to 12 handles for each pot, they are usually thick, long handles attached rim or the below rim to shoulder. One of the kraters, krater 1 in plate 35 is unique in level 1 with four loop handles, two of them attached vertically, and the other two were attached vertically, the pattern is known for kraters of earlier levels such as level 5 and 4. Krater 1 in pl. 37 is decorated with geometric lines vertically and horizontally, as well as, net shape decoration on the upper part of the body. The multi-handled kraters in level one which is the Iron Age I level are



more common and produced in Canaan, throughout this study, it appeared that it had an important role in the daily life activities as well as in the burial custom practices.

Multi-Handled Kraters are also known in Canaan for the Bronze and Iron Ages, most of them have been with 4 handles during the Late Bronze and the handles have increased in number during the Iron Age. Parallel examples have been found in several sites, but less popular than the kraters without handles. The multi-handled kraters have been found in several sites such as (Guy 1938; Lamon and Shipton 1939; Loud 1948; James 1966; Chambon 1984; Finkelstein 1986; McGovern 1986; Seger 1988; Bunimovitz and Finkelstein 1993; Yannai 2004; Zimhoni 2004; Panitz-Cohen 2009; Fisher 2013; Mullins and Yannai 2019: 194: fig. 3.13: 1; 203: fig. 3.19: 1-4).

The multi-handled kraters have not been found in level 5, it started to appear in level 4 with a small number, as well in level 3. But level 2 the number of them has increased to and continued during level 1, the kraters in all levels share common features such as the carination in the middle of the body. The ring and trumpet bases, as well as, the multiple handles which were attached to the pots, are attached rim to body, starting from 4 handles in level 4 until it reached 12 in level 1. The kraters in addition, are made heavy and thick walls, wide and tall, the kraters of the earlier levels are shorter and wider, while in level 2 and 1 are longer and narrower.

#### **IV. 9. 7. Krater-Mugs: (pls. 38-40)**

The krater-mug takes its name from the shape which resembles nowadays mug shapes, with the wide body, and the one single handle that is attached rim to body. The krater-mug pottery pots have a carinated body shape, wide and tall, with an inverted opening for some pots and everted for the others. The krater-mugs of all levels share two base types, the ring and the disk bases, the body walls and the bases are thick and heavy. The carination of the krater-mugs in this collection is of two main shapes, one that formed in the middle of the body which gives the inverting look to the pot, and the other is the carination which placed on the lower part of the pot, which allows the upper walls to be straight vertical.

**Krater-Mugs**, level: 5 (pl. 38) 2 krater-mugs have been included in this study, of fabric 1, variants 5 and 7, they are 1 and 2 of pl. 38, the two kraters are relatively small size of 15 cm rim diameter and 11 cm height of krater 1, and 9 cm of krater 2,

with a carination in the middle of the body. They are both inverted opening due to the carination formation, the two kraters are thick body walls, with rounded thickened rim profiles, and angular everted at the very top. A concave like between the top end and the carination caused by the everted end of the rim. The two kraters having as well thick, short loop handles which attached rim to body on the carination angle.

**Krater-Mugs, level: 4** (pl. 38) 5 krater-mugs from level 4 are included, they are kraters 3 to 7 in pl. 38 of fabric 1, variants 1, 2, and 7. With average rim diameter at 18 cm, average height at 16 cm. They are made of thick body walls and heavy, tall and large with a wide mouth and base. The kraters are angular profile in the middle of the body, kraters 3, 4, and 5 are with central carination, the carination is not sharp, but caused the inverted shape of 4 and 5, while krater 3 is with a slightly inverted orientation. The kraters 6 and 7 are of different type of carination, they are angular in the lower part of the body, it's a sharp carination, the carination in the lower part, gave more length to the upper part walls which allowed to be of straight vertical walls. The krater-mugs of level 4 are all of a rounded thickened rim profile, sometimes angular everted at the rim tip like kraters 6 and 7. The bases are thick ring bases for kraters 5 and 7, and thick wide diameter for kraters 3, 4 and 6.

**Krater-Mugs, level: 3** (pls. 39-40) 10 krater-mugs of level 3 have been examined, all of fabric 1, variants 1, 2, 4, and 7. They are of carinated shape, similar to the pattern of level 4. With most of them at 21 cm rim diameter and height average at 12 and 15 cm, with one small krater 4 at 12×8 cm. The carination of the kraters of level 3 is of two types, the lower body carination which forms kraters 1 to 5 in pl. 39 and 2 and 3 of pl. 40. These kraters have an inverted mouth with an angular everted for the lip of the rim, between the rim and the carination is a slight concave space, the disk base is the more frequent type, with a ring base fewer pots, in the rims are thickened rounded profile for kraters 1, 3, 4 and 5 of pl. 39 while it's of a square profile for kraters 2 of pl. 39, and krater 2 of pl. 40. The kraters 7 and 7 of pl. 39 and 1 of pl. 40 are of the lower body carination type, the main character of this krater shape is the long body created by the long upper walls which formed straight vertical, and which are much longer than the lower body. The rims of this type are simple rounded profile, the bases are thick disk bases for krater 6 and 7 of pl. 39 and thick ring base for krater 1 of pl. 40. All the krater-mugs of level 3 have a single loop handle thick and long, attached rim to body carination, except krater-mug 3 of pl. 40.

**Krater-Mugs**, level: 2 (pl. 40) 3 krater-mugs of level 3 are included in the catalog, they resemble the pattern of the krater-mugs of previous levels. All three are of fabric 1, variants 1, 2, and 7. All of the similar height at about 16 cm, rim diameter is averaged 13.5 to 19 cm. They are carinated shape, tall and wide, with thick rims, kraters 4 and 6 are slightly inverted mouth, while krater 5 is of straight vertical walls. The rims of those kraters are simple rounded profile, and three of them are with thick wide disk bases. A single loop handle is made for each of them attached below the rim to body carination. Moreover, the upper body parts in all three kraters are wavy, a feature which is not clear in the krater-mugs of the earlier levels.

**Krater-Mugs**, level: 1 (pl. 40) 1 krater-mug is included in the study, fabric 1, variant 2, measured at 16.5 rim diameter 11 cm high. The krater is similar to krater-mugs of the earlier levels which shape is carinated in the lower part of the body, and with tall straight vertical upper walls. The krater is a heavy pot with thick walls and base. Two long, thick loop handles are attached rim to body, which is rare for the krater-mug type. The pot is with a wide mouth and wide thick disk base. Flattened lip profile, straight vertical rim inflection thickened external rim profile. The krater shape is similar to those in the previous level, as well as being the only pot of its type in the level 1 suggests that it's probably one of the cases where pots have been sometimes moved to the later levels at the time of the excavation or during the actual use of the tomb, no certainty can be given but a high level of probability.

With that being said, a comparison between the use of the multi-handled kraters and the krater-mugs shows that the group has been very common in the earlier levels of the tomb, such as in level 3 where more than 10 pots have been uncovered, while the number of them in level 1 is 1 pot with doubts about its original dating. On the other hand, the multi-handled kraters were very rare in level 3, reaching only one pot, whilst more than 17 pots were found in level 1, this leads to the assumption that functionally, multi-handled kraters have replaced the krater-mugs at a certain point in the history use of the tomb, I suggest that the replacement has started by level 2 and continued with the new pot type dominated in level 1.

The krater-mugs in all of the levels of tomb 1 are in two general patterns, that have gone through slight modifications throughout the 5 levels of the tomb, the krater-mugs have been relatively smaller, and shorter in level 5, it started to be wider and

thicker as well as, longer in level 4 and continued the same pattern into levels 3 and 2. Another note is the appearance of the lower carination type which probably was not known in level 5, but appeared in level 4 and continue through level 3 and 2.

The krater-mugs are probably one of the most unique types to Tell Dothan Collection, most of the examples from other sites which have been included in (Guy 1938; Yadin 1960; Panitz-Cohen 2009, Arie 2013; Duff 2015: pl. 102: 6) are most have the same shape as the ones from Tel Dothan, but they are either with two handles or without handles at all. Of the previous sites that have been reviewed in this study, none has produced a krater with one handle that looks like a mug. One example comes from Tell Dothan open-air excavation, dated to the Iron Age I (Master *et al* 2005: fig. 9.23: 6).

#### **IV.9.8. Storage Jars:** (pls. 41-43)

Rounded storage jars and Canaanite jars have been found in the tomb, 8 of them have been included in the collection. The jars generally are large, with tall neck, rounded and pointy bases, thick loop handles attached to the body, with three main body shapes, ovoid, rounded, upside down, the jars represent all the 5 levels in the tomb. The Canaanite jars used for trade during the Late Bronze Age, while the storage jars have been used for household daily life. In the following, I describe the jars in the different levels of the tomb. The Canaanite jars have been common to be used for maritime trade during the Late Bronze in the Mediterranean regions, this topic is discussed by (Demesticha and Knapp 2016).

**Storage Jars**, level: 5 (pls. 41-42) three jars from level 5 have been examined, each with a different shape, jar 1 in pl. 41 is of fabric 1, variant 6, and 39 cm high. An ovoid shape jar, with a medium neck and a wide opening of the mouth. The rim is thick, angular inverted profile, thickened external, with a channel (cup-like) channel internal the rim. The body is large with an ovoid shape, wide from the top and narrow in the bottom of the jar, with a rounded base. Two thick handles were attached to the body, the shape of the jar is of Late Bronze storage jars. Jar 1 in pl. 42, fabric 1, variant 4, of height 37 cm, is missing the rim, with a semi-rounded or ovoid shape, tall and wide neck, with two large loop handles attached body to body, and a rounded base flattened slightly at the very bottom (Guy 1938; Yadin 1958, 1960; James 1966;

Pritchard 1980; McGovern 1986; Franken 1992; Mullins 2007; Stager *et al.* 2008; Panitz-Cohen 2009; Martin 2013; Duff 2015; Shalvi *et al.* 2019). Jar 2 in pl. 41 is a Canaanite jar, fabric 7, with an upside-down shape (upper part is much wider than lower part) the jar is missing the upper half, but the base is of a pointy type, it's a short base, typical of the amphorae bases in the later periods, this type of jars is with two loop handles, a sharp shoulder and a tall neck which I will show in another later example.

**Storage Jars**, level: 4 (pl. 42) one jar is included in this study that belongs to level 4, jar 2 in pl. 42 is a storage jar, fabric 1, variant 1. Medium size with height at 30 cm. The jar is of a semi-ovoid shape, noticeable is the very tall and wide neck with thick body walls. The rim is of a straight vertical profile, with a small inverted angle at the top, two thick loop handles attached body to body, the jar is with a rounded base which is the common type for the household jars in the period.

**Storage Jars**, level: 3 (pl. 43) 2 jars from level there are included, jar 1, of fabric 1, variant 2. Is a rounded medium size storage jar at a height of 33 cm, rounded shape with a tall wide neck, similar to jar 2 in level 4. Rounded, semi-ovoid with straight vertical rim profile, angular inverted on the top. Two thick loop handles were attached to the body. jar 2 is a typical intact Canaanite jar, of fabric 7, height is 35.4 cm, with tall neck, everted opening, a wide shoulder, with a very sharp carination and a sloping vertical body, a pointy short base. Two thick handles attached shoulder to body. This type of jars is for trade purposes, which also according to the fabric (7) is an imported type to Tell Dothan.

**Storage Jars**, level: 2 (pl. 43) one jar belongs to level 2, jar (3) which is the bottom of a Canaanite jar, of fabric 7. With pointy base, and similar to the shape of the Canaanite jars in the previous examples, it represents the continuity of this type over the different levels of the tomb. The Canaanite jars in all the levels have similar examples in the following sites (Guy 1938; Loud 1948; Yadin *et al.* 1960, 1961; Yannai 2004; Mullins 2007; Stager *et al.* 2008; Panitz-Cohen 2009; Martin 2013; Seger 2013; Shalvi *et al.* 2019; Mullins and Yannai 2019: 217: fig: 3.26: 6, 219: fig. 3.27: 8).

**Storage Jars**, level: 1 (pl. 43) Jar number 4 in pl. 43 is the only jar from level 1, fabric 1, variant 1, and a height of 36 cm. It has the semi-ovoid shape, tall, wide neck

with straight vertical rim profile, the rim is rounded with a channel interior. Two thick loop handles attached body to body, the base is rounded, slightly flattened at the very bottom of the jar. The general shape is resembling the type of the storage jars of the former levels. Such jars have been found in many sites in Canaan in the Iron Age such as (Lamon and Shipton 1939; Tufnell, Inge, and Harding 1940; Yadin *et al.* 1958, 1960, 1961; James 1966; Franken 1969; Rast 1978; Mazar 1981; Chambon 1984; Finkelstein 1986; Bunimovitz and Finkelstein 1993; Zimhoni 2004; Arie 2006, 2013; Stager *et al.* 2008; Panitz-Cohen 2009; Fischer 2013; Seger 2013).

The two types of the jars are the common types in the Late Bronze and Iron Age, the storage jars have been not changed but, with very slight modifications, it kept the general shape with a tall neck and the rounded semi-ovoid body shape. The handles were thick and the base is rounded and sometimes slightly flattened. The Canaanite or the amphorae jar was common in the Late Bronze Age with the shapes that I have shown, it probably disappeared or changed in the later periods starting for the Iron Age.

#### **IV.9. 9. Biconical Jars:** (pls. 44-51)

The biconical jars are driven their name from the shape, they are small size jars, used for storage and are classified due to certain shape features. This type of the jar is as I mentioned, small size has a biconical shape that divides the pot from the middle of the body into two equal parts, and the biconical itself is a carination sometimes as a sharp angle, sometimes a rounded carination. Another feature of those pots are the very short or missing neck, those jars were made with a very short or without a neck, which connects the rim to the shoulder and body, it is a closed pot with several rim profile types and decorations have been applied to a number of the jars. One or two loop handles are attached vertically to the body (shoulder to body in most of the cases) bases of the jars is disk and more frequently ring bases. This type was found in all levels of the tomb which great similarity but with some modifications and changes in the rims handles placing and bases.

**Biconical Jars**, level: 5 (pl. 44) 4 biconical jars from level 5 have been included in the collection, all of fabric 1, variants 3 and 7 three of them (1, 2, and 3) are tall about 14 cm rim diameter and 23 cm height. Thick walls and thick base, with a rounded

gentle biconical in the center of the body, three of them are missing the neck with and angular everted rim profile connected directly to the body, thickened external and wide and flared outward in 1 and 2. Jar 3 is of a triangular shape, with no neck, disk base is made for jar 1, with ring bases for jars 2 and 3. Jar 4, on the other hand, of 12 cm rim diameter and 16 cm high, is a heavy pot, with thick walls and base, sharp biconical in the center of the body, with a disk base, it is a short jar with an angular everted tall rim profile. The four jars each have a single loop handle attached vertically shoulder to the body. Another detail of those jars than accrued not very often is the spout which I will describe below.

The biconical jars in the Late Bronze Age, similar to those in Tell Dothan are found in sites across the region (Guy 1938: pls. 12, 43, 50; Tufnell, Inge, and Harding 1940: pl. XLIX b; Loud 1948; McGovern 1986; Franken 1992: figs. 4-11, 5-7, 5-10, 5-14, 5-15; Fischer 2006: figs. 269, 270; Mullins 2007: pl. 46; Shalvi et al. 2019: fig. 9: 1.JB1, 2.JB1, 3.JB2, 5. JB3b; Mullins and Yannai 2019: 224: fig. 3.31, 226: fig. 3.32).

**Biconical Jars**, level: 4 (pls. 45-46) 13 jars from level 4 have been included in the collection, all of fabric 1, variants 1, 2, 3, 4, 5, and 7. Those jars have a variety of sizes, shapes, base, rim, and body types. Jars 1, 2, and 3 of pl. 45 are tall with average height at 30 cm, rounded shape closed biconical with no neck, three different short rims. Jar 1 is with a t-shapes rim profile doubled external and internal with a wide ridge on the shoulder which is rare as well as decorative bands applied vertically on the upper body. Jar 2 is flared outward, and jar 3 is with a triangular rim. The three jars are thin walls with a ring base. Jars 4, 5, and 6 are with sharper biconical shape tall angular everted tall rim, thicker body walls, with a single loop handle attached to each of them shoulder to body. Jars 4 at height of 14 cm, is with a disk base. Jar 5 is with a ring base, and jar 6 is with a concave base which is not common, as well jar 6 has a wider opening almost an open type.

The jars in pl. 46 are with rounded body shape. Jars 1 and 2 are with a tall neck which is not common, with average height at 25 cm, thicker and wider body walls, angular inverted rim profiles, high ring bases. Jar 1 is with a single loop handle attached shoulder to body, while jar 2 is with no handles which are not a common feature in the biconical jars, the jar is similar to the jugs. Jars 3, 4 and 5 are tall, thick,

and with two loop handles attached vertically shoulder to body, the rim of jar 3 is angularly inverted, short and connected to the body, while the rim of jar 4 is angular everted and slightly flared outward profile. Jar 5 is 18 cm height, with a straight vertical rim with a channel on the rim interior, with a single loop handle attached vertically shoulder to body, and jar 3 is with a short disk base, while jars 4 and 5 are with high ring bases. Jars 6 height 12 cm, and 7 is 16 cm, are biconical jar shape with a different function. The fact that those two jars have spouts placed on the shoulder of each and with a basket handles attached rim to rim suggest that they may be called biconical jugs, but the shape and the thickness of the body, as well as the missing neck and that both are short, made me classify them in the jar types. Jar 6 is sharp biconical with a disk base, while jar 6 is more rounded with a high ring base, both of them in terms of the shape is very similar to the rest of the jars in pls 45 and 46.

**Biconical Jars**, level: 3 (pls. 47-48) 12 biconical jars from level 3 have been included in the collection, all of fabric 1, variants 1, 2, and 5. The general shape of the jars is similar to the jars that have been found in levels 5 and 4. In the following, I will give a detailed description of those jars. A common feature in the jars of pls. 47 and 48 is that all of the jars are with ring bases. In addition to that, all of them are of close opening type, with longer rims and very short necks, the jars are in pl. 47 with an angular everted rim profiles, thick in most of the cases with one or two loop handles attached vertically shoulder to body, and of rounded shape more than being biconical with average height at 22 cm, with jar 5 at 17 cm height. Jar 1 is decorated with horizontal painted bands covering the rim and the neck, placed on the upper and lower part of the body. The same pattern is featuring jars of pl. 48, at the average height at 18 cm, with longer handles for jars 4 and 5. Jar 6 is of small size, 12 cm high, probably a votive vessel with a palm tree and net shape lines decoration of the upper part of the body. Jar 7 is similar to the spouted jars of pl. 6 and 7 taller here in jar 7 in pl. 21 with greater spout, the main thing is that it continued from level 4 to level 3.

**Biconical Jars**, level: 2 (pls. 49-50) 10 jars have been examined from level 2, with fabric 1, variants 1, 2, and 3. They represent a similarity to the examples from the previous levels, but the jars in this level having a sharper biconical and more and most of them are with two loop handles attached to shoulder to rim. Plate 49 having jar 1 is tall 30 cm high, thin-walled with two long loop handles and a tall rim, angular everted with a ring base and horizontal decorative bands applied on below the rim, and the



middle of the body. Jars 2, 3, 4, and 5 are short at average of 19 cm, thicker body walls, and all with a ring base, jar 2 is without neck, the rim is triangular, jars 3, 4, and 5 are with a tall rim connected to the body, thick and rounded profile, with ridges exterior and all, have a channel on the rim interior.

The jars in pl. 50 are of smaller size, jars 1, 2, and 3 are similar to the jars of pl. 49, but with jar 3 having a flat base which is not common in level 2, and it also has horizontal and vertical decorative bands on the upper part of the body. In addition to that, jars 1 and 3 are at 15 cm height, are rounded shape with the rims is straight vertical of a simple rounded profile. Jar 4 is a very small biconical jar, 10 cm height, similar to the rest of the jars of level 2 but with distinctive decorative motifs. A palm tree and an animal (goat) are applied to the jar as a cultic symbol, the subject of the decoration of this jar was discussed above under the decoration sup-title. Jar 5 is 15.5 cm height, is a spouted biconical jar similar to the spouted jars that I have described above, this one is tall with very thick walls and a large spout, thick rim and a tall wide ring base.

**Biconical Jars**, level: 1 (pl. 51) 7 biconical jars from level 1 have been included in the collection, all of fabric 1 and of variants 1, 2, 5, and 7, with average height between 15 and 21 cm height. They are similar to the jars of level 2 but the biconical is not sharp in this group, it all looks rounded shape, with thick body walls. Jars 1, 2 and 3 are very similar with the size difference, ring bases for all, thick rounded simple rim, straight vertical rim profile and a channel on the rim internal with a neck almost missing. Jars 4 and 5 are similar to the above but with decoration bands randomly covering the upper part of the body, with a thick rim and rounded with prominent ridges exterior for jar 4, and a rectangular rim profile for jar 5. Jar 6 is of earlier style with the tall straight vertical ring and the flat base with a single loop handle attached below the rim to the middle of the body. Jar 7 is with rounded shape, angular everted rim flared and triangular rim, this is the only jar with such a rim profile type, and the base of the jar is a ring base which helps in dating the jar to the same level 1.

The biconical jars also in the Iron Age can be found in several sites such as (James 1966: figs. 52, 56; Briend and Humbert 1980: pl. 71: 8) but the type is not frequent in the Iron Age.

The biconical jars in the 5 levels of the tomb have three different types, sharp biconical body, rounded and spouted jars. The jars in level 5 are more often with one single handle and a disk base that has changed gradually in the subsequent levels until the ring base is dominated in level 2 and 1, with the two handles becoming more common. Another feature is the tall rim which became more common in the later levels of the tomb. In addition to that, I suggest that the jar 6 in level 1 is a copy of the jar 5 in pl. 18 in level 4, that is in my opinion maybe lead to the fact that the jar form level 1 got mixed, otherwise, the same pattern has continued throughout all the levels without remarkable change.

#### **IV. 9. 10. Jugs: (pls. 52-61)**

A great variety of jugs were noticed in tomb 1, it is represented by several shapes, differences in the details of the jugs, including, size, rims, handles attachment, bases, and thickness. In general, 49 jugs have been examined from the 5 levels of the tomb, the two dominant shapes are the rounded and the biconical jugs, with other shapes with very few examples, such as carinated, ovoid, the pear-shape jugs and the bilbil jugs. In most the cases, necks are tall wide or narrow, with several rim profile, handles attachment varies, bases of a ring, disk, flat and rounded can be found in the formation of the jugs.

**Jugs, level: 5 (pls. 52-54)** 13 jugs from level 5 are presented in the study, all of the jugs of fabric 1, and variants 1, 2, 3, 4, 5, 6, and 7, with several body shapes, the jugs 1 to 4 are biconical shape jugs with tall wide neck and high ring bases, all with everted mouth, and a square thick rim profiles. The handle attachment is different in the 4 jugs. In jugs 1 and 3, the handles were attached shoulder to shoulder, while jug 2 is attached rim to shoulder and jug 4 is attached middle neck to shoulder. Jug 5 belongs to the ring base ware (Cypriot bilbil) incomplete at 21.6 cm high which is probably imported, it is not decorated like the common type of bilbils but with the same body characters, such as the long neck, the distinctively high ring base, the ovoid body shape and the tall handle attached middle neck to shoulder, the jug is missing the rim, included in (Bushnell 2016). Jug 6 is similar to jug 5, however, it is locally made, with short ring base and a shorter neck, but the body is ovoid, which is probably a local imitation to the Cypriot type, the height of the jugs varies from 16 to 23 cm.

Jug 7 (24 cm height) and jug 8 (20 cm height) are of rounded shape, thick body walls, and a tall, wide, everted neck. Jug 7 is a heavy thick body, with a rounded everted rim profile, thickened external. The handle is attached shoulder to shoulder, and a short disk base. Jug 8 is similar to jug 7 with flat everted rim profile, the handle is attached below the rim to the shoulder with a ring base. The jugs of pl. 53 also belong to level 5, they are of a large size, average height is 24 to 30 cm, with biconical-ovoid shape, flared rim profiles, with a single loop handle attached shoulder to shoulder, jugs 1 and 2 are of triangle rim profiles and a flat base. Jugs 3 and 4 are with ring bases. Jug 1 in pl. 54 (30 cm height) is of a distinctive shape, it is of a pear-shape, rounded base which is not common and a handle attached rim to shoulder, tall neck, straight vertical rim profile, with one side extended for pouring water.

**Jugs, level: 4** (pls. 54-55) 9 jugs of level 4 were examined, all of fabric 1, variants 1, 2, 3, and 7, with an average height of 21 to 27 cm. Jugs 2, 3, and 4 in pl. 54, jugs 1 and 2 of pl. 55 are biconical jugs with an angle in the middle of the body. They are of several sizes, with an average height 15 to 25 cm, with a common feature is the ring base and the handles which are attached shoulder to shoulder except for jug 4 with handle attached neck to shoulder. The jugs also share the wide tall neck with straight vertical rim profiles, and an angular everted rim inflection, all are thick body walls. Jug 2 is with two loop handles which are not common in the collection, moreover, it has a distinctive very wide opening which is also rare. Jug 5 in pl. 54, jugs 3 and 5 of pl. 55 are rounded shape jugs, with similar necks like the other jugs in level 4, and rim profiles, as well as the bases which are ring, but two distinctive features in jug 5; first, the neck is narrowing on the top as well as the red slip covering the entire body. Jug 4 of pl. 55 is a pear-shape jug with a rounded base, tall, narrow neck, and a straight vertical rim profile, the rim is rounded everted, thickened external. The type is not common, resembles jug 1 in pl. 54 with a much smaller size.

**Jugs, level: 3** (pls. 56-57) the 10 jugs of level 3 are of fabric 1, variants 1 and 2, are of two types, biconical and rounded shapes, of average height of 15 to 21 cm. With tall, wide necks, with ring bases dominating, and 3 jugs with disk bases. Jugs 1 to 5 in pl. 56 and jugs 1 to 3 in pl. 57 are of biconical shape, with wide necks with handles attachment shoulder to shoulder except for jug 4 in pl. 56 and jug 3 in pl. 57, which are both have handles attached rim to shoulder. Jug 1 in pl. 57 is with two handles, gives it a vase-shaped jug. Jugs of pl. 57 are with average height at 16.5 cm to 25.5

cm, jugs 4 and 5 in pl. 57 are of a rounded shape, wide-body, with wide necks, straight vertical rim profile, and an angular inverting at the top of the rim, the handles are attached middle neck to shoulder, with a disk base for jug 4 and a ring base for jug 5.

**Jugs, level: 2** (pls. 58-60) Again in level 2 there are 13 jugs, of fabric 1, variants 1, 2, 3, and 4, with two shapes; rounded and biconical, two main feature in the jugs of level 2 are the ring base which is made for all the jugs, and on the other hand, the handle attachment which started to be connected upper neck or lower rim to shoulder, a pattern which is rare in the previous levels. The jugs of level 2 are large and medium size with average heights at 18 to 27.6 cm. The jugs of pl. 58 are all rounded and very wide body, with a wide tall neck, resembles to the jugs of the earlier levels, they are with a thick body, the rims are all straight vertical or sloping vertically. Jug 1 is of a square thick ring profile, thickened external with a ridge on the rim external, jug 2 is with an angled, cup-like rim. Jug 3 is with simple thick angular inverted rim profile, jug 4 is similar to jug 3, while jug 5 is straight vertical rim profile, rounded and double thickened external. The jugs of pl. 59, as well as jugs 1, 2, and 3 of p. 60, are of biconical shape. All with ring bases, tall and wide necks, the handle attachment is made rim to shoulder in all the jugs except jug 4 in pl. 59 which handle are attached shoulder to shoulder and the biconical is much sharper than the other jugs, which gives the impression of the of an earlier dating. Jug 5 in pl. 59 is with distinctive features, two angles on the shoulder and middle of the body, which gives it a slightly different biconical shape than the rest of the jugs. Jugs 1, 2, and 3 of pl. 60 are of small size than the jugs in pls. 58 and 59, with ridged necks.

**Jugs, level: 1** (pls. 60-61) 8 jugs have been included in the collection, all of fabric 1, variants 1, 2, and 4, with average heights at 24 to 31.5 cm. The shape of some of the jugs of level 1 is very similar, which are not all included. For example, jug 4 of pl. 60 has another nine copies that I did not include in the catalog. The jugs shapes of level 1 are rounded and biconical, similar to jugs of level 2. The ring base is dominated, tall necks, and handles attached rim to shoulder. Jugs 4, 5, 6 and 7 are biconical shape with very wide, tall necks and vertical sloping, angular inverted rim profiles, thickened external, with jug 6 a trefoil rim profile, the only jug in the collection. The handles are attached rim to shoulder, the bases are of a high ring type, except jug 7 is with a wide thick flat base. Jugs 1, 2, 3, and 4 of pl. 61 are rounded body shape, the

rims of those jugs are doubled and thickened external, angular inverted rim profile, with a cup-like channel interior, moreover, the bases are of high ring base for the four jugs.

The jugs of tomb 1 in all levels fit the general types that have been found in several sites across Canaan. The jug types are varied and have not changed greatly during the Late Bronze and the Iron Ages, it has served the same function which affected the staple shape during all the periods of use. Jugs have been spread and apparently used in funeral and daily life use, that's why they are a very common type in most of the sites, they have been found in the following sites with the same characteristics in those sites as well as at Tell Dothan (Guy 1938; Lamon and Shipton 1939; Tufnell, Inge, and Harding 1940; Loud 1948; Yadin *et al.* 1958, 1960, 1961; Tushingham 1964; James 1966; Franken 1966, 1992; McGovern 1986; Rast 1978; Briend and Humbert 1980; Pritchard 1980; Mazar 1981; Chambon 1984; Finkelstein 1986; Bunimovitz and Finkelstein 1993; Zimhoni 2004; Arie 2006, 2013; Fischer 2006, 2013; Mullins 2007; Panitz-Cohen 2009; Martin 2013; Seger 2013; Duff 2015; Shalvi *et al.* 2019; Mullins and Yannai 2019: 229-237).

The jugs of the 5 levels of the tomb showed continuity in the shape, the rounded and biconical shapes were found in all levels with very slight differences, most of the jugs share the ring bases in all levels, along with the tall, wide necks, and the straight vertical rim profiles with simple angular on the rims' tips. Handle placement is probably of importance and notable variable; the placement of the handles in levels 5, 4 were made in most of the cases, shoulder to shoulder, while in level 3 it appeared that handles were attached middle neck to shoulder in most of the cases, in levels 2 and 1 the attachment of the handles dominated by placing the rim to shoulder.

#### **IV. 9. 11. Dipper Juglets: (pl. 62)**

The dipper juglet form is a Middle Bronze Age type, it was known throughout the period and continued as other types to appear in the Late Bronze Age. The dipper juglets of this collection are of one type that is showing variations, the 7 dipper juglets coming from tomb 1 are from levels 5, 4, 3, and 2. No pots of this type have been found in level 1. The general character of those pots is the tall body, with one tall loop

handle and a rounded pointed base, usually; the rim is of trefoil type. All of the dipper juglets are of fabric 1, variants 2, 3, 5, and 7, with average height from 21 to 26 cm.

**Dipper Juglets**, level: 5, 4 and 3 (pl. 62) three dipper juglets were included in the collection, dipper juglet 1 is from level 5, tall, thick juglet with tall wide neck, and a simple trefoil rim profile. Single-loop handles attached rim to body, a thick rounded base ended flat at the bottom. Juglet 2 is coming from level 4, the shape is ovoid with a sharp rounded base, and a trefoil rim profile, slightly flared, a tall wide neck with a loop handles attached rim to shoulder, with thick body walls. Dipper juglets 3 is from level 3, more like the old tradition, tall with thin walls and a thick flat base, with a thick loop handle attached rim to shoulder, with a tall, wide neck. The rim is of a straight vertical profile, simple and thin.

**Dipper Juglets**, level: 2 (pl. 62) four dipper juglets were examined from level 2, dipper juglets 4, 5, 6, and 7 in pl. 62, all of them are tall with a long body, one loop handle attached rim to shoulder, and with a rounded base. Dipper juglet 4 is different for a rounded opening with an angular inverted rim profile, with two long ridges and a tall neck. Dipper juglets 5, 6 and 7 are with trefoil rim profiles, tall necks, ribs from the interior of the body, thin body walls, and a loop handle attached rim to shoulder with rounded bases. All of the dipper juglets of level 2 are similar in the shape and they share same features with slight differences in the neck width. The common feature of the dipper juglets in all levels is the slim long shape, with a trefoil rim profile, and a rounded base. Generally, these characters have not been changes, with a slight difference in the general shape from the narrow slim shape, to semi-ovoid.

The dipper Juglets were popular all over the ancient Canaan during the Middle, and Late Bronze Age with several functions, such as water or precious liquids. The juglets as well were used for same functions. Bushnell had studied the juglets and the dipper juglets across the ancient Levant during the Middle and Late Bronze Ages, with indicating function and distribution of such a type of pottery vessels (Bushnell 2016).

#### **IV. 9. 12. Juglets: (pl. 63)**

The juglets that have been studied in the collection are of several types, they are nine pots, coming from levels 5, 3, and 1, and they vary in different features, such as

the shape, the base type. A common feature between all of the juglets is the one single loop handle attached rim to shoulder. The juglets main function is for precious liquids or it has been sometimes attached to jars that contain water in the tombs such as Tell Dothan Tomb 1, with the two jars places on the entrance of the tomb, as well, juglets are known in all period of Bronze and Iron Ages (Bushnell 2016). The juglets in the collection are all of fabric 1, variants 1, 2, and 5.

**Juglets**, level: 5 (pl. 63) the 4 juglets of level 5 are of three types, juglets 1 at 9 cm height and juglet 2 at 12 cm. Both juglets are of a small size dipper juglets, with a rounded base, both are pear- shape with handles attached rim to shoulder, straight vertical rim profiles, with a slight rim, flared, tall and wide neck. Juglet 3, 17 cm height, is in a different shape, it is biconical, with a tall, very narrow neck and a flared rim profile, square and thickened external. The loop handle is attached rim to shoulder, and a wide ring base with three bands of decoration on the shoulder. Juglet 4, 14 cm height, is a carinated juglet, with a tall narrow neck and a simple straight vertical rim profile, slightly flared external. A loop handle is attached rim to shoulder, and a rounded base, the juglet was trimmed and shaved technique which is a rare application in the collection.

**Juglets**, level: 3 (pl. 63) the 2 juglets (5 and 6) are from level 3, they are of different shapes, juglet 5 of 13.5 cm height, is a rounded body juglet with a thick wide flat base. With a very high narrow neck, and a simple slightly flared rim profile. A loop handle is attached below the rim to the shoulder. Juglet 6 is 18 cm height, is of a biconical shape with a short and very narrow neck that opens on a wide mouth, with thick, flattened and flared rim profile, a loop handle is attached upper the neck to shoulder, and a ring base. This juglet resembles juglet 2 of level 5.

**Juglets**, level: 1 (pl. 63) 3 juglets from level 3 are presented, juglet 7 is 16 cm height is an ovoid shape, with a tall body, the rim is connected to the shoulder, with a relatively wide mouth, the rim is simple angular everted and short. A loop handle is attached below the rim to shoulder, thick walls and a short ring base, the juglet is relatively similar to the pattern of juglets 3 and 6. Juglet 8 is 11 cm height, is carinated, resembles the pyxides pattern with a tall neck, and a simple everted rim profile with an angular inverted rim lip, a single loop handle is attached rim to shoulder, the juglet has two carinations and a short thick base. Juglet 9 is 9.6 cm, it is

a rounded shape with a tall neck and an angular everted rim profile, one loop handle attached rim to shoulder, with a wide short ring base, and this type of juglets is a copy of the jugs in the level 1 which I will illustrate in the following.

The juglets of tomb one are with several types, the biconical type seems to be continued throughout the levels although no juglets have been included from levels 4 and 2. Small juglets accord in level 5, with ovoid and rounded juglets in the later levels.

#### **IV. 9. 13. Pyxides: (pls. 64-71)**

The pyxis is a pot or a small container for carrying liquids, such as precious liquids, perfumes, medicines or fuel, this type of pots is known in Cyprus and the Mycenaean world during the Late Bronze and Iron Ages. It has been imported to different regions in the Levant. The imported or the original pyxides are made with high-quality clays, well surface treated, and decorated with high skills. The pyxides have been imitated in some areas such as Canaan, where the pots are different than those imported, compared imported pyxides, the imitated ones are made with low quality of clay, surface treatment and decoration. 85 pyxides from the 5 levels of tomb 1 have been included in the study, they represent the larger pyxides collection which number is more than 500 pots.

The pyxides in tomb 1 have a variety of shapes and features, moreover, the pot is generally, a small size, double carinated, sometimes tall, wide and heavy with thick walls, or the opposite. Although pyxis is a closed vessel type, it has and everted mouth in most of the cases, with a tall narrow or wide necks, straight vertical, wide shoulders, double carinations on the shoulder and the lower body part which sometimes creating a straight vertical line between the two carinations, or a concave, or a sloping when the lower carination is wider than the upper one, which is common in the collection. Moreover, two handles, loop or knop are attached to the body, horizontally on the shoulder, and very rarely vertically. Ring and rounded bases are the dominant types for the pyxides. Finally, the majority of the pyxides are decorated with painted lines and bands, mainly geometric motifs on several parts of the body for symbolic purposes.



**Pyxides**, level: 5 (pl. 64) 8 pyxides from level 5 were examined, those are of two fabric types, pyxides 1, 2, 4, 6, 7 and 8 of fabric 1, variants 2 and 5, while pyxides 3 and 5 of fabric 3, with average heights at 9 cm, and body diameter at 9 to 10 cm. The pyxides of this level are all of the double carinated types. The carination is not sharp in those pots, which gives the semi-rounded profile for most of the pots. On the other hand, all of the pyxides are with rounded bases which are important in terms of chronological order. The walls of the pyxides are not thick, with relatively short wide necks. All of them are narrow in the lower part except pyxis 5 with a wide lower neck which is closing at the top. The rims are flared rounded or flattened or slightly beveled such as pyxis 1 and 2, while pyxis 2 is sharp, thickened and internally angular. While pyxides 1 to 5 and 8 are straight vertical line between the two carinations, pyxis 6 is lower carination is wider sloping from top to be wider in the bottom. Pyxis 7 is contrary to the former one. Most of the pyxides of this group are with knop handles attached horizontally on the shoulder. Pyxides 3 and 8 are with thin loop handles. Finally, painting decoration is not common in the group except pyxis 7 with pale geometric lines that may have been worn out through the use and time.

**Pyxides**, level: 4 (pl. 65) the pyxides in level 4 continued the same pattern in level 5, they are of fabric 1, variants 1, 2, 3, 5 and 7. With several sizes, average heights are 7.5 to 15 cm, and body diameter at 9 to 15 cm. Usually, they are small, double carinated, with a rounded base, and all of them are with knop handles and flared rims, simple rounded, thinned, and some of them are slightly square beveled like pyxides 2 and 7. A few modifications have occurred on the body and neck. The body is double carinated with straight vertical space between the two carinations, and some of them are with concave space such as pyxides 8 and 9. On the other hand, a rounded body is represented in pyxis 11, a small pot with an everted rim profile, connected to the shoulder and missing the neck, it's a rare example of a rounded pyxis. On the other hand, two large pyxides were found, 9 and 10 with semi-square shapes. The necks of the pyxides in this level are relatively long, narrow from the bottom and wide from the top, except pyxides 7, 8 and 11 which been made without a neck.

**Pyxides**, level: 3 (pls. 66-67) 24 pyxides are included in the study of level 3, all of fabric 1, variants 1, and 2, with an average height at 7.5 to 15 cm, and body diameter average is at 10 to 15 cm. The pyxides of this level resemble the ones from level 5 and 4. However, the main two distinct features in this level are the appearance of the

ring base which has not been in use before as well as the loop handles. The general shape of the body of the pyxides did not change, it is the double carination shape with four variations between the two carination; the straight vertical line in pyxides 3, 4, 9, 11, 12, 15, 16, 18 and 19 of pl. 66, the sloping upper to lower for the lower is wider in pyxides 1, 2, 6, 7, 8, 13, 14, and 17 of pl. 66, and 2, 3, and 4 in pl. 67. The sloping lower to upper for the upper carination is wider in pyxis 5 in pl. 66, the concave space in pyxides 4 and 12 in pl. 66 and 1 and 5 in pl. 67. On the other hand, the pyxides with rounded bases are with a shorter and narrower body, while those with a ring base are taller and sometimes wider. Most of the pyxides group of this level is of the angular everted mouth, the rims are simple rounded in most of the cases, square in pyxides 11, and 13 in pl. 66 and 1 in pl. 67. Some of the rims are angularly inverted such as pyxides 2, 3, 6, 8, 17 in pl. 66 and 4 in pl. 67. The ring bases of the pyxides are thin and short. Knop handles are connected to the rounded base pyxides, while the loop handles to the ring base ones, a distinctive loop handles are those of pyxis 4 of pl. 67 where the loop handles are vertically attached shoulder to shoulder. Finally, more pyxides in level 3 are decorated, the decoration is simple geometric lines and bands were applied to several parts of the body and sometimes on all over it like in pyxis 16.

**Pyxides, level: 2** (pls. 68-69) 22 pyxides of level 2 are of fabric 1, variant 1, 2, 3, and 7, with average height at 6 to 16 cm, with average body diameter 9 to 19.5 cm. They are with two types of bases, the ring and the rounded base. Pl. 68 is mainly for the pyxides of the rounded base, those pyxides resemble the pyxides of the earlier levels, but they are larger, taller and wider than the previous ones. The necks as well are tall and with two orientations, the straight vertical necks such as 2 and 4, and the angular everted neck such as 1, 3, 5, 6, 7, 8, 9, and 10. The line between the carinations is of different types, its straight vertical for pyxides 1, 2, 3, 4, 7, and 9, while it's sloping wider towards the lower carination in pyxides 5, and 7. The concave shape is in pyxides 8 and 10. The pyxides of pl. 69 are all with ring bases, they are longer and wider than those of pl. 68, and they all are of the sloping wider upper to lower carination except pyxides 10 and 12. The handles of the pyxides of level 2 are loop handles, 18 out of 20 which indicate that the type is dominating, except the knop handles for pyxides 7 and 10 of pl. 68. The majority of the pyxides in level 2 are

decorated with geometric painted lands and bands covering mainly the body of the pot and extended to the shoulder, neck and the base sometimes.

**Pyxides**, level: 1 (pls. 70-71) 20 pyxides of level 1 are examined in this study, they are all of fabric 1, variants 1, 2, 5, and 7, with average height at 9 to 15 cm, average body diameter is at 9 to 15 cm. The pyxides resemble the group of level 2. The level 1 group is of the double carinated type, with both rounded and ring bases. The pyxides of this level are large, tall and wide, with tall neck, some of the necks are straight vertical such as pyxides 1 to 6 of pl. 71 while the rest of them are in angular everted orientation. 5 pyxides from level 1 are of rounded bases 1 to 5 in pl. 70, the rest and the dominated type is the ring base. On the other hand, two types of rims are present, the rounded simple rims such as (pl.70) and 1, 2, 6 to 10 in pl. 71, the rest are thinned slightly beveled profiles.

Another feature in the rims is the angular everted rim inflection which is found in most of the rims. The line between the two angular profiles is straight vertical in pyxides 1 in pl. 70, and 4 and 6 in pl. 71. The dominant is the sloping everted line from upper to lower in pyxides 2 to 4, 6 to 10 in pl. 70, and 2, 3, 5, 7, 8, and 10 in pl. 71, concave space also present in pyxis 9 of pl. 71. The dominant handle is the loop handle which is attached to 18 pyxides out of 20, the remaining 2 are with knop handles, and they are pyxis 3 in pl. 70 and 5 in pl. 71. Pyxis 5 in pl. 70 is of a different shape, it's a pear-shape pot with narrow, tall neck without a shoulder, connected to a very wide carinated body and a thick rounded base, the pyxis as well is having concave long vertical wide grooves as a decorative element. Pyxis 10 of pl. 71 is a large 22 cm high, and 21 cm body diameter, it is uncommon in the group with distinctive loop handles attached rim to shoulder similar to pyxis 4 of pl. 68 which belongs to level 3. 17 out of 20 pyxides are decorated with geometric lines and bands covering several parts of the body with concentration on the body and secondly the shoulder of the pot.

Although the 85 pyxides of the 5 levels share the same carinated shape and other features such as the handle and base types, and relatively the sizes, there are clear variations in those elements, while the pyxides in level 5 are of a short neck, small size, knop handles, rounded base and only one is decorated. Level 4 is a bit different with the larger size of the pyxides, and taller necks, but remained with

rounded bases and knob handles. The pyxides in level 3 on have witnessed changes on the size which became larger, the necks became longer, the bases, not only rounded but also ring, with loop handles appearance in this level and more decorated pot than before, this pattern continued in level 2 were more of ring bases. Loop handles dominating, as well as more pots are decorated. During the final level, level 1, the ring base became dominant, as well as the loop handle, the size is big and most of the pyxides now are tall and wide. Moreover, most of the pyxides in level are decorated with very few examples without any decoration.

Pyxides considered being a foreign type of pottery (from the Aegean world) that have been exported to Canaan during the Late Bronze until the Iron Age. The type has two main categories; the imported and the locally imitated pyxides, Tell Dothan's pyxides falls in the first category, on the other hand, pyxides have been found in several sites across Palestine and it's a common type in sites such as (Guy 1938; Lamon and Shipton 1939; Loud 1948; Yadin *et al.* 1958, 1960; Pritchard 1963, 1980; James 1966; Franken 1969; Rast 1978; Chambon 1984; Dever 1986; Bunimovitz and Finkelstein 1993; Fischer 1997, 2013; Arie 2006, 2013; Mullins and Yannai 2019: 241: fig: 3.40: 8, 10).

#### **IV. 9. 14. Stirrup jars: (pl. 72)**

10 stirrup jars have been found in tomb 1 according to the excavators, the 10 jars are included in the collection. The distribution is as follows, no jars from level 5, 2 from level 4, 6 from level 3, 2 from level 2, and no one coming from level 1. The stirrup jar type of pottery is known to be of typical Mycenaean origin that has been imported to the Levant during the different stages of the Late Bronze Age. The Mycenaean type is very fine, with beautifully applied decorations and surface treatment, as well as, the clay quality. It has been found in several archaeological sites in Palestine. Moreover, the type also has been imitated by the locals, the quality of the imitated examples is not as good as the imported ones.

At Tell Dothan group, it probably has been imitated locally at the site, due to the fact that the clay although very fine but local, as well as, the decoration and surface treatment quality which indicated that those stirrup jars are local. The common features of this type are rounded or carinated body shape, relatively small size, the

burnishing of the surface, the dark painting colors which applied to parts or all of the pot. Two unique parts that are attached to the pot is the upright trumpet-shaped spout placed on the top of the pot and the small basket handles which attached to the top of the pot and connected to a lid centered between the two handles, looking like the opening of the jar, while it's only a decoration element, for the opening, is the spout. Although rounded and carinated shape, it also has a ring, concave or disk bases. It was used probably for precious perfumes, oils or medicines, or on the other hand, they were empty used simply as precious beautiful objects for the decoration of the place or the tomb in case of Tell Dothan. All the jars are of fabric 4, the measured average height is 10.5 cm, body diameter measured at 9 cm, with exception measures of jars 8 and 10 which will be mentioned below.

**Stirrup jars, Level: 4** (pl. 72) one stirrup jar from level 4 is included in the collection, it is a carinated shape jar, the carination is not sharp, giving it a semi-rounded shape. It has thin walls, with a disk base, the spout is relatively short but missing, with the basket handle attached on the two sides and a lid in between. The jar is decorated with wide painting band as strips on all over the body including the top of the lid.

**Stirrup jars, Level: 3** (pl. 72) 7 stirrup jar were uncovered in level 3, which includes the majority of the type. Three shapes can be classified, the first is the typical rounded shape for jars 2, 3, 4, 6 and 7. The next shape is a carinated semi-rounded shape, it includes only one jar, number 5, the carination of this jar is not sharp, and it looks like a semi-rounded or a heart-shape jar. The third shape is the sharp carination jar number 8, height is 9.3 cm, and body diameter is 13.2 cm, with a short wide body. the 7 jars have two base types, the concave base of jars 5, 6, and 8, and the disk base for the jars 2, 3, 4, and 7. All the jars of level 3 are decorated with painted lines in thick strips. Jars 2, 5, 6, and 7 were decorated but the decoration has worn out with pale decoration remnants left on several parts of the body. Jars 3, 4 and 8 are intensely decorated with thick painted strips on all over the body.

**Stirrup jars, Level: 2** (pl. 72) 2 stirrup jars were included from level 2, they have two different shapes. Jar 9 is a rounded shape similar to those from level 4 and 3 with thin body walls, disk base and decorated with thick painting strips on all over the body including the spout, lid and handles. Jar 10 height is 12 cm, and body diameter is 12.6

cm, it is of a carinated shape, the carination is sharp and wide on the upper part, loping narrower in the lower part until it reaches the base which is a high ring base, the only one in the stirrup jars group. Jar 9 as well, is very similar to those imported to the area along with jar 8. Jar 10 is decorated with good quality decoration, burnished and the colors of the decorated strips are shinny.

Stirrup jars like pyxides, they are mostly can be found in tombs, and are less common than the pyxides, probably for the high skills that it needs when forming and due to the precious value, it represents, though the time has been found in Late Bronze and Iron Age in several sites (Guy 1938; Loud 1948; Yadin 1960; James 1966; Briend and Humbert 1980; Pritchard 1980; Dever 1986; Franken 1992; Yannai 2004; Yasur-Landau 2006, 2013; Arie 2006; Panitz-Cohen 2009; Martin 2013).

Due to the small number of stirrup jars in the collection, I was not able to find variations between the different levels. The jars are similar in most of the cases, 8 jars of them are of rounded or semi-carinated shapes, with same features and decoration patterns. The other 2 jars are from level 3 and 2 with distinctive shapes but a single example for each. The jars have not been found in level 1 which is a good indicator that the stirrup jar type has probably not been used in that level.

#### **IV.9.15. Flasks: (pl. 73-77)**

16 flasks have been included in this collection all of a lentoid shape, with two handles, different sizes and some are decorated with lines in concentric circles shape. The flasks were made by attaching to bowls and a neck with handles for holding the neck with the bowls strong, to carry the flasks, to hang it while traveling, and probably to attach a rope when people wanted to fill them from deep wells. The last point leads me to suggest that the reason behind the lentoid shape of the flasks, not only to be easier to carry on the back of donkey or horses, but more important is to facilitate the filling of the water, the rounded or square bottom of any pot will make it very hard to sink in the water, while the flask's lentoid which is similar to the ship shape principle or the fish shape which allowed the fish to swim easily<sup>15</sup>.

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<sup>15</sup> The idea of the flask shape being made in a fish or bottom ship-shape in order to facilitate filling the water from deep wells is not found in the literature.

**Flasks**, level: 5 (pl. 73) 3 flasks from level 5, of fabric 1, variants 2, 3, and 6, all of them are of lentoid shape, with a high neck, wide opening, and a medium-size body with average height is 21 to 34 cm. The three flasks (1-3) having two vertical loop handles attached to the middle of the neck to the shoulder, and all are decorated with lines in concentric circles shape. Flask 1 is having a wide opening and a tall neck, it is thick, and the rim is angular straight, and rounded rim profile. The handles are attached below the rim, upper neck to the shoulder, they are relatively small. Flask 2 is similar to 1, but with a smaller opening, shorter neck and handles with angles unlike flask 1 with rounded handles. Flask 3, on the other hand, is smaller in the size, with an angular everted rim, very thick and rounded, the handles are attached from the bottom of the rim to the shoulder, and they are relatively large handles.

**Flasks**, level: 4 (pl. 73) one flask have been studied from level 4, of fabric 5 which is of basalt inclusions, with 13.2 cm. It is very similar to flasks from level 5, though this flask (4) is a small size flask, the rim is very similar to flask 3 in level 5, will the handles are large rounded loop handles attached upper neck to the shoulder. The handles of this flask look like jug handles, moreover, the flask is not decorated or probably the decoration has worn out through use and time.

**Flasks**, level: 3 (pls. 74-75) three flasks from level 3 have been included in the study, of fabric 1, variants 2 and 3 two of them 1 and 2 in pl. 74 are of large size of 30 cm for flask 1, and 36 cm for flask 2, and flask 1 in pl. 75 is of oversize with a height 46 cm. It is a very large flask about 45 cm high. The three flasks are decorated with concentric circles shape. Flask 1 is with a distinctive shape for the neck is wide and very short with the handles rectangle-shape attached rim to upper shoulder and very small but thick. Flask 2 is similar to the flasks of the previous levels, with a sharp angular inverted rim profile. Flask 1 in pl. 75 is over-size, with a very wide neck and strong handles attached lower rim to the shoulders, it is similar to flask 2 in pl. 74.

**Flasks**, level: 2 (pl. 76) 5 flasks from level 2 were included, all of fabric 1, variants 1, 2, and 3, they are large and small, the large flasks 1, 4, and 5 with height average at 33 cm, they are with short necks, with handles attached middle rim to shoulder. The handles are rounded in flask 1, and rectangular in flasks 4 and 5. The rim profiles for are angularly inverted, with flask 4 closing mouth more than the usual. Flasks 2 and 3 are of small size with an average height at 18 cm. Flask 2 is with a very tall, narrow

neck, and a mouth everted, almost flared and thick, the handles, on the other hand, are tall and decoratively attached mid-neck to the shoulder. Flask 4 is a small flask, with a medium neck and a tall handle attached rim to shoulder, the mouth is opening similar to flask 2. All the flasks are decorated with concentric circles shape on the body from the two sides, flask 2 has more detailed decoration on the body and the handles.

**Flasks**, level: 1 (pl. 77) 4 flasks from level 1, all of fabric 1, variants 1, 3, and 7, three are of large size, the fourth is small. The flasks general shape resembles the flasks of levels 2, 3, 4, and 5. But there are differences in the neck size, handle shape and attachment. Flasks 1-3 are with medium size necks, wide and the rim profiles are angular inverted with channels interior rim. Flasks 1 and 2 are rounded rims thickened external, while flask 3 is flattened in a triangular shape profile, with ridges on the neck. Thick squarish shape handles are attached rim to shoulder in the three flasks, but the handle shape in flask 2, they are thin and opens wide in a half-circle, all the three flasks are decorated with concentric circles shape on the body from the two sides. Flask 4 is small, the decoration is worn out with small remnants with an everted opening, sloping vertically and wide, simple rounded rim profile. Tall neck with handles attached upper neck to the shoulder.

The flasks of tomb 1 are with different sizes, they have several features, for example, the flasks of levels 5 and 4 are with tall necks, and a very wide opening and the handles are attached middle neck to shoulder. The flasks of level 3 are of shorter necks, handles were attached more from the middle of the rim to the shoulder, with narrower mouth opening. Flasks of level 2 are very similar to those of level 3. Flasks of level 1 have shorter wider necks, with handles attached rim to shoulder which I consider being an important indication for evolution in the shape, in addition to the fact that the mouth is narrower than flasks of the early two levels of the tomb. Finally, the decoration pattern of the flasks has been the same all over the 5 levels with no changes.

The flask type vessels have been found in different sites and across a long period of time, it started in the Late Bronze and continued until very late in history. Flasks were found in the following sites resembles those from tomb 1 at Tell Dothan, with some variants in the handles, some flasks from different sites had only one loop handle attached to them, the case has not been found at Tell Dothan (Guy 1938;



Lamon and Shipton 1939; Tufnell, Inge, and Harding 1940; Yadin *et al* 1960; Tushingham 1964; James 1966; Briend and Humbert 1980; Finkelstein 1986; Franken 1992; Yannai 2004; Arie 2006; 2013; Panitz-Cohen 2009; Fischer 2013; Mullins and Yannai 2019: 243: fig: 3.41: 1-8).

#### **IV.9.16. Chalices:** (pls. 78-80)

29 chalices have been included in the collection, although named chalices, it may according to the shape have served not for drinking but for incense burning with evidence of carbon traces on the inside of the bowls. The shape of the chalices is a mushroom-like shape<sup>16</sup>. The chalices are generally are of one shape differed in the details, consists of a leg sometimes footed sometimes not, the leg is a cylinder shape, carrying rounded bowls like a crown. The chalices size differs from tall to short, and large to small bowls. In addition to that, some of the chalices are with thick attachment, while others with thin, which lighter weight. The chalices in the Late Bronze and Iron Ages are similar in shape and function, they have been found in several sites across Ancient Canaan east to west and north to south, Grutz has surveyed the chalices of Canaan in almost all the sites where excavators have discovered, has studied is useful for chronological and distribution purposes, noting that chalice started before the Late Bronze Age, and continued throughout all the periods of the Iron Age (Grutz 2007).

**Chalices**, level: 5 (pl. 78) 4 chalices form level 5 have been examined, of fabric 1, varants 1, 2, and 6. They are tall, with a height of about 12 cm, with wide bowls about 14 cm diameter, and footed legs, chalice 1 is medium size with prominent ridges on the bowl exterior. The body of the chalice are thick, the surface is not treated, t-shape rim profile, angular inverted, the bowl itself is rounded. The base is trumpet footed base which is the case of all the chalices of the collection. Chalice 2 is taller with ridges on the leg of the chalice interior wide shallow bowl with a t-shape rim profile and angular inverted. Chalices 3 and 4 similar to chalice 2, with a difference in the foot of chalice 4 that is a short foot, almost no foot.

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<sup>16</sup> The name mushroom-like chalices comes from the shape of the chalices which go in accord with the general shape of the chalices, the base, leg and the crown, if 10 chalices put together it looks like a mushroom kingdom, Grutz has not named the chalices the mushroom-like chalices.

**Chalices**, level: 4 (pl. 78) chalices 5, 6, 7, and 8 in pl. 78 are from level 4, of fabric 1, variants 1 and 2, they are not different than chalices of level 5 with an average height at 12 cm and bowl diameter at 15 cm. Chalice 5 is with v-shape bowls, while 5, 6, and 7 are rounded. The rims of those chalices are of the t-shape, angular inverted with a triangular shape rim profile, chalice 8 is without a foot, the only chalice without a foot in levels 5 and 4, but the trumpet end is a wide diameter.

**Chalices**, level: 3 (pl. 79) 11 chalices from level 3 have been included in the collection, all of fabric 1, variants 1, 2, and 4. Some are tall at about 16 cm like chalices 1-4, some are short at about 9 cm high, with bowl diameter at about 10 cm. They maintain the same traditions of levels 5 and 4. Chalices 1 and 4 are with tall trumpet base leg, no foot at the end, with wide shallow bowls, angular everted rims, t-shaped rim profile, and a thin attachment between the leg and the bowl. Chalice 5 is short, wide and footed, resemble the chalices in the two former levels, while chalices 6-10 are similar with a short, wide-body, and a wide leg, with only chalice 8 is footed. Chalice 6 on the other hand, is with a distinct rim profile, v-shaped triangular, with double rim lips.

The chalices 6-10 are deeper bowls than chalices 1-5. Chalice 11 is a different shape and function than the others. It is a krater shape with multi handles and a rim that resembles the other kraters in the collection. The reason to include it in the chalices group is the fact that the base is a chalice trumpet footed base, as well as the small size. The bowl is a small krater, with an angular inverted rim, horizontally flat with a carination, and a rim lip angled upright. The body has two carinations that ends at the base of the krater where it attaches to the leg. Four paralleling loop handles attached shoulder to body. It is suggested that the chalice of this type to be used for liquid.

**Chalices**, level: 2 (pl. 80) 5 chalices from level 2 were examined, all of fabric 1, variants 1 and 2. The main character for chalices 1, 2, and 3 is that they are short about 12 cm high, with wide legs and not feet for each of them. The bowls are small 12 cm in diameter and shallow which is why the legs look bigger and unfit. On the other hand, Chalice 2 has a rare case in the attachment where a tall pointed base coming out of the base of the bowl, with the leg being attached to the middle of the body of the bowl. The rims are angular inverted with a triangular profile. Chalice 4

about 17 cm high, it is different with a deep large bowl with 20 cm bowl diameter, and footed base, with ridges on the leg exterior. Chalice 5 is functionally and shape is different with which resembles a carinated krater with two loop handles attached rim to body, and a straight vertical rim, square rim profile slightly thickened internal, the base is short trumpet type without a foot. It is a chalice for the small size which height is 15 cm and rim diameter is about 16 cm.

**Chalices**, level: 1 (pl. 80) chalices 6-10 of pl. 80 are of level 1 of the tomb. All belongs to fabric 1, variants 1, 6, and 7. Chalices 6-8 are short, 12 cm high and wide with thick bowls diameter at about 14 cm, and leg. Chalice 6 is with a shallow bowl, while 7 and 8 are with deep wide bowls, chalices 9 and 10 in addition to being thin body walls, they are tall at about 17 cm high, with small bowls diameter at about 12 cm, and tall legs, each of them is with a similar triangular rim profile and angular inverted. A common feature for chalice 7-10 is the short foot and the end of the base, while chalice 6 is made without a foot.

The chalices in the context of the tomb 1 are very similar, there is no big differences, which makes it hard to distinguish and create a marker to each level, however, the feet can be a relevant indicator of the typology purposes; chalices in levels 4 and 5 are made with prominent feet, while the feet in the next 3 levels almost disappeared or been very short, less attention was given to the feet making in levels 3, 2, and 1.

#### **IV. 9. 17. Oil Lamps:** (pls. 81-88)

The oil lamps of the Late Bronze and Iron Age of Tell Dothan are those common lamps in Canaan at that period. 52 lamps in the current collection, all of the 52 lamps are of fabric group 1, variants 1, 2, 3, 4, 6, and 7. They are simple lamps made out of a rounded shallow bowl which has been pinched from one side forming a little basin which usually takes the majority of the lamp's size, in addition to that, when it pinched it creates a channel which is known as the nose or spout of the lamp where a piece of cloth is placed for lighting. The tomb has produced a large number of such lamp, all of them have been used due to the traces of the carbon on the nose. The lamps features are varied, some of the lamps have a flared rims, some were made without rims, some of the lamps pinches are sharp while other examples are not, very few examples have been almost closing from one side due to the great sharpness of

the pinch, the sharpness of the pinch also decides the sharpness and length of the nose. The ring base is the dominant type in the collection with not more than 2 or three lamps with flat bases, the bases are relatively thick in order to create the balance when places on a floor of a niche.

**Oil Lamps**, level: 5 (pls. 81-82) the 8 lamps of level 5 are all of the deep bowl type, 6 cm deep and about 14 to 16 cm in diameter, which is the main character of lamps of this level. In addition to that, they are with relatively small diameter, they are not very wide. Some of the noses are long such as lamps 1, 3, and 3 of pl. 81, and lamps 1, 2, and 4 of pl. 82. The rest of the lamps of the two plates are of long noses, sometimes even sharp due to the sharpness of the pinch such as lamp 3 in pl. 82. Both the lamps with and without rims are present in the collection, i.e. both types have been produced during this level, usually; the lamps of level 5 are not sharply pinched. The noses of the lamps of this level as well are having noses with equal height as the rest of the body, which means that the lamps have been placed with a balance between the two ends of them. Finally, lamp 4 of pl. 82 is of distinct features, it is a tall, narrow lamp with a short nose, with sharp wide ridges on the body external surface, as well as, a clear break which suggests that the lamp was placed originally on a tall leg or a trumpet base.

**Oil Lamps**, level: 4 (pls. 83-84) 13 lamps from level 4 have been examined, they are from the same type as the previous level, but a little shallower at 5 cm, with a diameter average at 15 cm. They are wider lamps in diameter, with longer noses and most of the noses, are higher than the rest of the body. In addition to that, they are shallower than the lamps of level 5, except lamps 5 and 6 of pl. 83 and lamps 2, 3, and 4 of pl. 84, all of the lamps of level 4 are with a flared simple rims. All of the lamps are of rounded thick bases except lamps 4 in pl. 83, and 5 and 6 of pl. 84 with flat, slightly rounded bases. A distinctive shape lamp is lamp 7 of pl. 84, the lamp is very narrow and shallow with a very sharp pinch which caused almost the lamp to be closed, this cause of the formation of a long nose, the nose is also wide in the bottom, the opening of the nose is rounded which has been probably meant to be in this shape. Finally, most of the lamps of the level are of moderate sharpness as well as moderate sharpness of the nose, while some of the lamps are with sharp pinches such as lamps 2 and 6 of pl. 84.

**Oil Lamps, level: 3** (pls. 85-86) 11 lamps of level 3 have been included in the study, they maintain the same shape and features of the earlier two levels, with few modifications. The lamps of this level are with a wide diameter at about 15 to 17 cm, with depth at about 5 to 7 cm, with tall noses and in most cases are deep lamps, with an exception of lamp 3 of in pl. 86; the lamp is similar to lamp 7 in pl. 84. The lamps of level 3 as well, the noses of the lamps in level 3 are not sharply pinched. All the lamps are with simple rims, the lamps are equal balancing between the nose and the other end of the bowl. The rounded base is the dominant type with a few exceptions of one concave base in lamp 5 in pl. 85 which is rare. And lamp 2 in pl. 86 which is slightly flat.

**Oil Lamps, level: 2** (pls. 86-87) the 11 lamps of level 2 maintain the same pattern as those of level 3. The lamps of level 2 are shallow at an average depth of 4 cm, and wide diameter at about 15 cm, with tall noses and rounded bases, except for lamp 7 in pl. 87 which is a very shallow and wide lamp with a flat base. Lamp 7 of pl. 86, and lamps 1, 2, 3, and 4 are of sharp pinching and a rounded nose top, while the rest are not sharp pinching. Lamp 6 of pl. 87 is a short deep shape with a small rim, this oil lamp resembles the lamps of level 5.

**Oil Lamps, level: 1** (pl. 88) 9 lamps from level 1 were included in the catalog, they are similar in principle to those from all the earlier levels with some differences. The lamps of level 1 are wide diameter at about 15 to 18 cm, and shallow with 3 to 4 cm deep, with noses higher than the other end of the lamp, all of the lamps are with thick rounded bases except lamp 5 which is a flat base lamp. On the other hand, the noses are moderate length, and the pinches are not sharp with lamp 6 as an exception. Some of the lamps are with flat or flared rims such as lamps 3, 4, 5, 6, 7, and 9, while lamps 1, 2 and 8 are with very small rims which are not projected.

According to Sussman, oil lamps in the Late Bronze Age have maintained the same tradition of the Middle Bronze Age and the same tradition have continued until the Iron Age I and II. The oil lamps have served in both daily life and in burial a context, a great amount of them have been found in caves and tomb such as at Tell Dothan tomb 1 (Sussman 2007: 42-46, 51-54, 58). Typical oil lamps in the period represented in pl. 3.44 in Mullins and Yannai (2019: 249).

While the lamps in the 5 levels of the tomb have the same shape pattern, a few modifications have occurred on them in each of the levels. The lamps in level 5 are short from the nose to the opposite side, and narrow body, with a deep bowl and an equal height of the nose and the rim, the lamps are also with short noses. That has slightly changed in the next levels starting from level 4 where lamps are shallower, wider and the noses are longer, that same pattern is applied to lamps of levels 3, 2, and 1 where the lamps became even shallower than level 4 and wider. The lamps in level 1 are shorter noses than in levels 3 and 2.

The collection is rich with many typological details and it reflects the wealth of the tomb 1, many of the pottery vessels that have been examined are reflecting the accurate date and the accurate level of which it belongs to. A few examples may have been moved or been mixed within other levels. The continuity in the collection is in favorable on several scales, such as fabric, decoration, color, and the typological treatments which will be the focus of the next chapter.

## Chapter V

### Pottery of Late Bronze and Iron Ages, typology and chronology

## **V. Pottery of Late Bronze and Iron Ages, typology and chronology<sup>17</sup>**

In this chapter, after the examination of the pottery collection in terms of fabric, color, decoration, technology, and description, I will attempt at drawing the typology and chronology of the tomb in light of other sites that have been given as examples and resembles for the tomb, which helped in terms of dating the collection of Tell Dothan, the sites which have been used are both from the high and lowlands are located both in Palestine and Jordan as a the natural geography of Canaan during the Late Bronze and Iron Ages. The sites which most of them are tells with multiply strata have been excavated extensively since the beginning of the 20<sup>th</sup> century until today, a consensus among the archaeologists were established for the chronology of most of those sites and are used as key sites for relative dating. Moreover, they have played certain important roles in shaping the history of the region during the Late Bronze and the Iron Ages.

### **V.I. Typological considerations of Tell Dothan collection**

Before discussing the chronology of the site, some remarks have to be made for the purpose of establishing a relative chronology for the tomb. The collection of pottery of Tell Dothan which have been the subject of this dissertation is a rich collection with many types, variations, and details on several levels, such as fabric, coloring and most important is the typology which reveled similarities and differences within the collection. What was hard sometimes is the great similarity between the types of different levels in the tomb, this factor is confusing, sometimes there are no differences at all, but in some other, there are pottery types that have been useful in making sharp separation between the levels on dating bases.

The collection of pottery is matching the dating that has been given by Free, Cooley and Pratico, the principle excavators of the tomb. The indicators for this dating within the collection, itself are varied, the presence of some types in certain levels and the disappearance in some other is one of the main indicators, in addition to that, certain shape treats and changes in some types are very clear and chronologically

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<sup>17</sup> All classifications, typoplgy tables, figures and digrams are made by G. Nagagreh in this chapter.



fit. Lastly, the comparative factor to other sites which belongs to the same strata or phases in other sites.

The fact that the collection is made up of similar technology which is the wheel, fabric which is dominated by one fabric group, coloring which is affected by the clay type. The firing which also has been almost the same for the collection, the surface treatment, and the pottery measurements, those elements are common and hardly can be used to date the collection and to do the chronology, the only element that is useful to date the pottery was the type and the type variants which can be classified into three groups: 1- pottery that has not changed such as (kraters, krater-mugs, biconical jars, jugs, juglets, flasks, chalices, oil lamps) 2- pottery that is present in some levels while disappeared in other such as (carinated bowls, ring base bowls, cooking pots, Canaanite jars, dipper juglets, stirrup jars) 3- pottery types that have been changed or evaluated such as (bowls, multi-handled kraters, pyxides).

The first group is the hardest one, in which dating is almost impossible, maintaining the same shape with very slight modifications on the rims, bases, handle placement and sometimes very slight differences in measurements. For example, the biconical jars are sometimes with tall necks, ring or disk bases in all the levels, chalices sometimes footed and some other not. Flasks with the opening width and the handle placement, juglets have not certain shapes, kraters as well maintained almost same shape, kraters mugs are with no parallels with the opening and closing angle slight differences. The oil lamps maintained the same shape with slight differences in the depth of them. This group is not useful for the chronology purposes, but it indicates a continued pattern and tradition of manufacturing, not only at Tell Dothan but in all the sites that have been in the comparison. With the same concept of the function wither for household or funeral, additionally, those types probably have not affected by any regional circumstances during the Late Bronze, the transitional period and the Iron Ages. Moreover, throughout the comparative process with other sites, the same conclusions can be drawn about those types.

The second group which mainly consists of the pottery that has foreign origins such as the milk bowls, ring base bowls, jugs, the Canaanite jars and the stirrup jars which were used for trade purposes are of great importance of the dating of the collection. The appearance of such types in some levels have an indication to the

markers of the periods in Canaan, i.e. the milk bowls, for example, have been common during a certain period of time, the disappearance of them indicates the end of this period, or that the site which they have been found in, is no longer connected to any importance locally and regionally, or in worst cases, the site was abandoned. In most cases of the pottery which belongs to this group are dated to the Late Bronze Age, and it has been found – although few – but the intensity is in the levels 5 and 4 of the tomb.

The Canaanite jars due to the active trade in the Late Bronze were popular, they have been found in several sites on the coastal plain and inland, the case has changed during the Iron age, no more Canaanite jars have been found. This case applies to levels 5, 4, 3, and 2 where Canaanite jars are present, level 1 on the other hand, is supposed to be the pure Iron Age level is marked by the disappearance of the type. The stirrup jars as well, although it's common in the Late Bronze and some sites of the Iron Age, it disappeared in level 1 of the tomb. The ring base bowls and the jug (bilbil) also disappeared in level 1. Another indicator is the carinated bowls which were found mostly in the earlier levels of the tomb, the carinated bowls are known to be a Middle Bronze marker and an invention. The continuity of them in the Late Bronze Age points to the proximity of the culture of the Late Bronze Age to those in the Middle Bronze, which also helps in giving the maximum dating of the tomb.

The third group are the types that have witnessed clear changes and modifications which helped in determining the dating of the 5 levels, consist of the (bowls, multi-handled kraters, and pyxides) each of those types has one or more elements that have been changing throughout the Late Bronze and the Iron Ages not only at Tell Dothan but in almost all the sites that have been dated to this period.

The multi-handled kraters as having been observed in the 5 levels of the tomb, found in level 4 to level 1, it has been with a maximum of 4 attached handles in levels 4 and 3, the number of the handles has doubled or trebled in level 1 reaching 12 handles on some of the kraters. This pattern is prominent and the most notable element which marks the beginning of the Iron Age almost everywhere this type of pots has been found. On the other hand, the multi-handled kraters in the Late Bronze Age is not decorated which suggests that the function has probably changed during the Iron Age were more decorative elements such as the molding shapes and the

pedestal pendants applied to serve cultic purposes than only containers of food or water.

Bowls are the type of pottery that according to the observations have witnessed notable changes and modifications. Bowls of Tell Dothan are used in addition to the rest of the collection to date the 5 levels of the tomb. Typologically, the bowls of the collection – excluding the carinated bowls – have three main types; rounded, hemispherical, and deep, with different sizes, those three classifications applies to the 5 levels of the tomb, within this classification two main different body and rim profiles are notable in terms of chronology and dating, 1- the open sloping vertical body walls with simple rim or flattened lip profile thickened internally and sloping vertically inflection, those are characterizing the earlier levels, 5, 4, and 3. On the other hand, the second type 2- is with a body and rim profiles, those with inverted simple rims almost folded in inflection, with rounded lip profile, sometimes angular everted. The presence of one of those two types at a certain level is considered to be a mark for dating that level, in addition to that, the frequency and number of the bowls in each level is another factor that has been taken in account. All that is combined with the other types from the same collection and the comparison with other sites that have been included in the study, which altogether assist in building a confidential relative chronology for the tomb, which subsequently helps in connecting Tell Dothan Late Bronze and Iron Ages to the rest of the sites across the region. **Figs. 40 and 50.** illustrate the differences between the bowls bases and body shape and rims in the 5 levels of the tomb.

113 bowls were selected to the current study, as mentioned elsewhere, the bowls are classified into several sizes, and shapes, in light of this, five types can be classified, the straight sloping bowls (pls. 1: 1, 3, 4, 5, 6, 8; 2: 5, 6, 7, 8; 3: 1-5, 7; 6: 5-8, 10, 11; 7: 1-3; 8: 5-7; 10: 6-11; 13: 1, 9; 14: 6) and vertical sided bowls (pls. 1: 2, 9; 2: 1, 2, 4; 3: 6, 8; 4: 1-3; 6: 1, 3, 4; 8: 4; 10: 1-3, 5; 13: 2, 3, 8), the rounded bowls (pls. 1: 1, 3; 2: 1, 3; 4: 4-7; 6: 2, 9; 10: 4; 13: 4-7; 14: 1-5) the deep bowls (pls. 4: 8-11; 5: 1; 8: 1-3; 9: 1-4; 11: 1-7; 13: 10-14) and the wide plates (pls. 5: 1-6; 7: 4-6; 12: 1-3; 14: 7, 8). The number of these bowls varies at each level. **Table 23.** shows the distribution of each bowl type on the 5 levels of the tomb. **Fig 40.** illustrate the difference in the presence of the 5 different bowl shapes of 5 levels of the tomb. The five bowl types frequency difference is not great, however, the straight sloping bowls

frequency in level 5 is much higher than level 1, while the straight vertical bowls frequency is the same in levels 5 and 4, with a slight decreased in levels 3, 2 and 1. The rounded bowls (folded inward) frequency in level 1 is much higher than the rest of the levels, on the other hand, the deep bowls were not present in level 5, with a similar frequency in the rest of the later levels, the plates (large, wide bowls) also were not present in the level 5 while its frequency is similar to the deep bowls in levels 4, 3, 2, and 1.

The straight sloping bowls indicate that they were more common in level 5, which according to the seriation and comparison to strata in different sites in the description in level 4 dated to the Late Bronze Age, the straight vertical bowls appeared to belong to all the periods, it may have continued the tradition into all the levels. The rounded bowls were more common in the Iron Age as indicated in the seriation of the sites at the beginning of the Iron Age, nevertheless, they have been present in the Late Bronze Age as well. The deep bowls have probably started to appear in level 4 but were common in the later levels which can be a continuation to the tradition throughout the Late Bronze and Early Iron Age, the same conclusion can be drawn to the plate type bowls.

Type \ Level	L.5 and per.	L.4 and per.	L.3 and per.	L.2 and per.	L.1 and per.	per cent within all the levels
Straight Sloping bowls	10 1.9%	6 1.5	12 3.36%	6 1.26%	3 0.65%	41.81%
Straight Vertical Bowls	5 0.95%	5 1.25%	4 1.12%	4 0.84%	3 0.65%	23.73%
Rounded Bowls	4 0.76%	4 1%	2 0.56%	1 0.21%	9 1.98%	22.6 %
Deep Bowls	0 0.0%	5 1.25%	7 1.96%	7 1.47%	5 1.1%	27.11%
Plates	0 0.0%	5 1.25%	3 0.84%	3 0.63%	2 0.44%	14%
per cent of all types in each level	21.47%	28.25%	31.6%	23.73%	24.86%	22.6 %

Table 23. Distribution of each bowl type on the 5 levels of the tomb.

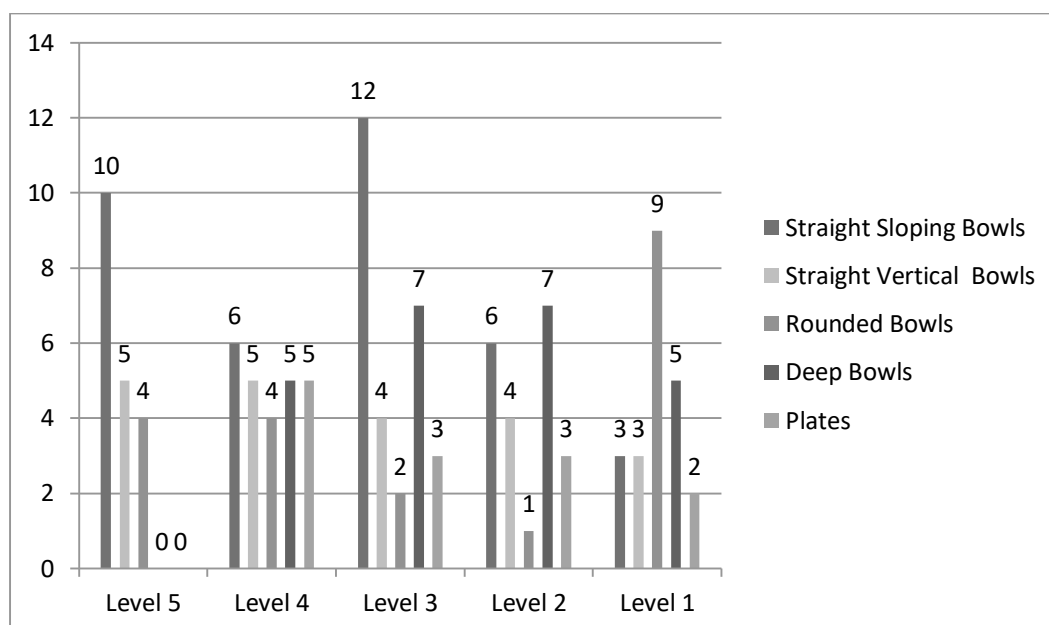


Fig 40. The difference in presence of the 5 different bowl shapes of 5 levels of the tomb

7 carinated bowls were uncovered in the tomb **pl. 15**, the majority of them belongs to level 5 of the tomb, bowls 1-4, while 2 are from level 3 (5-6) and bowl 7 belongs to level 1. This indicates that the frequency decreased in levels 4 and 3, until no carinated bowls present in levels 2 and 1 which supports the dating of levels 5, 4, and 3 to the Late Bronze Age, **fig 41**. illustrates the distribution of the carinated bowls to the 5 levels.

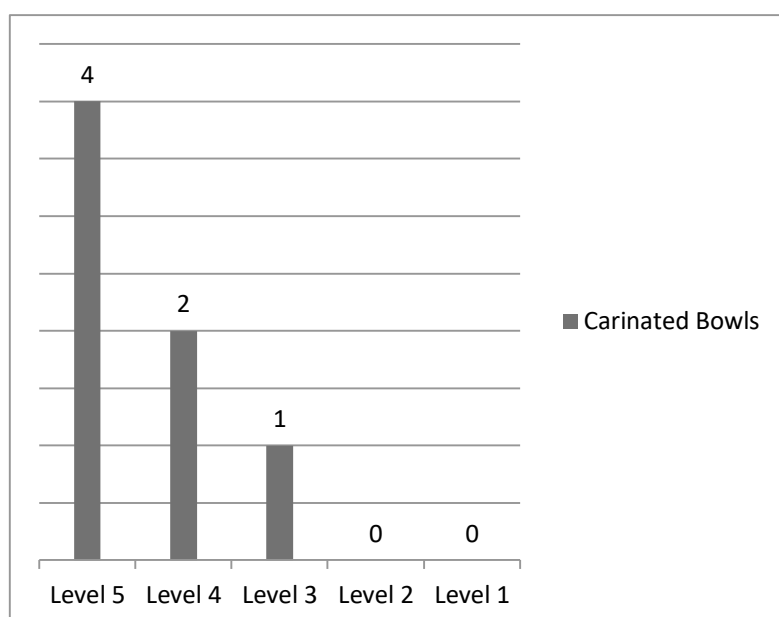


Fig 41. Distribution of the carinated bowls to the 5 levels

11 imported/imitated bowls have been selected to the current study, they represent levels 5, 4, 3, 2 of the tomb **pl.** 16 most of those bowls came from level 5, while the frequency decreased in later levels until it disappeared in level 1, **fig 42.** illustrates the distribution of the imported/imitated bowls to the 5 levels.

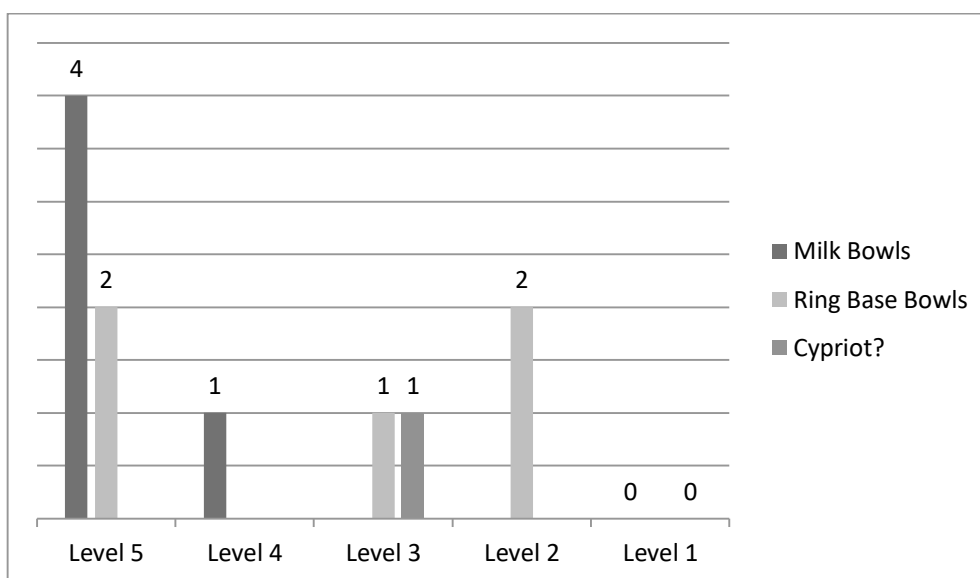


Fig 42. Distribution of the imported/imitated bowls to the 5 levels.

32 multi-handled kraters were selected to this study, they are distributed to levels 4, 3, 2, and 1, the kraters of levels 4 and 3 are all with 4 handles (**pils.** 24: 1-3; 25: 2; 27: 2; 28: 2; 29: 1; 30: 2; 33: 1-3; 34: 1; 35: 1; 36: 1; 37: 1), while the element changed in levels 2 and 1, in addition to kraters with four handles, the multiply increased to six, eight and twelve in those two levels, which indicates that kraters with more than 4 handles (**pils.** 26: 1-2; 27: 1; 28: 1; 29: 2; 30: 1; 31: 1-2; 32: 1-3; 3: 2-3; 35: 2; 36: 2; 37: 2) were more frequent in the later levels. **Fig 43.** illustrates the distribution of the multi-handled kraters on the levels of the tomb.

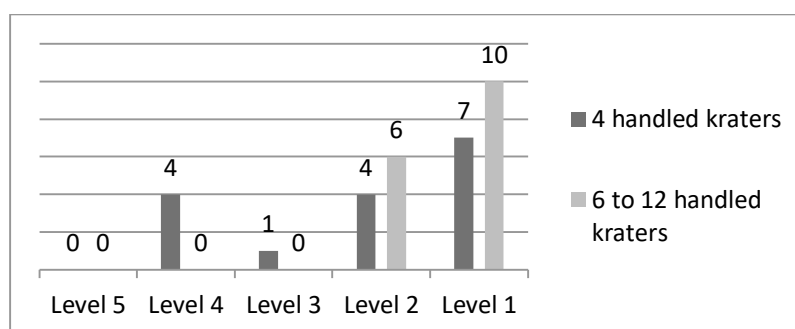


Fig 43. Distribution of the multi-handled kraters on the levels of the tomb

21 krater-mugs (pls. 38-40) were selected in the study, with a straight vertical wall, inverted walls, and lower and upper carinations, for the differences in the types of the kraters. The kraters as well, are distributed in levels 5, 4, with its zenith in level 3, then a sharp decreasing frequency in levels 2 and 1. **Fig. 44** illustrate the distribution of the krater-mugs on the levels of the tomb.

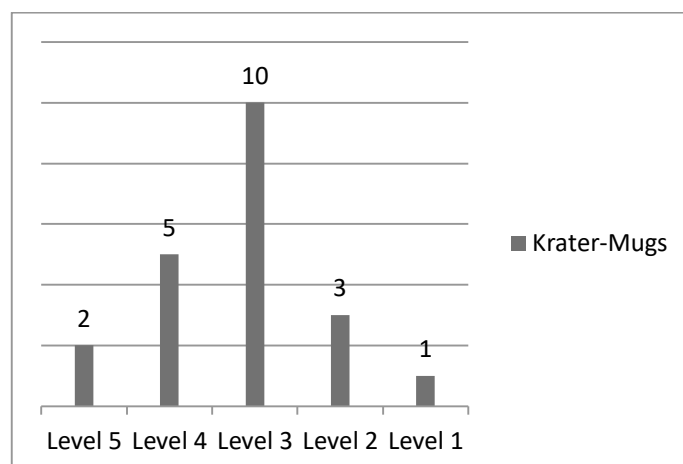


Fig 44. Distribution of the krater-mugs on the levels of the tomb.

47 biconical jars were selected for the current study, the majority of those jars comes from level 4, with only 2 jars from level 5. The frequency decreases in levels 3 to 1. Two types of the jars can be distinguished; the rounded biconical (**pls. 44: 1, 3; 45: 4, 6; 46: 4, 7; 47: 2, 4-5; 48: 2, 4, 6; 50: 1, 3-4; 51: 1-7**) and the carinated biconical jars (**pls. 44: 2, 4; 45: 1-3, 5; 46: 1-3, 5-6; 47: 1, 3; 48: 1, 3, 5, 7; 49: 1-5; 50: 2, 5**). More carinated jars with disk base and handles attached shoulder to body can present in levels 5, 4, and 3, with relatively more rounded jars with ring bases in level 1. **Fig 45.** illustrates the distribution of the biconical jars with the two types on the 5 levels of the tomb.

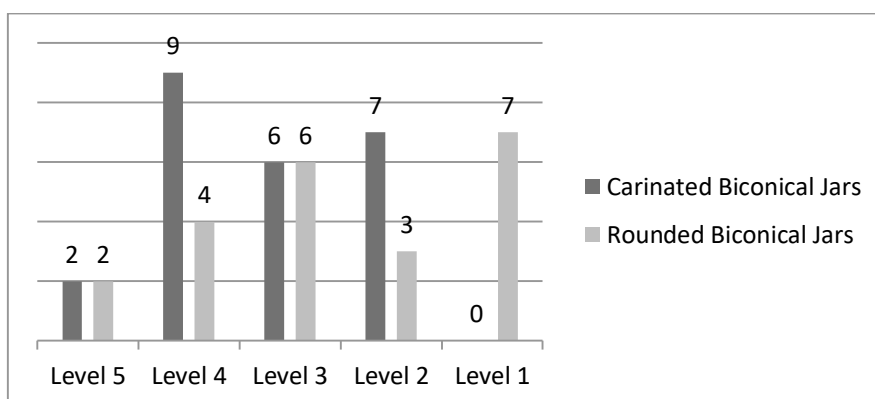
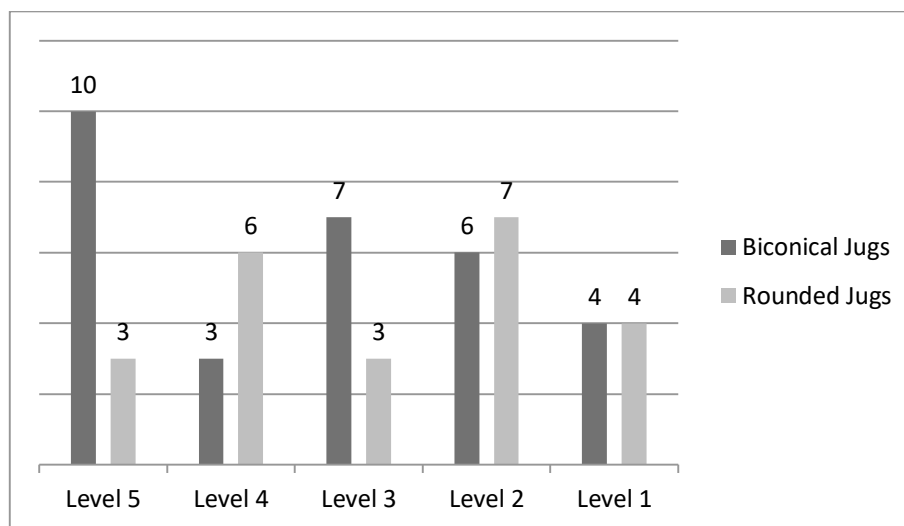


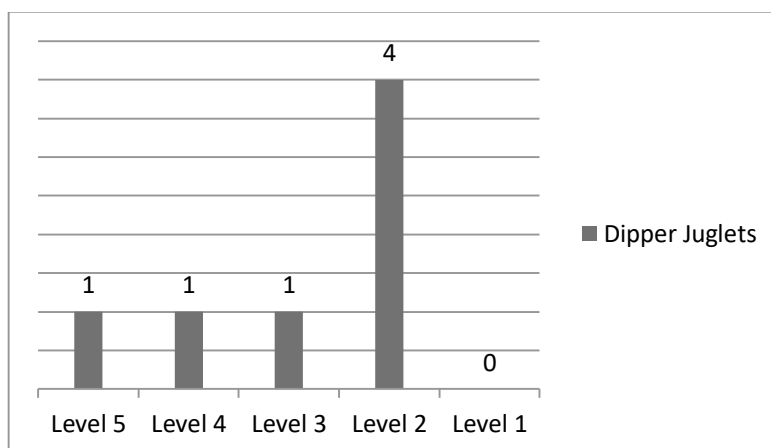
Fig 45. Distribution of the biconical jars with the two types on the 5 levels of the tomb

54 jugs have been included in the study, with two types; the rounded (**p**ls. 52: 7-8; 54: 1-3; 55: 2-5; 57: 3-5; 58; 60: 3, 5; 61: 1-2, 4) and the biconical jugs (**p**ls. 52: 1-6; 53; 54: 4-5; 55: 1; 65; 57: 1-2; 59; 60: 1-2, 4, 6-7; 61: 3), both were present in all the levels with relatively similar frequency, differences can be found in the handle placements, while shoulder to shoulder handle attachment occurred in the earlier levels, the rim or nick to shoulder attachment in the later levels. **Fig 46.** illustrate the distribution of the jugs on the 5 levels with its two types.



**Fig 46.** Distribution of the jugs on the 5 levels with its two types

Seven dipper juglets (**pl.** 62) were included for this study, they resemble those of the Middle Bronze Age, continued in the Late Bronze Age, levels 5, 4, 3, and 2 in the tomb, were this type of the juglets is not present in the level 1. **Fig 47.** illustrate the distribution of the dipper juglets on the 5 of the tomb.



**Fig 47.** Distribution of the dipper juglets on the 5 of the tomb



10 stirrup jars were selected to the study (pl. 72), the majority of them comes from level 3, while 2 from level 2 and 1 from level 4, the stirrup jars are not present in levels 5 and 1. This type of vessels considered to be imported or imitated, the with dating varies from the Late Bronze until the Iron Age, at Tell Dothan the Late Bronze Age IIB witnessed the true presence of such a vessel. **Fig 48.** illustrates the distribution of the stirrup jars in the 5 levels of the tomb.

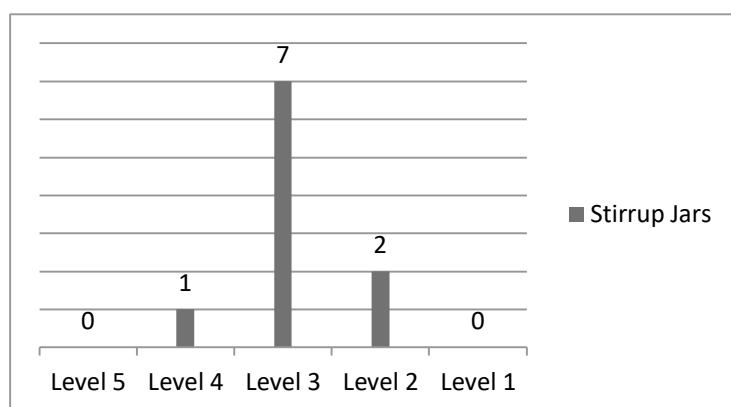


Fig 48. Distribution of the stirrup jars in the 5 levels of the tomb

The pyxides are the second type of pots that can be classified and divided according to the archaeological periods made its appearance in the record at the beginning of the Late Bronze Age as a foreign form of pots which was imported from the Mycenaean world with certain formation treatments. The type being imitated later and manufactured locally which played a major role in the modification of the shape. Pyxides continued to be manufactured and used in the Iron Age, carrying the same general character but with changes in the details of the handles, bases, measurements, dimensions, and body shape. For example, while pyxides in the early levels are all with rounded bases and lower sharp carination and a gentle upper carination, short and wide, with short neck and knob handles. The pyxides in the later levels are higher, tall necks, larger, the carinations on the lower and upper body are sharp, loop handles are attached and most of the time with ring bases, **Figs. 49 and 51.** illustrates the variations in the pyxides in the 5 levels of the tomb. These features are helpful and sometimes easy to recognize. Another treatment is the decoration, which usually was more common in the later than the earlier levels. Moreover, the shape has not changed which suggests that the same function always has been applied.

In the typology of the pyxides, I will classify the pots according to the base, general shape and handles, count each group in number and percentage in each level

in comparative to the total number in the levels and in the difference in each level independently.

The 85 pyxides that have been selected for the current study are all from the 5 levels of the tomb, 8 from level 5 (6.8%), 11 from level 4 (9.35%), 24 from level 3 (20.4%), 22 from level 2 (18.7%) and 20 from level 1 (17%). The 85 pyxides have two main types, the rounded base (pls. 64, 65, 66: 1-12, 68, 70: 1-5) and the ring bases (pls. 66: 13-19, 67, 69, 70: 6-10, 71) in addition to that, the pyxides have either a lop or a knop handles. Most of the time the lop handles are connected to the pyxides with ring bases, while the knop handles are attached most of the time to the rounded bases. Another characteristic of the two types are the short body of the rounded base pyxides and the tall bodies of the ring base pyxides. Moreover, the rounded base pyxides are more frequent in the lower levels 5 and 4, while the ring base pyxides are more in the later 3 levels. **Table 24.** illustrate the number and percentage of the rounded and ring base pyxides at each level. **Fig 49.** illustrate the difference in the presence of the rounded and ring bases in the 5 levels of the tomb.

Level Type	L.5	L.4	L.3	L.2	L.1
Round Base pyxides	Total. 8.  6.8 % in all levels.  100% in the same level.	Total. 11.  9.35 % in all levels.  100% in the same level.	Total. 12.  10.2 % in all levels.  50% in the same level.	Total. 10.  8.5 % in all levels.  50% in the same level.	Total. 5.  4.25 % in all levels.  25% in the same level.
Ring Base pyxides	Total. 0  0% in all levels.  0% in the same level.	Total. 0  0% in all levels.  0% in the same level.	Total. 12.  10.2% in all levels.  50% in the same level.	Total. 12.  10.2% in all levels.  54% in the same level.	Total. 15.  12.75% in all levels.  75% in the same level.

Table 24. Number and percentage of the rounded and ring base pyxides in each level

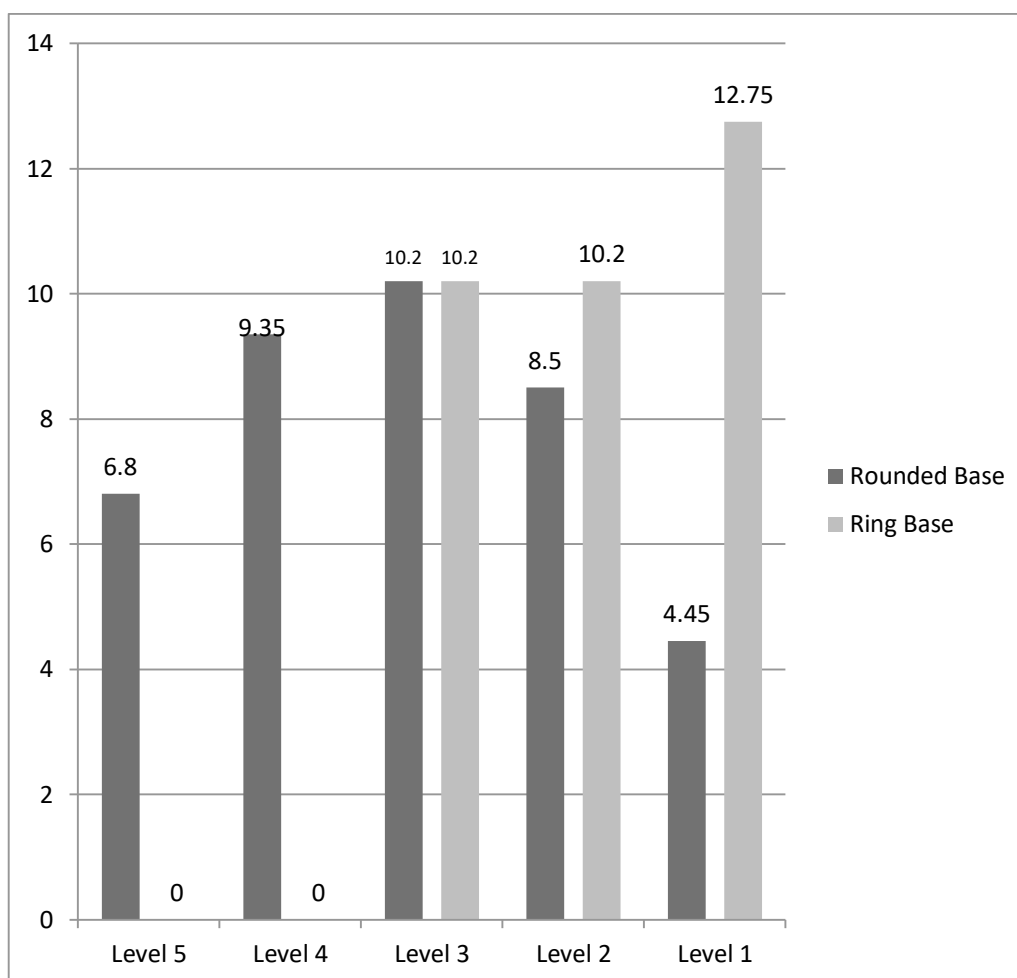


Fig 49. The difference in presence of the rounded and ring bases pyxides in the 5 levels of the tomb

In **table 24.** and **figs. 49** and **51**, the round base type is dominating level 5 and 4, with no ring base type in the same two levels, gradually, the frequency of the ring base increase while the rounded base pyxides reduce in the levels 3, 2, and 1. This indicates that the rounded base pyxides with all its characteristics were more common in the earlier levels which to be dated to the Late Bronze IIA. While the ring base appeared in level 3 and became more frequent and dominant in level 2 and 1 which to be dated to the Late Bronze Age IIB (level 3), the transition (level 2) and the Early Iron Age (level 1).

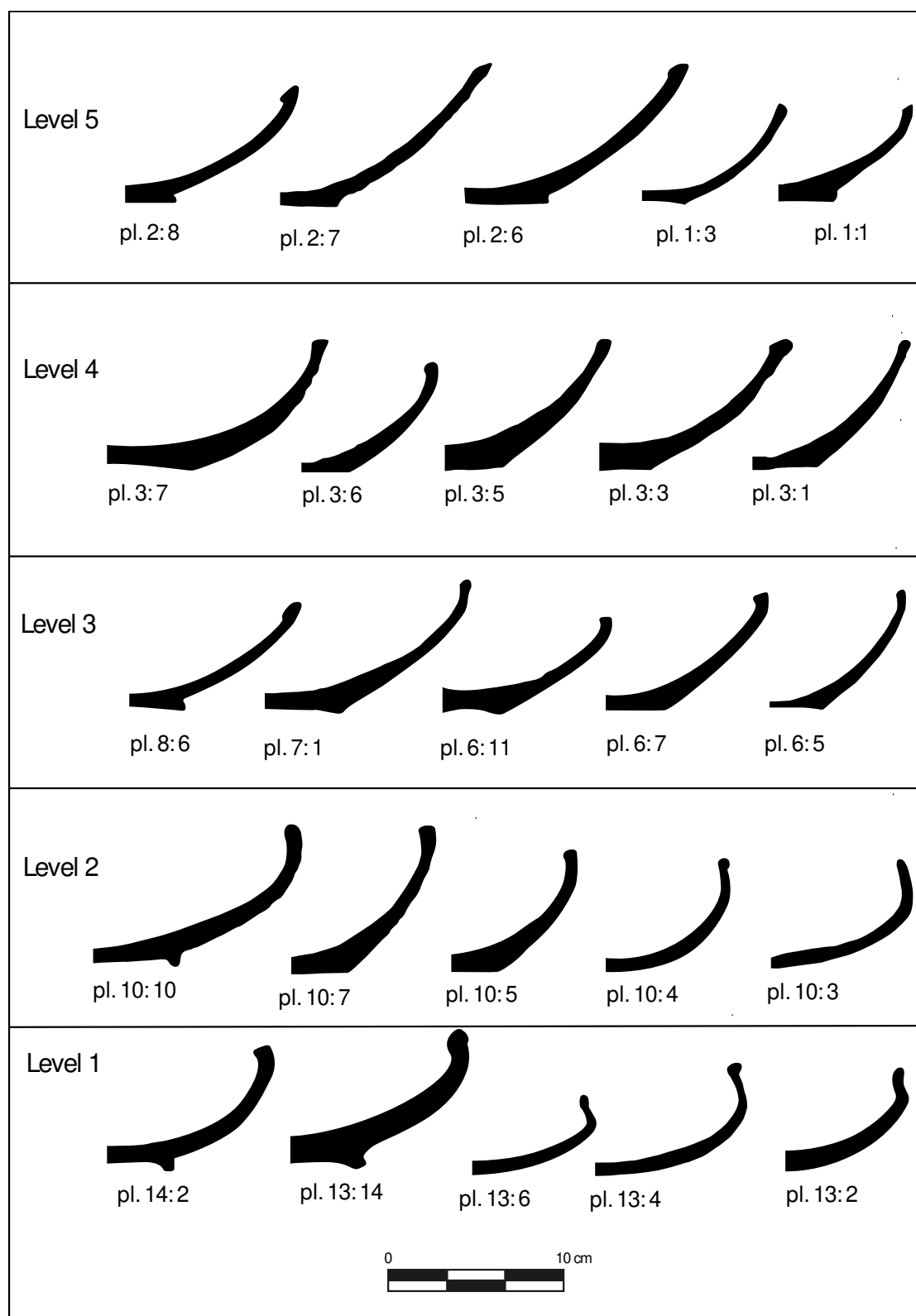


Fig 50. Differences between the bowls bases and body shape and rims in the 5 levels of the tomb.

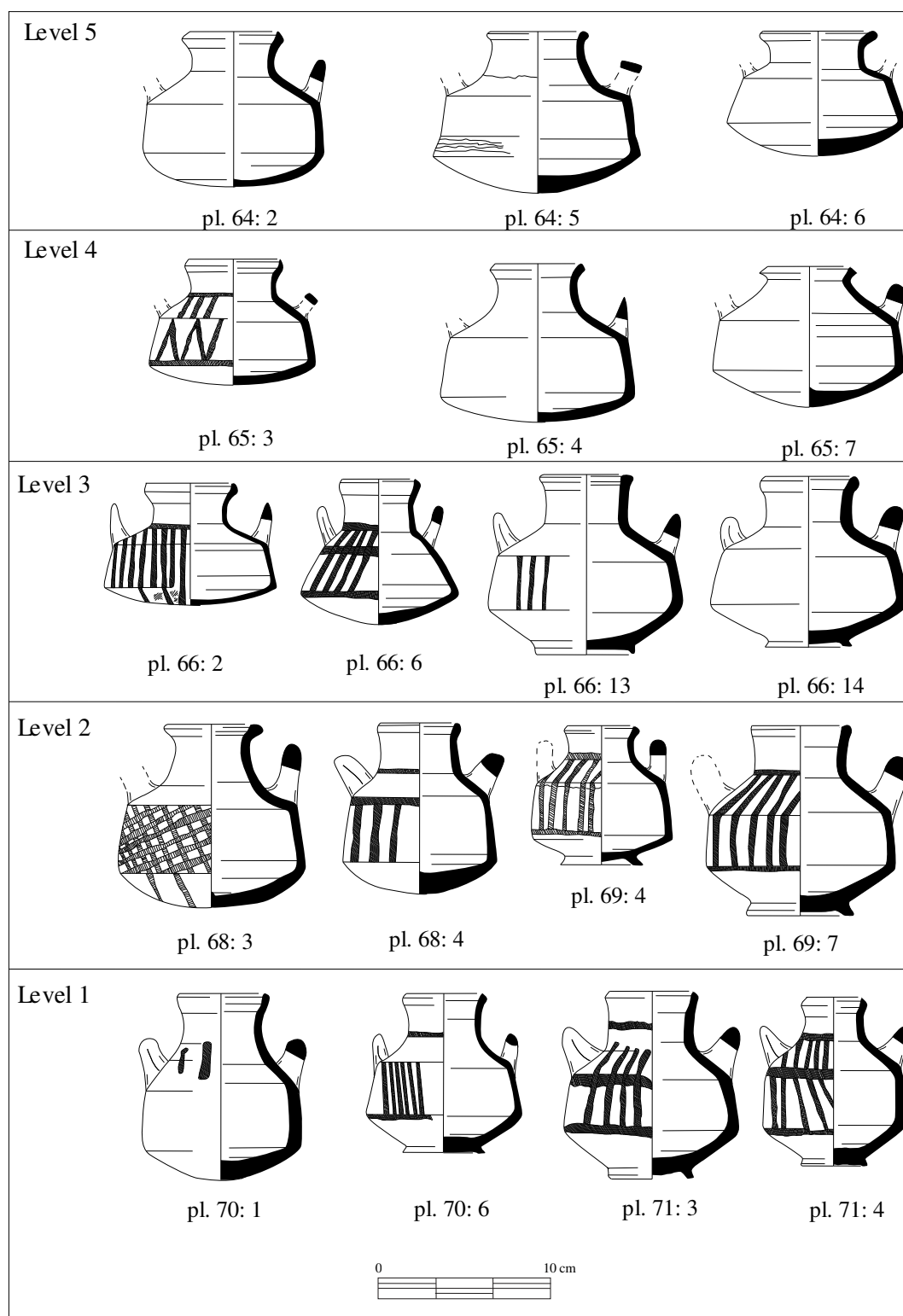


Fig 51. Variations in the pyxides in the 5 levels of the tomb

The above typology discussion and illustrations are essential for the establishment of the chronology of the tomb. The variations that can be seen in each type of shape, frequency of the bowls, carinated bowls, imported/imitated bowls,

stirrup jars, multi-handled and krater-mugs kraters, biconical jars, jugs, dipper juglets and pyxides point out to the differences in each level, either that of the shape or the frequency of the types. Usually the straight sloping and vertical sided bowls common to the earlier levels of the tomb, while the rounded and deep bowls and the plates are later. On the other hand, the carinated bowls are of Middle Bronze Age tradition that has been present in the Late Bronze earlier levels of the tomb, while it disappeared in level 1. Moreover, imported/ imitated bowls and stirrup jars were present in the 5, 4, 3, and seldom in level 2, while completely disappeared in level 1 which has some indication that some types have not continued in the tradition which may have been affected by internal and external conditions. The rest of the pottery types such as the multi-handled kraters which have been more common in level 2 and 1, while very few in the later levels indicate that some technological evolution has taken place, bearing in mind that the krater-mugs were the opposite, i.e. they were common in the earlier levels and sharply decreased in the levels 2 and 1, which probably points to the replacement of some manufacturing goals. Lastly, biconical jars and jugs kept the same frequency in all levels with the different types. The dipper juglets are another example of the carinated bowls which disappeared in level 1.

**Figs.** 50 and 51 of the bowls and pyxides have been drawn relying on the typology and chronology of other sites of the region. Those two types with its sub-types are the most reliable tool for drawing the chronology of the tomb, as fellows: Level 5 and 4 are both dated to the Late Bronze IIA or a little earlier, while level 3 with the mixed shapes and the imported materials fit the Late Bronze II B. The level is a mix of Late Bronze and Iron Age with parallel possibility. Relying on the absence of imported pottery, i.e. stirrup jars, ring base ware, carinated and milk bowls, the situation which contradicts Sheridan's opinion 2019 of the commingled remains, these factors strengthen the hypothesis that level 1 fits the entire period of Iron Age IA and beginning of Iron Age IB, and that the earlier levels fit it's given dating. This conclusion matches the dating of the Free, Cooley and Pratico and contradicts the dating that has been given by Gregoricka and Sheridan. In light of the above, a chronological table for tomb 1 5 levels will be established.

Depending on chapter 4 and 5, the pottery collection with its types can be classified into different types and shapes. In the following **table 25**. I will draw a typology of the most reliable pottery collection with is types and sub-types:

Type	Sub-Type
Bowls	1- Straight sloping sides bowls 2- Straight vertical sides bowls 3- Rounded bowls 4- Deep bowls 5- Plates 6- Carinated bowls 7- Ring base ware bowls 8- Milk bowls
Multi-Handled Kraters	1- 4 handled kraters 2- 6 to 12 handled kraters
Biconical Jars	1- Rounded biconical Jars 2- Carinated biconical Jars 3- Carinated spouted Jars
Storage Jars	1- Canannite jars 2- Ovoid jars 3- Rounded jars
Jugs	1- Rounded Jugs 2- Carinated biconical Jugs 3- Ring base ware jug
Stirrup Jars	1- Rounded 2- Biconical
Pyxides	1- Rounded base (short) 2- Ring base (tall)

Table 25. Typology of the most reliable pottery collection with its types and sub-types

The rest of the pottery such as the kraters, flasks, juglets, dipper juglets, chalices and oil lamps are not reliable for the typology purposes for the small number of each and the great similarity that they may have not changed across the tomb use. Nevertheless, chalices can be classified into small and large, chalices are tall and short, oil lamps are deep and shallow. The above typology and distribution study allows a chronological and dating of the collection which will be the focus of the following.

## V.2. Chronology comparative of Tell Dothan tomb 1 with contemporary sites

Relying on the published pottery collections of other sites such as Tell el-Jazari (Gezer) (Dever 1986; Seger 1988, 2013) Beit Jala (Giloh) (Mazar 1981) Tell el-Asawir (Tel Esur) (Shalvi *et al.* 2019) Tell ed-Duweir (Lachish) (Tufnell, Inge, and Harding 1939; Tufnell, Murray, and Diringier 1953; Tufnell 1958: pls. 70-72; Clamer 2004; Yannai 2004; Zimhoni 2004) Tell Keisan (Briend and Humbert 1980) Tell el-

Qedah/Tell Qaqqas (Hatzor) (Yadin *et al.* 1958, 1960, 1961; Ben-Tor, Ben-Ami, Sandhaus 2012; Ben-Tor *et al.* 2017) Ashkelon (Stager *et al.* 2008; Brody 2008) Tell Deir 'Alla (Franken 1969, 1992) Khirbet Seilūn (Shiloh) (Bunimovitz and Finkelstein 1993) Tell el-Ḥuṣn (Beth Shean) (James 1966; Mullins 2007; Panitz-Cohen 2009) Tell el-Mutesellim (Megiddo) (Guy 1938; Lamon and Shipton 1939; Loud 1948, Arie 2006, 2013; Finkelstein 2006; Yasur-Landau 2006, 2013; Gadot, Yasur-Landau, and Ilan 2006; Martin 2013) Tell Ta'annek (Tanak) (Rast 1978) Tell el Far'ah (N) (Chambon 1984) 'Isbet Şarṭah (Finkelstein 1986) Dhahrat et-Tawileh (The Bull site) (Mazar 1982) Tell el-Qadi (Dan) (Biran and Ben-Dov 2002) Tell Abu al-Kharaz (Fischer 2006, 2013) Saḥem (Fischer 1997) Tell es-Sa'idiyeh (Prichard 1980) el-Jib (Gibeon) (Prichard 1963) Baq'ah Valley (McGovern 1986) Tell Dothan (Master *et al.* 2005) Tell Balatah (Shechem) (Duff 2015) and those sites mentioned in (Amiran 1969; Gitin 2019), in addition to that, some pottery came from Leboanon makes the general character of the pottery not only on Tell Dothan but in Palestine (Badre, Capet and Vitale 2018: 58-185). **Table 26.** provides a chronology of several sites for the dating of tomb 1 at Tell Dothan.

Site Name	Late Bronze IIA	Late Bronze IIB	Iron Age I A
Tell Dothan	Levels 5, 4	Levels 3, 2	Levels 2, 1
Tell el-Jazari (Gezer)	St. XVI	St. VX	St. XIII-XI
Tell ed-Duweir (Lachish)	St. VII	St. VI	St. V
Tell Keisan		St. XIII-XI?, 13	St. 12-11
Tell el-Qedah/Tell Waqqas (Hatzor)	St. 1-b	St. 1-a	St. XII
Ashkelon	Stage. V	Stage V	Phase 20
Tell Deir 'Alla	Phase E	Phase E	Phase A-D
Khirbet Seilūn (Shiloh)		St. 6	St. 5
Tell el-Ḥuṣn (Beth Shean)	St. IX	St. VIII, VII	St. VI
Tell el-Mutesellim (Megiddo)	St. VII B	St. VIIA	St. VI B, V
Tell Ta'annek (Tanak)		St. II?	St. II
Tell el-Far'ah (N)			St. VI
'Isbet Şarṭah		St. III?	St. III/II?
Tell Abu al-Kharaz	Phase VII	?	Phase VIII
Tell Balatah (Shechem)	St. XIII	St. XII	St. XI
Tell el-Qadi (Dan)	St. VII?	St. VII	St. VI, V

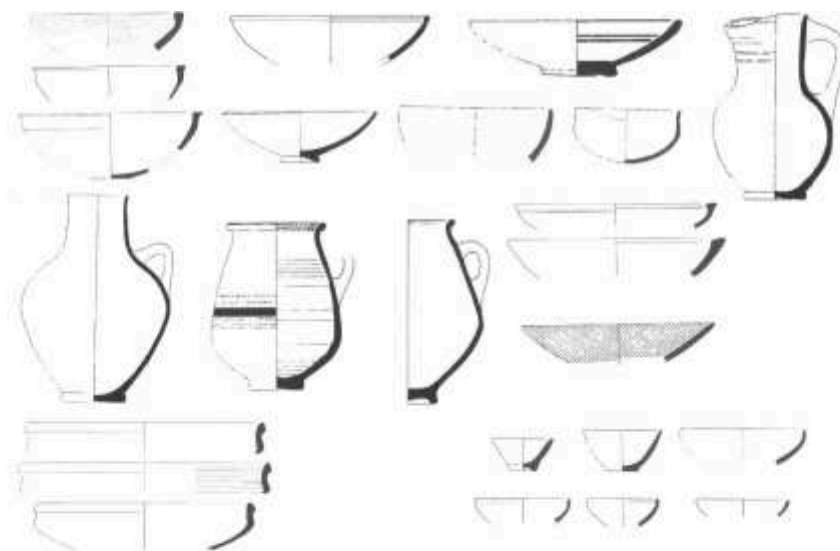
Table 26. Chronology of several sites for the dating of tomb 1 at Tell Dothan

The chronology of tomb 1 collection is built on several elements; typology, seriation, and the pottery that is being distinctive such as the carinated bowls, the

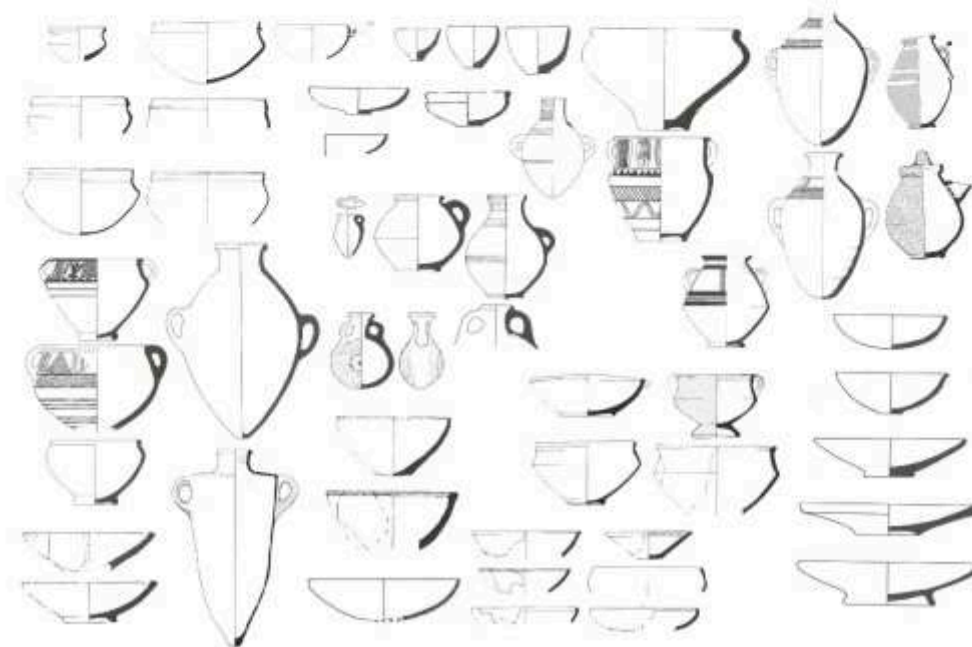


imported/imitated bowls and pots including milk bowls, the ring base ware and the stirrup jars, Using the other sites from all over Canaan for comparative, indicates a cultural horizon in most of the regions in the low and highlands, including the Jordan highlands and valley. Although dating of the collection is relative and difficult to be absolute, the general pottery chronology of the Late Bronze and early Iron Age is confusing and very similar that it is an uneasy task to label it in phases such as Late Bronze IIA, IIB, and Iron IA. In addition to that, the beginning of the Late Bronze is confusing as well for reasons related to the continuous manufacturing traditions of the Middle Bronze Age, with very small changes in the pottery repertoire across these phases of the Late Middle Bronze to the Iron Age (Mullins and Yannai 2019: 151). The case also can be applied to the pottery dated to later phases of the Iron Age I which appeared in the sites that have been studied by (Mazar 2019).

Those classifications that I have made above are close up observations which would be unimportant and do not make sharp divisions between the phases of the Late Bronze on one hand, and between the Late Bronze and the Iron Age on the other. Thus, Tell Dothan with its pottery collection fits the general cultural horizon of Canaan during the Late Bronze and the Iron Age. The site presents a geographical and cultural unit that connects different regions on the south in the highlands, the north the fertile valleys, to the east in the Jordan valley and highlands, and the coastal plain or the lowlands to the west. Most of the pottery types that have been studied were represented in several sites in the Late Bronze and the Iron Age; the transition between the two ages have almost the same characteristics (**figs.** 52-59) the continuous tradition of the pottery from the Middle Bronze age through the Late Bronze has been present not only at Tell Dothan but in most of the sites above in all the geographical regions of Canaan, wither it was open-air sites or tombs, such as Tell el-Jazari (Gezer) Tell el-Asawir (Tel Esur) Tell ed-Duweir (Lachish) Tell el-Qedah/Tell Qaqqas (Hatzor), Ashkelon Tell Deir 'Alla, Khirbet Seilūn (Shiloh) Tell el-Ḥuṣn (Beth Shean) Tell el-Mutesellim (Megiddo), Tell el-Qadi (Dan) Tell Abu al-Kharaz, Tell es-Sa'idiyeh, Saḥem, el-Jib (Gibeon) Baq'ah Valley, Tell Balatah (Shechem). Those sites present both burial and open-air sites context, they are distributed in all directions.

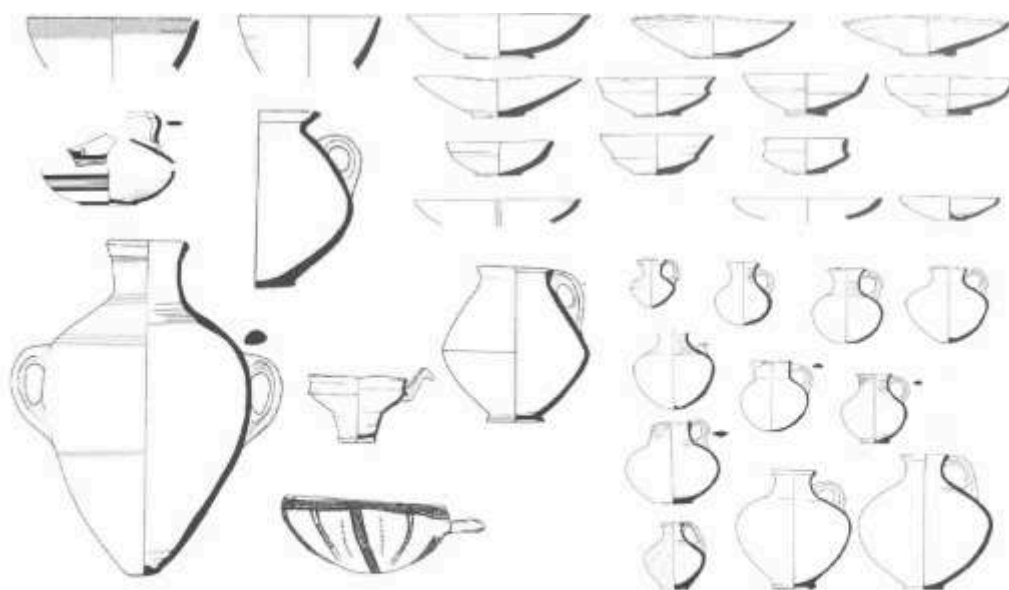


Tell Abu al-Kharaz 2006, 2014

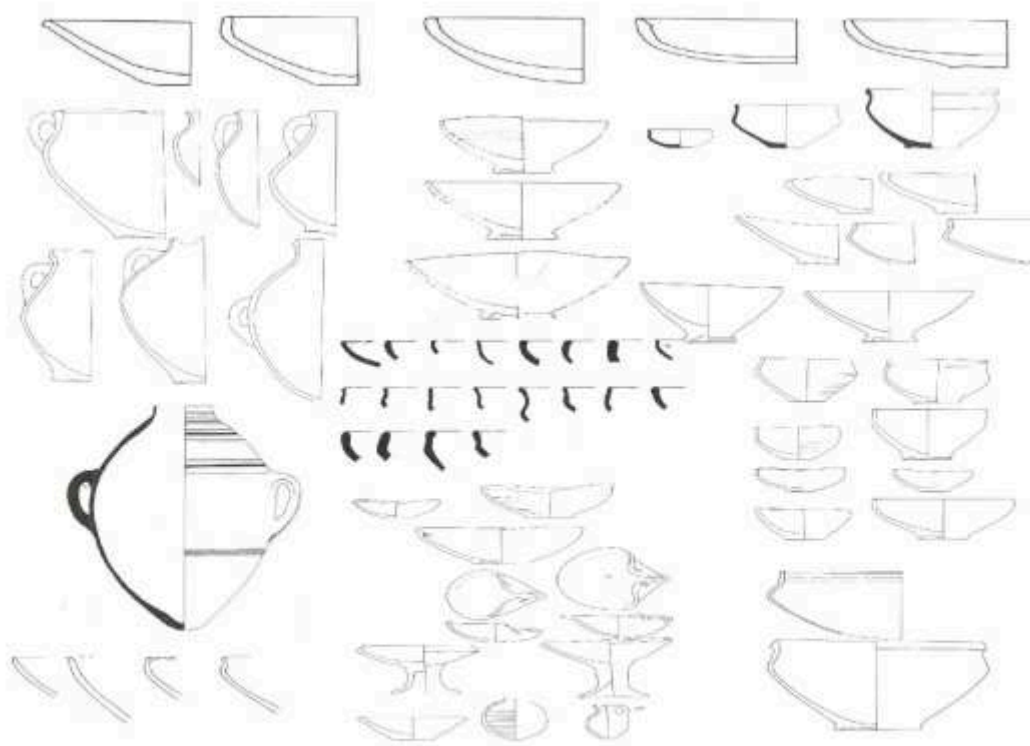


Tell el-Husn (Beth Shean) 1966, 2007, 2009

Fig 52. Pottery examples of Late Bronze and Iron Ages from Tell Abu al-Kharaz and Tell el-Huşn (Beth Shean)

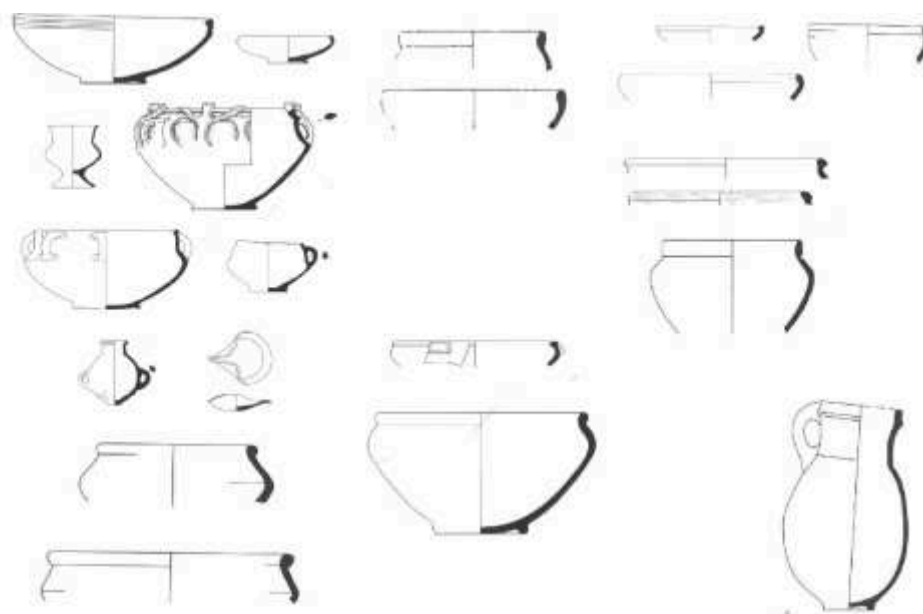


Tell el-Qadi (Dan) 2002

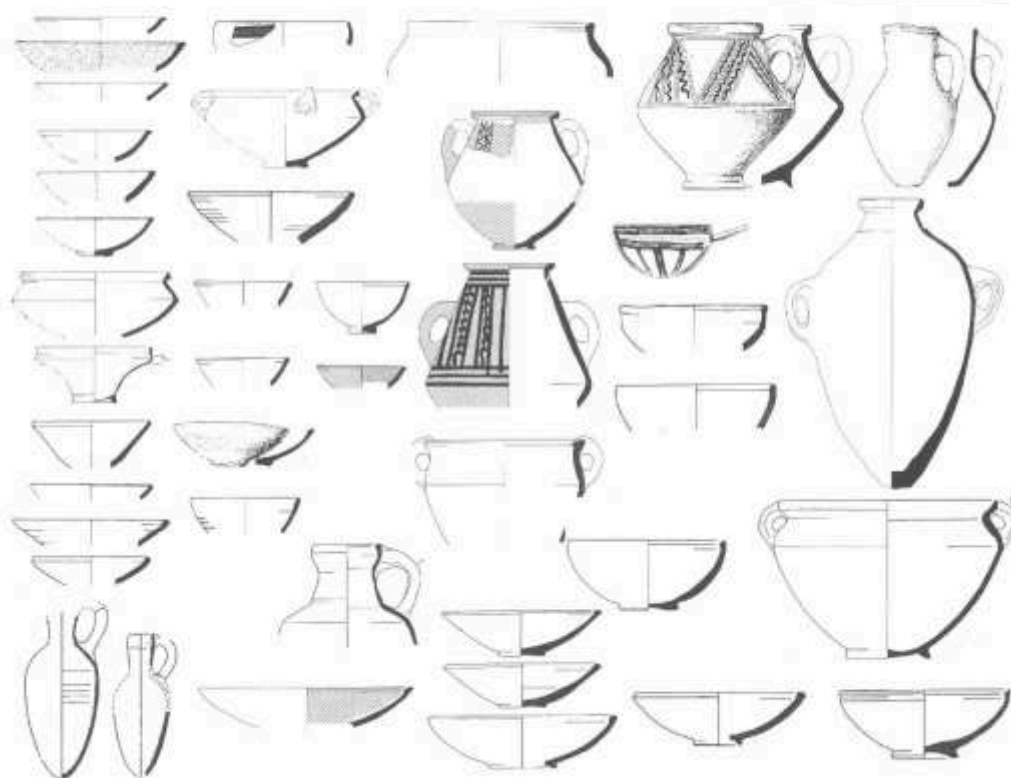


Tell Deir 'Alla 1969, 1992

Fig 53. Pottery examples of Late Bronze and Iron Ages from Tell el-Qadi (Dan) and Tell Deir 'Alla

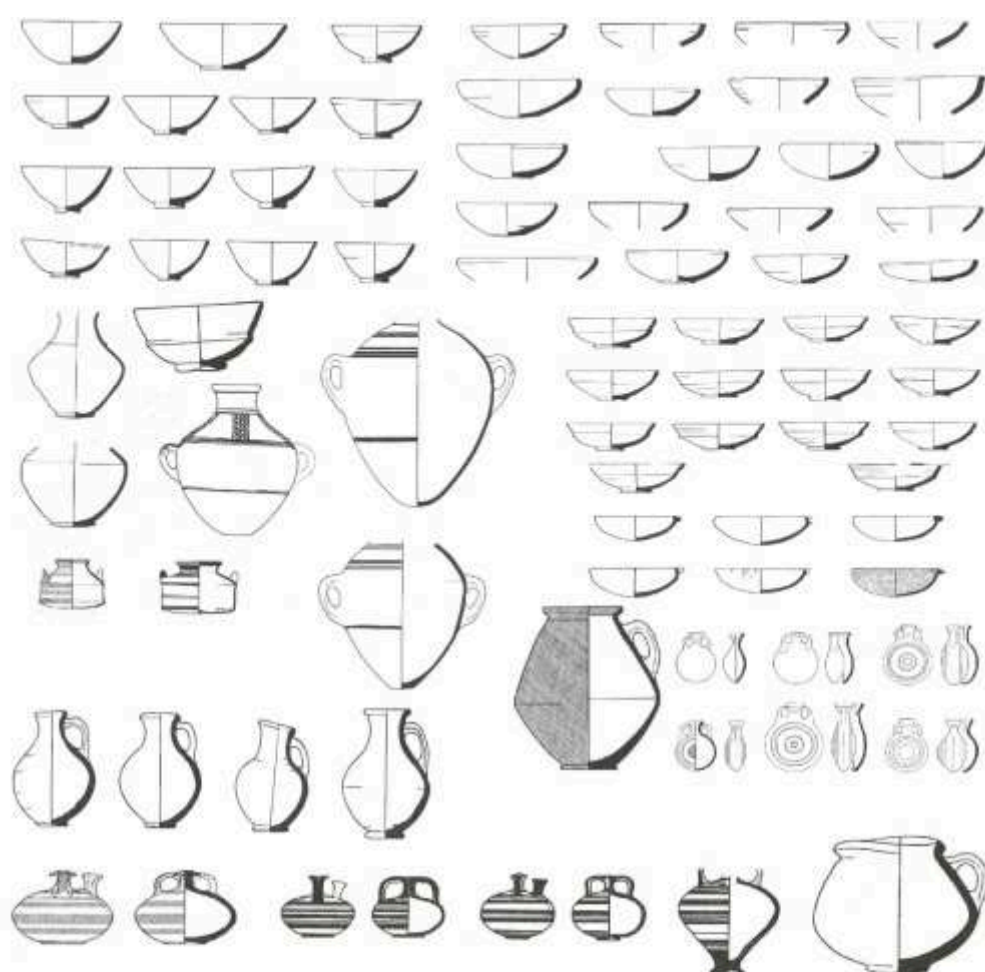


Tell Dothan 2005

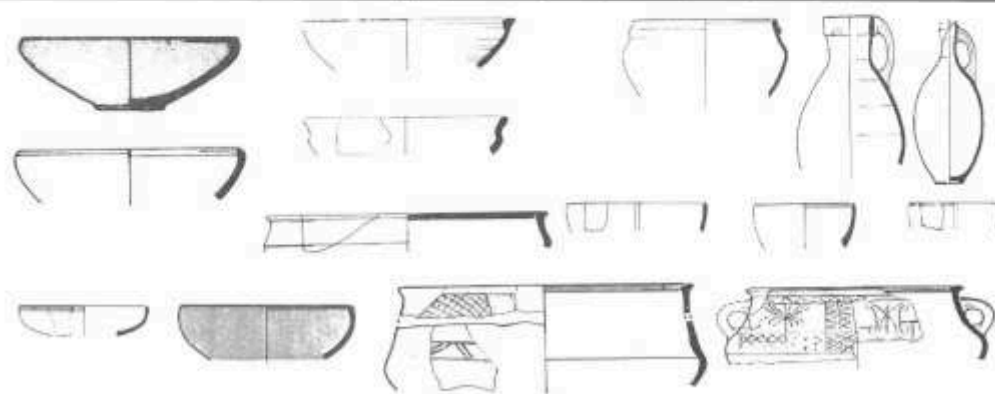


Tell el-Jazari (Gezer) 1986, 1988, 2013

Fig 54. Pottery examples of Late Bronze and Iron Ages from Tell Dothan and Tell el Jazari (Gezer)

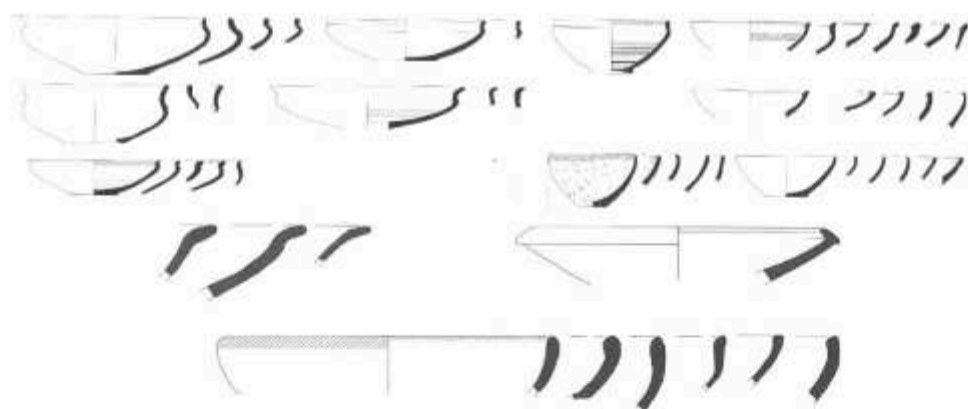


Tell el-Qedah/Tell Waqqas (Hatzor) 1958, 1960, 1961, 2012, 2017

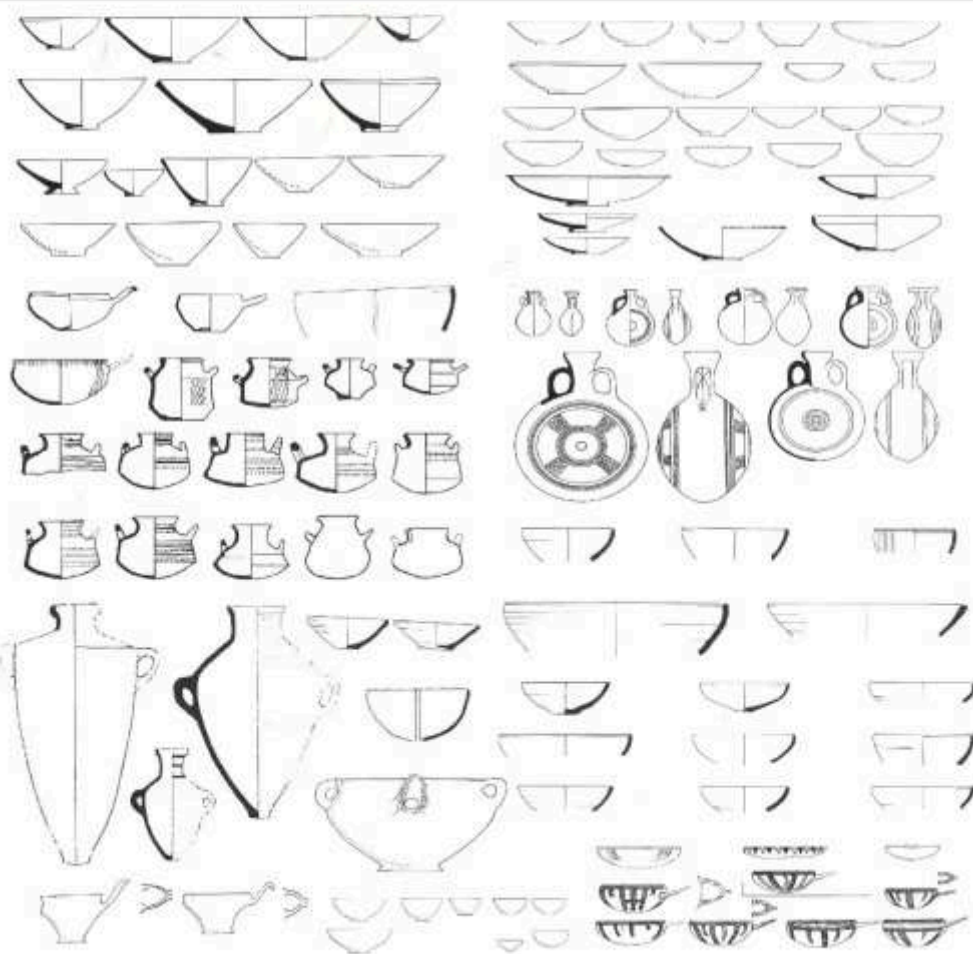


'Izbit Sartah 1986

Fig 55. Pottery examples of Late Bronze and Iron Ages from Tell el-Qedah/Tell Waqqas (Hatzor) and 'Izbit Sartah



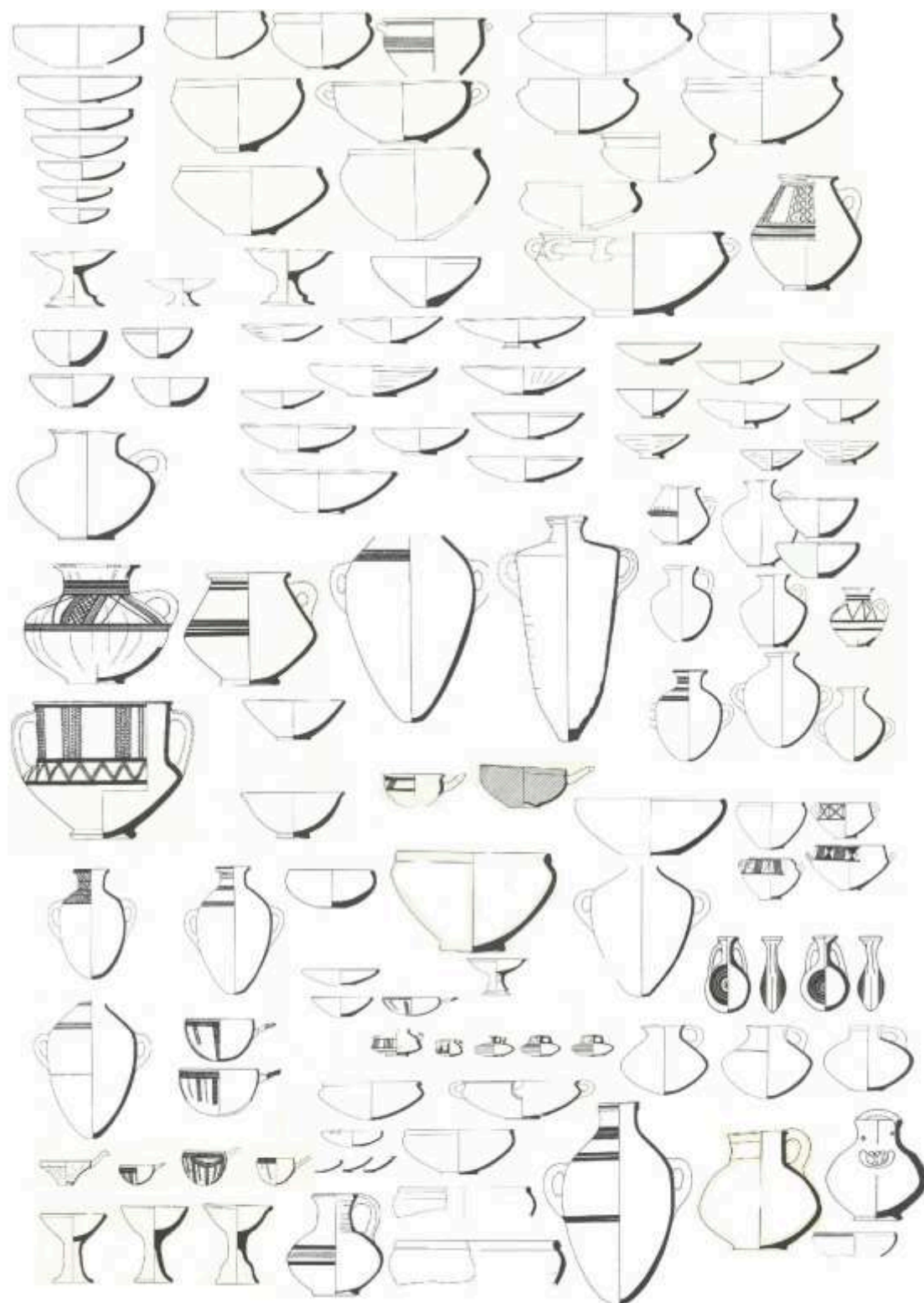
Tell Keisan 1980



Tell ed-Duweir (Lachish) 1940, 1953, 1958, 2004

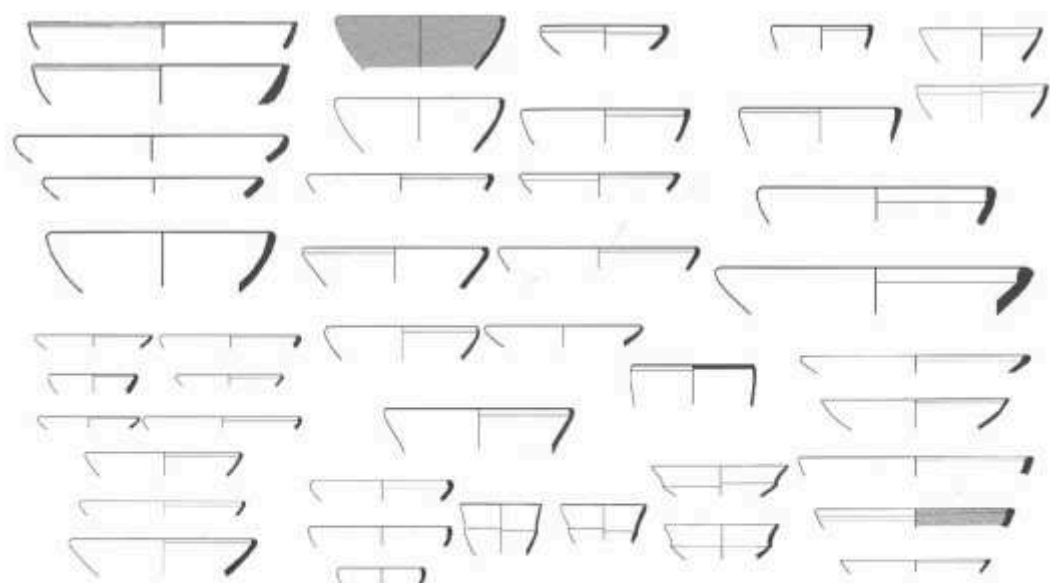
Fig 56. Pottery examples of Late Bronze and Iron Ages from Tell Keisan and Tell ed-Duweir (Lachish)



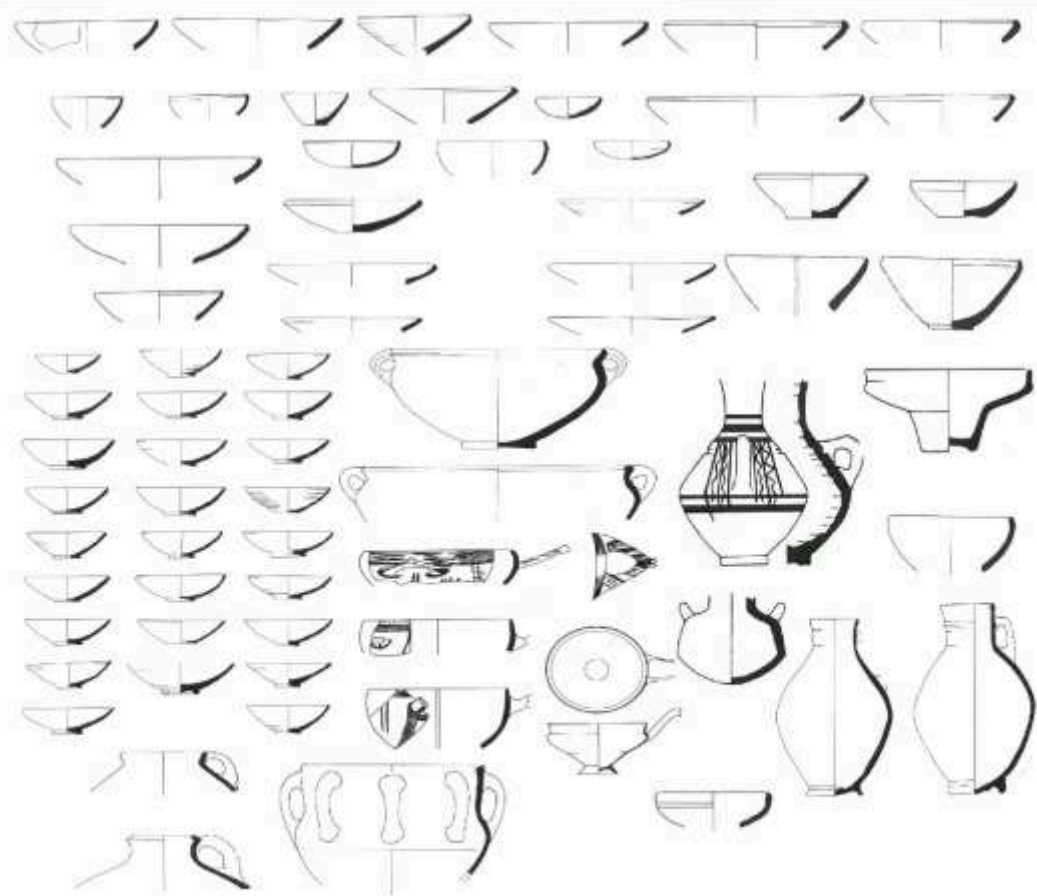


Tell el-Mutesellim (Megiddo) 1938, 1939, 1948, 2006, 2013

Fig 57. Pottery examples of Late Bronze and Iron Ages from Tell el-Mutesellim (Megiddo)



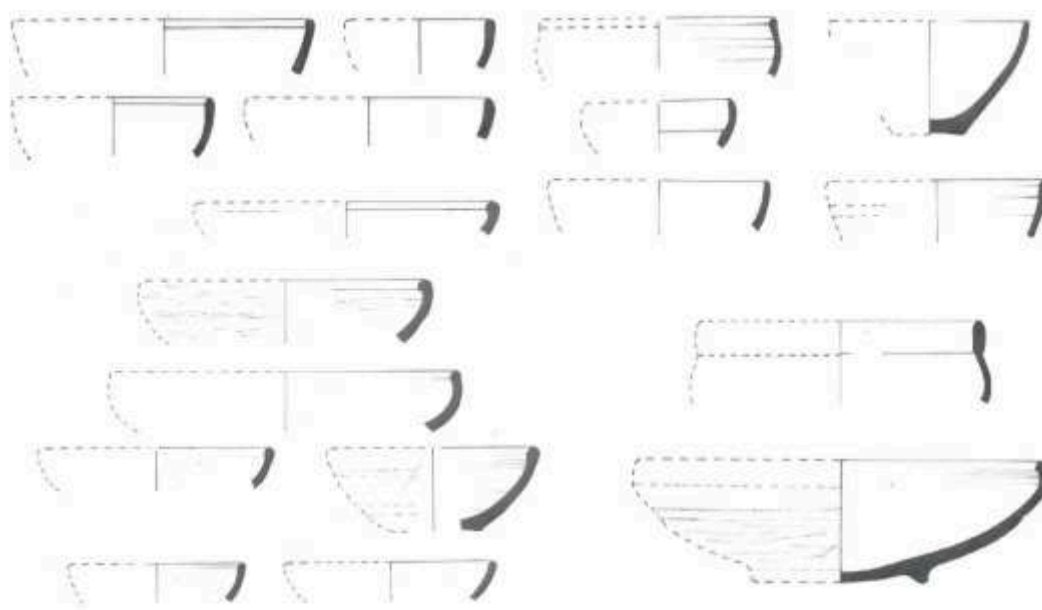
Tell Balatah (Shechem) 2015



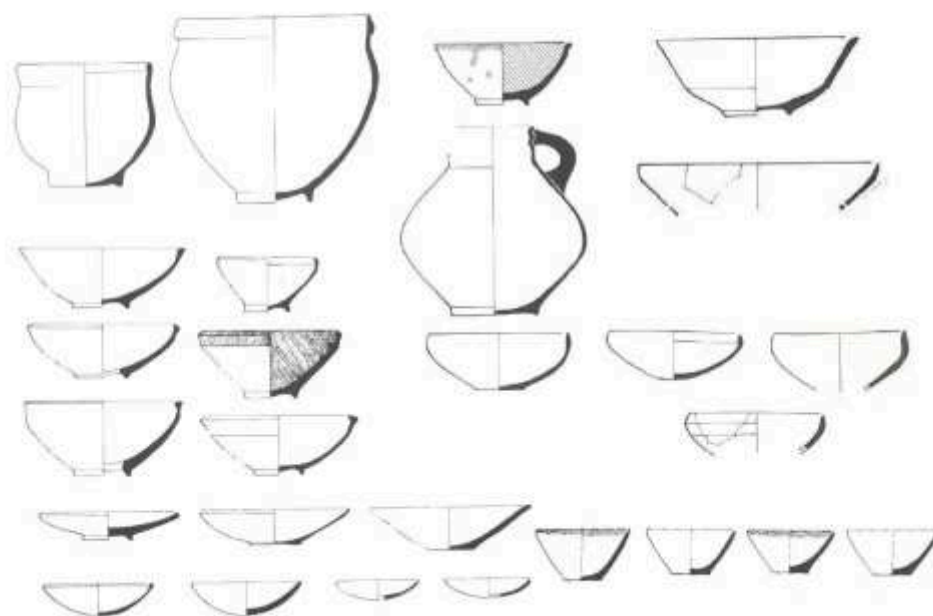
Khirbet Seilun (Shiloh) 1993

Fig 58. Pottery examples of Late Bronze and Iron Ages from Tell Balatah (Shechem) and Khirbet Seilun (Shiloh)





Tell Ta'annak (Tanak) 1978



Tell el Far'ah (N) 1984

Fig 59. Pottery examples of Late Bronze and Iron Ages from Tell Ta'annak (Tanak) and Tell el-Far'ah (N)

The pottery in **figs. 52-59**<sup>18</sup> presents an actual comparative pattern of with the collection of tomb 1 at Tell Dothan with other sites in the region, These figures presents the idea of the continuity in the Late Bronze to the Iron Age I, bowls for example are very similar in those sites and that of tomb 1, jars, jugs and other pottery types, continuity also is present in the pottery of Tell Dothan in Iron Age open-air squares and that of the Iron Age tomb 1, level 1. Moreover, the close comparative in the sites offered in the figs. 52-59 also presents a similarity between these sites in different regions of Palestine, which can shed light on the unpublished sites as I have mentioned somewhere else in the present text.

In addition to the above sites, which present Late Bronze Age and Iron Ages strata, there are sites that have not been published pottery from the Late Bronze Age such as Tell Ta'annek (Tanak), Tell el Far'ah (N), or sites that only dated to the Iron Age such as Beit Jala (Giloh) Tell Keisan, 'Isbet Şarṭah, Dhahrat et-Tawileh (The Bull site) all present a resemblance to the pottery of Tell Dothan, with the problematics regarding the imported/imitated pottery which also presents external relations in those sites that resembles that of Tell Dothan. In this regard, Tell Dothan appeared to be connected to the coastal sites such as Ashkelon, with the Mycenaean and the Canaanite jars which presented not only at the site but also to the others. The site also had similarities to the deep highlands sites such as Tell Balatah (Shechem), Khirbet Seilūn (Shiloh), Tell el Far'ah (N), Beit Jala (Giloh), Dhahrat et-Tawileh (The Bull site) el-Jib (Gibeon). Also the similarity can be found in the north in the Marj Ibn Āmir and Bisan valleys sites such as Tell el-Ḥuṣn (Beth Shean) Tell el-Mutesellim (Megiddo), Tell el- Tell Keisan and to the north in the Galilee sites such as Tell el-Qedah/Tell Qaqqas and Tell el-Qadi (Dan). In the Hebron Valley site which starts in the North, such as 'Isbet Şarṭah, Tell el-Jazari (Gezer) Tell el-Asawir (Tel Esur) and Tell ed-Duweir (Lachish), and in Jordan valley and highlands sites such as Tell Deir 'Alla, Tell Abu al-Kharaz, Tell es-Sa'idiyeh, and Saḥem.

To conclude, I believe that the settlement patterns of the period have been affected from the pottery distribution in all the regions, i.e. with keeping in mind that the pottery repertoire is similar in all the regions, the small sites (clusters) which belong to larger sites shows no difference, for example, if Tell Dothan is a central site,

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<sup>18</sup>The figures are not organized by strata or level, for precise citation of each level and pottery reference see chapter IV, pp. 179-227.

or belongs to Tell Balatah (Shechem), the pottery would be similar and follows the same horizon, the same can be applied to the coastal, valleys, and highlands sites, in Palestine and Jordan. This is to say that, the historical conditions can be to some extent to most of the sites that have been included in this study as well as the clustering sites, wither by the communities that lived and interacted internally and externally, i.e. the relations with of the Canaanites with the Egyptians, the climate and the climate change, the interaction of the local people with the Sea Peoples, and the collapse of the Late Bronze and the aftermath.

Tell Dothan represents one case of the sites in the Late Bronze and the Iron Age on the junction between four different geographical regions, it is not enough to draw large scale archaeological and historical conclusions about the Late Bronze Age and the Iron Age, nevertheless, it gives an idea about the culture of the highlands which can be used for the reconstruction of the ancient communities in Palestine during the Late Bronze and Iron Age. the presentation of the other sites such as Tell Ta'annek (Tanak), Tell el Far'ah (N), and Tell Abu ez-Zarad is to through the light on the problem that those sites are dated to the Late Bronze Age but have not been published, and when those sites to be published, more knowledge about the highland can be gained which helps for the understanding of the region during the Late Bronze Age. Tell Dothan pottery collection, in this case, gives a unique window to the period and its connections to the rest of the regions and also the transition from Late Bronze into the Iron Age.

The pottery collection of Tell Dothan is not currently relevant for the generalization regarding the Sea Peoples presence in Canaan, not for the climate change, nor for the Late Bronze age, nor for the presence of new peoples in the land like the Israelites, however, the pottery collection of Tell Dothan gives indications for all these issues. One important point at tell Dothan pottery collection is the reflection of the continuity not only from the Late Bronze to the Iron Age, but also from the Middle Bronze to the beginning of the Iron age II, in terms of pottery predation traditions, which reflects the homogeneity of the community throughout the history of the site Late Bronze and Iron Age.

## Conclusion

The carrying of this study main purpose is to put Tell Dothan and tomb 1 in the context of the Late Bronze and Iron Ages. Throughout the study of the pottery collection, the researcher has accomplished several goals, which all together formulate a major part of the archaeology and history of the site, as well as, contributing to the archaeology and history of Canaan during the Late Bronze and the Iron Ages. This study has included several topics such as the dating of the site in light of the chronology of the Levant with its several issues of low and high chronology assisted by historical and archeological review in the first chapter.

The continuity/discontinuity of the material culture, the climate and the climatic change effects on the Levant and Egypt with Tell Dothan as part of the history of the region. The pottery collection typology and fabrics, in which I have attempted at studying in details brings a new unpublished pottery in the highlands of Palestine during a period known for civilizations trade and interaction activates, with supposed differences in settlement patterns across the regions of Canaan at the Late Bronze Age, where the highlands are known to be almost empty of sites, while the lowlands are much more populated, due to the fertile and moderate geomorphological nature of the coastal plain and the valleys, as well as, the connections to Egypt and other civilizations of the ancient world. Then comes the end of the Late Bronze Age with a general collapse of the age, with the effects of this event on Canaan and the people, where Egypt's control declined, supposedly new peoples moved or more precisely grown and developed in the area bringing new cultural elements into the Iron Age, with that, also facing the complexity of drawing concrete historical and archaeological assumptions about those events and the effects of it on Canaan during the two ages.

Chapter 1 sums up the archaeological and historical background of the Canaan in the Late Bronze and the Iron Ages, without this chapter, it would be hard to imagine Tell Dothan and the pottery collection which were discovered 70 years ago at the site, putting the tomb 1 in the context. I had to review several elements, all of which highlight a question, together, the chronology of the period, the settlement, the relations of Canaan to other civilizations, and the collapse of the Late Bronze and the dawn of the Iron Age, shows that Canaan probably has not been in a serious crisis, because the lowlands sites, the valleys and the Jordan sites had a cultural continuity. The highlands, although foggy, but with Tell Dothan pottery collection and the variety

with the several types it presents, shown that at least the area of Tell Dothan with the other sites north of Nablus were not in a poor condition nor empty.

Moreover, the tradition of cutting cave tombs was a practice that have been found in several regions and it represented a local pattern throughout Canaan from the Early Bronze IV until the Iron Age II, with Tell Dothan's tomb 1 as a considerable example. The settlement in light of the above needs to be examined in the highlands of which Tell Dothan have shown throughout the rich collection of the tomb 1, Tell Dothan located at a fertile valley, might have been a key site with clusters of sites, or it was part of a cluster, the same may apply to the highlands, and the other regions. In addition to the sites which were surveyed which shows that the highlands have not been marginal although those site are small. In addition to that and in the below conclusions it doesn't seem that the historical events have influenced the pottery making during this period.

Relations with Egypt evident in the historical records, Tell Dothan is on the road between north and south, although it's not clear at Tell Dothan, but I believe that the site has also an evidence of Egyptian presence that needs to be investigated. Other groups of people were not evident at Tell Dothan, probably the issue needs more excavations, bearing in mind that the site has not a clear Late Bronze Age and Iron Age, only comes from the tomb, this situation requires more excavations.

In chapter two, I have attempted to show Tell Dothan in a historical overview, the evidence shows that the site is located on a strategic point, on the historical road, with fertile land and fields in the Arraba valley, of that, the site had a continuous habitation across the history. The mention of Tell Dothan in the Egyptian records, is not confirmed, though, I hypothesize that with the location of the site on the cross roads might have been of interest for the Egyptians.

Although Late Bronze strata is not clear on the site, and excavations had no indications, but in light of chapter two, I look at the wealth of tomb 1 in chapter three in terms of Tell Dothan location, fertility lands, and strategic location, which I believe have played a major role in the cultural accumulation of the site's strata, and tomb 1 in particular, the large number of a variety of artifacts, truly indicates that Tell Dothan is a rich and important site in the area around and in the general picture of Canaan.

Chapter four is the spine of the study, where a focused examination of the collection has been done. The results of the pottery collection are of great importance, the verity of types, the homogenous fabric, technology, and the great similarity between the types, points out to the continuity of the pottery traditions in the site, which can through lights on the other unpublished sites in the region which probably can show same results, if it can be studied.

In chapter five, I attempted at drawing a typological and chronological line for the pottery collection, tomb 1 fits the general pottery typology of the Late Bronze and the Iron Ages in the sites that were used for the comparison. Thus, level 5 of the tomb is relatively dated to the Late Bronze IIA or a little earlier, level 4 fits the Late Bronze IIA-B, while level 3 fits the Late Bronze IIB, Level 2 and 1 are both similar which present the transition and the into the Iron Age, probably until the end of the Iron IB, and probably into the beginning of the Iron IIA, which contradicts the absolute dating of the experiments on the teeth, what strengthen this assumption is that level 1 has not pottery such as carinated bowls, nor stirrup jars, or ring base ware pots. Because if found in level 1, it would be considered as comingled or heirloom artifacts.

Although the pottery collection of Tell Dothan is limited and consists of burial context, but the wealth that it provides is a considerable one in many ways, first and for most, it offers a window to the highlands, during the Late Bronze and the Iron Ages, where a few sites have been excavated and published. The collection with its several levels that spins over almost four hundred years, with its several pottery types is a good opportunity to examine the archaeological conditions of the highlands. The study of the pottery types, sub-types, technology, fabric, decorations, and comparison with different sites in different regions, points clearly that Tell Dothan during period matches perfectly of the cultural horizon of milieu. In this regard, we can draw this conclusion to the sites nearby which have not been published, which subsequently can change our understanding of the Late Bronze and the beginning of the Iron Age in the highlands, in addition to this, Tell Dothan pottery collection has shown continuity in the cultural horizon in the site across all the 5 levels of the use. However, there are slight differences in the presence and disappearance of some types of the pottery, but that is probably connected to the interactions processes between the site itself and the surrounding, which reflects that the Late Bronze Age phase and the Iron Age one, are

not silent, on the contrary, the collection proved the continuity of the traditions from the Middle Bronze Age all the way down to the Iron Age.

The different sub-types of the bowls, the carinated bowls, and the dipper juglets are relevant evidence for this conclusion. Canaanite jars, Mycenaean pottery, reflect the trade activities of Tell Dothan like the other sites. Flasks, chalices, bowls, biconical jars, jugs, and oil lamps showed continuity from the Late Bronze into the Iron Age. Moreover, the collection fits perfectly the pottery repertoire of the Late Bronze strata in major sites across the region, as well as the Iron Age strata not only in the lowlands but with those excavated and published sites in the highlands and in the Jordanian sites which showed great similarity with its near or far. An additional point which supports the continuous cultural horizon is the burial and burial practices, which through this study I have attempted at bringing as much examples to the tomb 1 pattern in terms of space and time, which represents the Canaanite culture throughout those two periods.

The approach of studying tomb 1 in light of the site and the site in light of the region and the vice-versa, strengthen the regional historical facts and shows the results of such cultural interactions on small and large scales. In addition, the sites on the highlands which I tried to survey show that it's not empty and marginal. Moreover, the similarity of the pottery in several sites in the different geographical regions influence the cultural connections as well as the continuity.

The study suffered from different problems, 1- the limited access to the whole pottery collection, due to the spread of the pottery over three different countries and several institutes, with also some restrictions, 2- limited access to the excavations reports which was fragmentary, created some difficulties in linking the tomb to the open-air excavation, 3- the shortage of petrographic, thin section examination, and which is an expensive process.

Finally, the site Tell Dothan brings an example to the settlement in the highlands. This leads me to conclude that more research and excavations need to be carried out at Tell Dothan and the other unexcavated and unpublished sites in the region in the Late Bronze and Iron Ages to help understand or change our knowledge of the highlands during this phase of history of Canaan.



Selected photographs from the five levels  
of tomb 1

Vessel №	Type	Level	Registered №	Catalog №
1	Bowl	5	2558	Pl. 1-1
2	Bowl	5	2597	Pl. 2-6
3	Bowl	5	2716	Pl. 2-8
4	Bowl	5	2778	Pl. 2-7
5	Bowl	5	2680	Pl. 16-2
6	Bowl	5	2776	Pl. 15-1
7	Bowl	5	2541	Pl. 15-4
8	Bowl	5	2615	Pl. 15-2
9	Bowl	5	2775	Pl. 16-6
10	Cooking Pot	5	2588	Pl. 17-1
11	Krater	5	2621	Pl. 18-1
12	Krater-Mug	5	2687	Pl. 38-1
13	Jar	5	2651	Pl. 41-1
14	Jug	5	2643	Pl. 53-1
15	Jug	5	2613	Pl. 52-4
16	Dipper Juglet	5	2711	Pl. 62-1
17	Juglet	5	2561	Pl. 63-3
18	Pyxis	5	2550	Pl. 64-6
19	Pyxis	5	2565	Pl. 64-5
20	Pyxis	5	2691	Pl. 64-1
21	Flask	5	2706	Pl. 73-3
22	Chalice	5	2670	Pl. 78-2
23	Oil Lamp	5	2612	Pl. 82-1

Table 27. Selected photos from pottery of level 5



Figure. 52

Figure 60. selected photos of pottery of level 5

Vessel №	Type	Level	Registered №	Catalog №
1	Bowl	4	724	Pl. 3-6
2	Bowl	4	806	Pl. 3-1
3	Bowl	4	2281	Pl. 3-5
4	Bowl	4	833	Pl. 3-3
5	Bowl	4	2470	Pl. 15-6
6	Bowl	4	2496	Pl. 15-5
7	Cooking Pot	4	2481	Pl. 17-2
8	Cooking Pot	4	2331	Pl. 17-3
9	Multi-Handled Krater	4	2308	Pl. 24-1
10	Krater	4	2439	Pl. 18-3
11	Krater-Mug	4	2426	Pl. 38-3
12	Jar	4	2412	Pl. 42-2
13	Biconical Jar	4	2534	Pl. 45-3
14	Jug	4	2337	Pl. 54-4
15	Dipper Juglet	4	852	Pl. 62-2
16	Pyxis	4	2534	Pl. 65-4
17	Pyxis	4	2283	Pl. 65-7
18	Pyxis	4	2530	Pl. 65-3
19	Stirrup Jar	4	2522	Pl. 72-1
20	Flask	4	2363	Pl. 73-4
21	Chalice	4	2316	Pl. 78-7
22	Oil Lamp	4	2284	Pl. 83-5

Table 28. Selected photos from pottery of level 5



Figure 53

Fig 61. Selected photos from pottery of level 4

Vessel №	Type	Level	Registered №	Catalog №
1	Bowl	3	2248	Pl. 6-7
2	Bowl	3	523	Pl. 6-5
3	Bowl	3	1970	Pl. 7-1
4	Bowl	3	2086	Pl. 8-6
5	Bowl	3	2221	Pl. 16-8
6	Bowl	3	2060	Pl. 15-7
7	Cooking Pot	3	1990	Pl. 17-5
8	Multi-Handled Krater	3	2025	Pl. 25-2
9	Krater	3	2043	Pl. 19-2
10	Krater-Mug	3	2205	Pl. 39-4
11	Jar	3	2105	Pl. 43-2
12	Biconical Jar	3	1964	Pl. 47-1
13	Jug	3	2209	Pl. 56-2
14	Juglet	3	2225	Pl. 63-5
15	Pyxis	3	2177	Pl. 66-6
16	Pyxis	3	2214	Pl. 66-2
17	Pyxis	3	615	Pl. 66-14
18	Pyxis	3	619	Pl. 66-13
19	Flask	3	2116	Pl. 74-1
20	Stirrup Jar	3	2217	Pl. 72-6
21	Stirrup Jar	3	2031	Pl. 72-8
22	Chalice	3	2022	Pl. 79-2
23	Oil Lamp	3	1954	Pl. 86-3

Table. 29. Selected photos from pottery of level 3



Figure 54

Fig 62. Selected photos from pottery of level 3

Vessel №	Type	Level	Registered №	Catalog №
1	Bowl	2	311	Pl. 10-7
2	Bowl	2	1695	Pl. 10-4
3	Bowl	2	1786	Pl. 10-5
4	Bowl	2	1724	Pl. 10-3
5	Bowl	2	1680	Pl. 16-9
6	Bowl	2	1568	Pl. 16-10
7	Cooking Pot	2	1846	Pl. 17-8
8	Multi-Handled Krater	2	1546	Pl. 26-2
9	Krater	2	1758	Pl. 20-2
10	Krater-Mug	2	1552	Pl. 40-5
11	Jar	2	479	Pl. 43-3
12	Biconical Jar	2	1589	Pl. 49-5
13	Jug	2	250	Pl. 58-1
14	Dipper Juglet	2	1595	Pl. 62-4
15	Dipper Juglet	2	1884	Pl. 62-7
16	Pyxis	2	1788	Pl. 68-3
17	Pyxis	2	1484	Pl. 69-7
18	Pyxis	2	1495	Pl. 68-4
19	Stirrup Jar	2	1892	Pl. 72-9
20	Stirrup Jar	2	1852	Pl. 72-10
21	Chalice	2	285	Pl. 80.3
22	Oil Lamp	2	1642	Pl. 86-7
23	Oil Lamp	2	407	Pl. 87-1
24	Flask	2	1862	Pl. 76-5
25	Flask	2	1714	Pl. 76-1

Table 30. Selected photos from pottery of level 2





Figure 55

Fig 63. Selected photos from pottery of level 2

Vessel №	Type	Level	Registered №	Catalog №
1	Bowl	1	1305	Pl. 14-2
2	Bowl	1	1019	Pl. 13-4
3	Bowl	1	1162	Pl. 13-2
4	Bowl	1	1248	Pl. 13-6
5	Krater	1	1214	Pl. 23-2
6	Multi-Handled Krater	1	1314	Pl. 35-2
7	Multi-Handled Krater	1	1125	Pl. 34-2
8	Krater-Mug	1	927	Pl. 40-7
9	Jar	1	1201	Pl. 43-4
10	Biconical Jar	1	1216	Pl. 51-2
11	Jug	1	1188	Pl. 61-1
12	Juglet	1	116	Pl. 63-8
13	Pyxis	1	1293	Pl. 71-4
14	Pyxis	1	936	Pl. 70-6
15	Pyxis	1	1025	Pl. 71-3
16	Pyxis	1	1136	Pl. 70-1
17	Flask	1	1131	Pl. 77-4
18	Chalice	1	926	Pl. 80-8
19	Oil Lamp	1	57	Pl. 88-9
20	Oil Lamp	1	1172	Pl. 88-4

Table 31. Selected photos from pottery of level 1



Figure 56

Fig 64. Selected photos from pottery of level 5

Number	Type	Remarks
1	Jug	A jug shows some firing problems with air bubbles on the surface
2	Krater	A krater a pedestal pendent base showing decorations
3	Jug	A surface of a jug with large inclusions cracking from on the surface
4	Bowl	A bowl surface weathered with white inclusions appear on the surface
5	Body	Vessel body cracked because of very large inclusions
6	Pyxis	Pyxis surface with decorations on the body and the base
7	Bowl	Flat base with cut with inclusions and traces of rob cut
8	Bowl	Disk base with a cut
9	Bowl	Ring base with the ring added to the body
10	Bowl	Shallow disk base built in the body
11	Section	Over fired section turns into gray color with clear white inclusions
12	Section	Section of very fine Pyxis section, with very few inclusions

Table 32. Showing technological/shaping and fabric remarks on the pottery of tomb 1.

Number	Remarks
1	Pottery of tomb 1 soled in cabins at St. George College
2	Pottery of tomb 1 soled in cabins at St. George College
3	Pottery of tomb 1 stored on shelves at Rockefeller Museum
4	Pottery of tomb 1 stored on shelves at Rockefeller Museum

Table 33. Showing the storage conditions at St. George College and the Rockefeller Museum, Jerusalem.



Fig 65. Showing technological/shaping and fabric remarks on the pottery of tomb 1. (P. Ballet 2018).

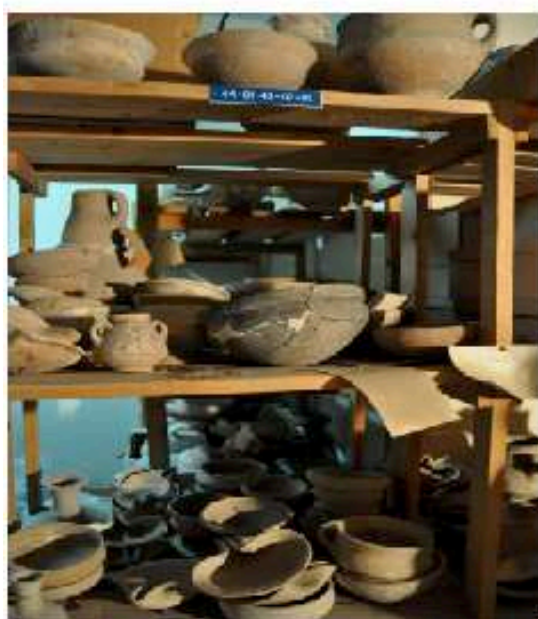




1



2



3



4

Fig 66. Showing the storage conditions at St. George College and the Rockefeller Museum, Jerusalem (P. Ballet 2018).

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## Un Résumé Substantie

Titre: Continuité culturelle à la fin de l'âge du bronze au début de l'âge du fer en Palestine. Typologie de la céramique et des modes d'occupation : la tombe 1 de Tell Dothan.

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La présente thèse porte sur l'archéologie du pays de Canaan aux âges du Bronze et du Fer. L'analyse des typologies céramiques et des modes d'occupation du territoire constitue les fondements pour l'étude et la compréhension de la région. C'est pourquoi nous proposons de l'appliquer à Tell Dothan, un site des hautes terres palestiniennes. Les fouilles, il y a plus de 70 ans, y ont révélé des phases du Chalcolithique, du Bronze, du Fer, de l'époque hellénistique et de la période mamelouke. Sur le site, a été dégagé, entre autres, le « Cimetière Ouest » – dans la partie nord-est du tell – constitué de trois tombes (nommées tombe 1, 2 et 3) datées entre le Bronze récent et le Fer. La tombe 1 est le plus grand de ces édifices funéraires, mais aussi le plus important avec ces riches trouvailles et sa séquence stratigraphique continue du Bronze récent au Fer – période de transition incluse.

Archéologiquement parlant, la tombe est divisée en cinq niveaux qui vont, selon toute vraisemblance, du Bronze récent IIA au Fer I. Cette stratigraphie reflète l'importance du site durant la période Bronze récent/Fer I dans sa région proche, mais également, de manière plus large, en Palestine. De plus, dans la tombe 1, 3 000 vaisselles en terre cuite ont été mises au jour, ce qui aide à comprendre la céramique du point de vue typologique et technologique, et à avoir une image qui soit la plus claire possible des modalités de changement ou de continuité de la production céramique durant le Bronze récent et le Fer I. L'examen des poteries provenant de la tombe 1 nous permettra de mieux appréhender les continuités et les ruptures dans la culture matérielle du Bronze récent et du Fer I – deux phases courtes, mais non moins importantes. Cet examen, avec l'aide d'autres données issues de l'étude des modes d'occupation du territoire ou des contacts culturels, économiques et politiques au

niveau régional, pourra nous permettre de dégager des conclusions d'ordre historiques.

À la lumière de ce qu'on vient de dire, il nous faudra entreprendre un certain nombre d'analyses pour contribuer à la compréhension de la tombe 1 et du site de Tell Dothan au Bronze récent et au Fer, ainsi que pour faire le lien avec les données archéologiques et les événements historiques palestiniens. De plus, comme les fouilles ont eu lieu il y a environ 70 ans, l'examen des datations des ensembles céramiques est une réelle nécessité. Nous devons, par exemple, garder à l'esprit les nouveaux résultats de quelques datations (isotope et radiocarbonate) de dents provenant de la tombe. En effet, ces datations sont en partie en contradiction avec les datations classiques données par les fouilleurs, puisqu'elles tendraient à dater la tombe du Fer I uniquement, et non du Bronze récent et du Fer I. En outre, il faudra prendre en compte les éventuels phénomènes de contamination qui auraient pu avoir eu lieu lors des fouilles ou du déplacement et du stockage des poteries.

Afin d'étudier les phénomènes de continuité et de rupture dans l'assemblage céramique de la tombe 1, de faire le lien entre la situation à Tell Dothan et les données archéologiques et historiques de la région, et d'examiner les datations céramiques du site, nous opterons pour une division du travail en cinq chapitres, lesquels aborderont chacun une question spécifique liée à l'archéologie et à l'histoire de Tell Dothan. Le chapitre 1 donne un aperçu général de l'histoire et de l'archéologie du pays de Canaan aux Bronze récent/Fer I, ce qui permet de comprendre la place qu'avait cette région et, plus particulièrement, Tell Dothan, qui se révèle être une zone dynamique reliant, tant du point de vue géographique que culturel, les hautes et les basses terres. Le chapitre 2 est consacré à la présentation du site de Tell Dothan en lui-même ; nous y verrons son contexte archéologique, historique – de manière plus approfondie – et environnemental. Le contexte archéologique détaillé de la tombe 1 est quant à lui étudié dans le chapitre 3 à l'aide de tous les rapports de fouilles, de l'étude de la stratigraphie et des objets qui y ont été mis au jour, ainsi qu'en utilisant l'analyse typologique des sépultures et de l'architecture funéraire. Le chapitre 4 est dédié à l'étude de la céramique des différents niveaux de la tombe 1. Les assemblages y sont étudiés à l'aide de la typologie, des caractéristiques techniques, des fabriques et de la couleur des poteries. Un catalogue de dessins des poteries sera associé à ce chapitre. Le chapitre 5 permet de comparer les datations céramiques de la tombe 1 avec celles

obtenues pour les mêmes types de céramiques provenant d'autres sites. Ainsi, nous pouvons comprendre la nature de la céramique de la tombe 1, tout en la replaçant dans son contexte archéologique et historique. Finalement, nous proposons dans ce dernier chapitre une reconstitution relativement précise du contexte culturel de la tombe 1 et nous contribuons à mieux connaître les périodes du Bronze récent et du Fer. Nous ouvrons ici la voie à de nouvelles études fondées sur une bonne et complète compréhension du matériel céramique. Dans les paragraphes suivants, nous présenterons tous ces chapitres de manière plus détaillée.

Le premier chapitre de la thèse aborde les problèmes et les sous-problèmes de la recherche, ainsi que la méthodologie qui sera appliquée, dans le but de voir les différentes variables qui aideront à introduire et à mieux comprendre les chapitres suivants. La stratigraphie archéologique du Bronze récent et du Fer dans le pays de Canaan et influencée par plusieurs facteurs et événements, et par l'interprétation que l'on fait de ceux-ci. Pour introduire cela, il est possible d'aborder les différentes hypothèses quant à la fin de l'âge du Bronze. D'après une de ces hypothèses, à la fin de l'âge du Bronze une nouvelle population s'installe dans le pays de Canaan et remplace les communautés qui l'ont précédée, créant par la même une nouvelle culture, tout en ayant un impact important sur les modes d'occupation du territoire. À ce titre, nous pouvons évoquer l'exemple, dans les hautes terres, de l'augmentation significative des zones habitées entre le Bronze moyen II et le Fer I, alors que d'autres hypothèses mettent l'accent sur la continuité de la culture matérielle durant le Bronze récent et le Fer dans ces mêmes hautes terres, comme cela est démontré à Tell Dothan.

L'exemple de Tell Dothan sera mis en lumière dans cette étude à travers l'analyse approfondie de la tombe 1 du « Cimetière Ouest ». Une étude de la céramique de la tombe 1 sera effectuée pour comprendre au mieux la nature de l'occupation de Tell Dothan au Bronze récent et au Fer et pour appréhender la transition entre ces deux âges.

L'étude de la céramique et de l'occupation du site nous permettront d'examiner le phénomène de continuité à Tel Dothan.

Le phénomène de continuité de la céramique de la tombe 1 de Tell Dothan a des implications dans l'histoire et la culture de la Palestine au Bronze récent et au Fer et

durant la période transitoire entre ces deux âges. Dans ce chapitre, nous remettons en cause certaines hypothèses qui ont une importance considérable dans l'historiographie ; pour ce faire, nous nous appuyerons sur la situation archéologique de Tell Dothan.

Le chapitre 1 est consacré à la chronologie du Bronze récent et du Fer et à leur transition, en prenant en compte toutes les questions qui y sont connectées : l'occupation du territoire, la culture matérielle, les événements historiques en lien avec les habitants de Canaan, l'économie de la Palestine et son climat.

La problématique principale de cette étude est la question de l'examen du phénomène de continuité et discontinuité des assemblages céramiques à Tell Dothan, site important des hautes terres. Ce phénomène a bien sûr une importance capitale sur notre compréhension de la culture des hautes terres, mais il peut également nous éclairer sur la culture des basses terres. De plus, l'étude des poteries de Tell Dothan apportera de nouvelles données à l'archéologie palestinienne au Bronze récent/Fer I, puisque la majorité des sites fouillés ayant révélé des niveaux relatifs à ces périodes se situe dans les basses terres.

L'examen typologique de la céramique de Dothan nous donnera l'opportunité de voir les types de poteries qui ont continué à être utilisés, ou au contraire ceux qui ont été délaissés ou modifiés, entre le Bronze récent et le Fer. Nous aurons ainsi une image plus claire du phénomène de continuité et de rupture. Finalement, nous pourrions comprendre les changements dans la production céramique et l'occupation du territoire avant de faire des parallèles avec d'autres sites datés de la même époque. La recherche sera divisée en deux parties, l'une pratique et l'autre théorique.

La partie pratique : dans cette partie, nous aborderons le phénomène de continuité et discontinuité à travers l'examen des poteries. Nous étudierons donc tous les types de vaisselles misent au jour dans la tombe 1, comme, notamment, les marmites, les jarres, les *pithoi*, les cruches, les bols, les lampes à huile, les calices, les gobelets, les cratères, les amphores, les pyxides et les gourdes. Si une partie des poteries du site a été publiée, de très nombreuses vaisselles, conservées à Saint George et au Rockefeller Museum, sont encore inédites. La partie pratique sera le sujet des chapitres 3 et 4.

La partie théorique : cette partie jettera les fondations de l'étude théorique de toute notre recherche. L'historiographie nous permettra notamment d'examiner certains concepts auxquels il sera fait référence partout ailleurs dans la thèse.

L'objectif principal de cette section théorique est de voir comment s'articule la culture matérielle et l'histoire dans le paysage général du Bronze récent/Fer I. Nous donnerons également un aperçu général de l'archéologie et de l'histoire de ces périodes, sans négliger la période de transition entre le Bronze et le Fer.

L'état de la littérature qui touche aux problématiques de la transition entre le Bronze récent et le Fer I donne un bon aperçu de la variété des sujets qui sont en lien avec l'étude de la céramique et des conséquences qui peuvent en découler sur les modèles d'interprétation, tout en permettant de préciser la place de notre propre étude dans le champ scientifique et ses implications sur les recherches précédentes. Cet examen de la littérature s'appuiera sur des travaux qui ont utilisé la céramique en tant que marqueur culturel principal, comme les travaux de William G. Dever, Ann E. Killebrew, John S. Jorgensen et NavaPanitz-Cohen. Toutes ces études ont en effet démontré l'importance de l'examen des poteries pour appréhender les horizons culturels à travers différentes périodes.

Le contexte de la chronologie historique du Bronze récent et du Fer est le sujet du point suivant. Durant le Bronze récent – la phase finale de l'âge du Bronze – daté entre 1550 et 1200 av. J.-C., il y a eu de nombreux événements historiques au Levant Sud, faisant de l'âge du Bronze récent une période importante reliant le Bronze moyen et le Fer. Durant cette période, plusieurs modes d'occupation du territoire se sont développés, en fonction, surtout, des différentes zones géographiques constituant la Palestine, à savoir, les hautes terres, les basses terres, la vallée du Jourdain, les vallées fertiles intérieures et le désert du sud. L'histoire de chacune de ces régions a été influencée par leur environnement particulier. La diversité géographique a fait que lorsque certaines zones étaient affectées par certains événements historiques, d'autres zones ont, elles, été affectées par d'autres événements. Les différences de mode de vie durant la période qui nous intéresse sont dues à de nombreux facteurs. Les principaux éléments qui nous permettent d'appréhender la Palestine au début de l'âge du Bronze sont la politique, les guerres, le commerce, la course à l'hégémonie, la présence égyptienne (dans certaines parties de Canaan), les changements dans la



culture matérielle, l'artisanat (dont la production céramique), les évolutions architecturales civiles et militaires, les pratiques funéraires et le climat. Ces thèmes historiques et archéologiques seront étudiés à travers les résultats archéologiques de Tell Dothan, ce qui est particulièrement intéressant, car la poterie ainsi que les restes humains ont démontré qu'il existait un certain conservatisme sur le site entre le Bronze et le Fer. Nous rappellerons ici que c'est la continuité de l'occupation entre les âges du Bronze et du Fer qui fait de Tell Dothan un site idéal pour une étude telle que la nôtre. Dans la partie suivante, nous discuterons de la chronologie du Bronze récent et du Fer, en considérant les chronologies hautes et basses, puis nous verrons quels ont été les principaux événements historiques de ces deux périodes, toujours en prenant en compte la phase de transition.

La chronologie du Bronze récent et du Fer, avec les problèmes posés par l'existence de deux chronologies – une haute et une basse – sera abordée en détail dans la thèse. Nous donnons ici un aperçu de ce sujet. La fin du Bronze moyen dans le pays de Canaan se caractérise par des niveaux de destruction et d'abandon, repérables sur de nombreux sites. La chronologie de cette période se fonde, notamment, sur la chronologie égyptienne, ce qui a conduit à faire un lien entre l'expulsion des Hyksos d'Égypte et la fin du Bronze moyen palestinien. Au Bronze récent, on peut remarquer une forte augmentation des échanges entre le pays de Canaan et ses voisins, l'Égypte et le Levant Nord. La datation du Bronze récent et du Fer fait l'objet de débats depuis que les fouilles, et avec elle, l'établissement des premières typologies céramiques, commencèrent à être menés de manière plus ou moins régulière au début du XX<sup>ème</sup> siècle. Trois « écoles », d'origine différente (française, anglaise et américaine), contribuèrent à l'établissement de cette datation en 1921. La chronologie proposée par Albright et celle qui a eu le plus d'influence sur les travaux archéologiques en Palestine – elle reste d'ailleurs, en grande partie, encore d'actualité. Ce chercheur a divisé le Bronze récent en plusieurs phases, que nous présentons ici avec leur dénomination d'origine – car c'est ainsi qu'on les retrouve le plus souvent dans la littérature :

- LB IA ;
- LB IB ;
- LB IIA ;
- LB IIB.

C'est également Albright qui divisa et assigna une dénomination pour l'âge du Fer :

- Iron I ;
- Iron II ;
- Iron III.

Cette dernière division tripartite de l'âge du Fer était censée être le reflet des changements visibles, du point de vue archéologique, sur les sites palestiniens déjà fouillés à l'époque d'Albright. La division et la chronologie du Bronze récent et du Fer n'ont d'ailleurs pas beaucoup changé depuis, puisqu'en effet, on les retrouve dans plusieurs ouvrages de référence bien postérieurs, comme *Encyclopedia of Archaeological Excavations in the Holy Land*, publié en 1975 par Avi-Yonah, ou dans *The New Encyclopedia of Archaeological Excavations in the Holy Land: 5 The Supplementary Volume*, édité par Ephraïm Stern en 2008. Certains événements historiques sont considérés comme ayant été la cause du commencement et de la fin des différentes phases du Bronze récent et du Fer ; ces événements seront passés en revue dans la thèse afin de trouver des relations entre eux et de voir quels liens ils ont avec les données archéologiques pour, au final, établir une vision générale de cette période qui a tant fait couler d'encre dans les études sur l'archéologie et l'histoire de la Palestine.

L'occupation du territoire en Palestine aux âges du Bronze récent et du Fer fera également l'objet d'une étude détaillée dans le chapitre 1. Les modes d'occupation du territoire sont le reflet des événements historiques, mais ils peuvent également avoir un impact sur l'histoire de la région. En gardant à l'esprit que les modes d'occupation du territoire peuvent varier de manière plus ou moins grande d'une région à une autre, nous constaterons qu'ils montrent des bouleversements importants entre le Bronze récent et le Fer. Tous ces changements sont dus à plusieurs facteurs, ce que nous allons présenter brièvement dans les paragraphes qui suivent.

Pour le Bronze récent, les données sur l'occupation du territoire ont été récoltées grâce à plusieurs fouilles archéologiques et prospections dans la zone des hautes terres. Ces travaux ont été menés de manière régionale ; c'est-à-dire que chaque fouille ou prospection est dédiée à une zone géographique spécifique des hautes terres. Ces données couvrent plusieurs périodes archéologiques.

La haute Galilée n'a révélé que très peu de données pour le Bronze récent. En effet, d'après les prospections de Gal, il semble qu'il n'y a que deux sites – bien que cela ne soit pas complètement certain – datables de cette période dans la zone.

En basse Galilée, six à huit sites ont été repérés par Gal.

En ce qui concerne la région réunissant Naplouse, Ramallah, Jérusalem et Hébron (c'est-à-dire, la Samarie et Judah), nous possédons de nombreuses données issues de prospections qui nous éclairent sur l'occupation du territoire. En effet, de nombreux sites ont été repérés dans chaque section du centre des hautes terres.

De nombreux sites étaient habités le long de la plaine côtière, du Marj Ibn Amir (la vallée de Jezréel), et du Jourdain. En effet, 53 sites, qui font entre 50 et 200 *dunam*, y ont été repérés. Ces sites sont beaucoup plus grands que ceux que l'on trouve dans les hautes terres. Ils sont répartis en trois phases différentes du Bronze récent :

- 24 sites pour le XIX<sup>ème</sup> siècle ;
- 38 sites pour le XIV<sup>ème</sup> siècle ;
- 43 sites pour le XIII<sup>ème</sup> siècle.

Dans les basses terres, les prospections et les travaux archéologiques révèlent que les habitats sont constitués de petites bourgades proches les unes des autres appartenant à une ville plus importante ou à une cité-État. À ce titre, nous pouvons évoquer le site de Tell el-Duweir (Lakish). En effet, une prospection de 1992 a révélé la présence de 15 petits sites, constitués de nombreux tells, situés dans les alentours de la grande ville, à une distance comprise généralement entre 6 et 8 km. Il en est de même pour le site de Lot, qui est entouré de quatre petites occupations constituées de plusieurs tells où plusieurs structures ont été mises au jour. Nous ne pouvons citer tous les exemples dans ce résumé, mais nous finirons en évoquant le site de Haditheh, l'un des plus grands, et en faisant remarquer que certains sites ont connu une occupation continue depuis le Bronze moyen.

De la comparaison entre l'occupation du territoire des hautes terres et des basses terres, nous pouvons conclure que c'est l'Égypte qui a joué un rôle important dans les modes d'occupation du territoire du pays de Canaan du début à la fin de l'âge du Bronze récent.

Cela s'explique par la présence égyptienne qui, dans les basses terres, devient importante au Bronze récent. Les zones des basses terres étaient alors devenues attractives et avaient attiré de nombreux habitants ; probablement au détriment des hautes terres, qui connurent une sorte de relative « désertification » – comme le montre le petit nombre de sites trouvés en prospection dans la région par Zertal et Finkelstein. Il n'est donc pas étonnant que les basses terres aient connu un important phénomène d'urbanisation.

La seconde partie du chapitre 1 se consacre à la présentation de l'histoire du pays de Canaan et, surtout, à la présentation des différents groupes de populations qui vivaient dans les sites que nous avons évoqués plus haut.

Le premier de ces groupes est représenté par les Cananéens. Un long débat a été, et est toujours, animé par les historiens, les archéologues, les théologiens et les philologues spécialistes de la Palestine autour de la question de la définition de « Canaan ». Une question primordiale est de savoir s'il s'agit d'un « pays » ou d'un « peuple ». Mais d'autres questions découlent de cette première interrogation : si c'est un pays, il s'agira de savoir comment le définir et de connaître ses limites, et si c'est un peuple, les interrogations porteront sur le fait de savoir où et quand il vécut. La question des sources et de l'interprétation des sources qui nous permettent de connaître ce peuple est également très importante et sous-tend souvent les débats. Ces questions seront toutes traitées en détail dans la thèse. Elles ne sont pas moins importantes que les questions archéologiques, car, en effet, elles ont un impact majeur sur notre compréhension de la culture matérielle, des poteries, des sépultures, des modes d'inhumation et des croyances. En analysant les problèmes concernant Canaan, nous pourrions avoir une meilleure image des personnes qui ont produit et utilisé la céramique de la tombe 1 de Tell Dothan. De plus, cela pourra nourrir la réflexion sur la compréhension globale du site de Tell Dothan, mais également sur la compréhension de l'occupation au niveau régional.

Le second groupe qui habitait en Palestine est représenté par les Égyptiens, qui étaient très actifs dans la région. La présence égyptienne dans le pays de Canaan durant le Bronze récent a été abordée par de nombreux chercheurs du XX<sup>ème</sup> siècle. Les abondantes études à ce sujet ont abouti à un consensus d'après lequel les Égyptiens auraient été présents en Palestine pour, essentiellement, des raisons

économiques. Par exemple, Alt, des 1925, a suggéré que c'est des raisons économiques, notamment le contrôle des ressources naturelles, qui poussèrent les Égyptiens à dominer la Palestine durant le Bronze moyen et le Bronze récent. Pour ce chercheur, l'Égypte voulait constamment acquérir plus de bénéfices à travers cette domination. Mendenhall reprend cette théorie lorsqu'il fait remarquer que la situation économique en Palestine était devenue très difficile, du fait de l'exploitation intensive par les élites des différentes communautés, et ce dans des travaux variés qui demandaient beaucoup d'investissement humain. Mendenhall désigne donc les Égyptiens comme étant la principale cause du manque de ressources en Palestine à la fin du Bronze récent. Shemuel émet également l'hypothèse que l'Égypte était présente pour drainer les ressources naturelles de la région. Il apparaît donc que l'Égypte a eu un impact important sur les ressources naturelles du pays de Canaan, mais également sur les modes d'occupation du territoire de la région ; nous discuterons dans la thèse du rôle économique des Égyptiens à Canaan au Bronze récent. Mais nous ferons également le lien avec la situation climatique de la région, qui n'aurait pas pu ne pas avoir d'impact. En acceptant le fait que la région avait connu, au Bronze récent ou un peu avant, une phase de sécheresse, nous essayerons de comprendre quelles ont été les stratégies employées par les Égyptiens pour gagner le contrôle des ressources naturelles et comment, finalement, l'Égypte domina la région.

Les nouvelles découvertes sur le paléoenvironnement de la Palestine nous permettent d'analyser la présence égyptienne à Canaan par le prisme des changements climatiques. Quatre missions d'analyse géologique approfondie ont permis d'avoir une meilleure idée de ce qu'avait été le climat palestinien durant le Bronze récent. Ces quatre missions ont démontré qu'à la fin du Bronze récent la région avait connu un épisode de sécheresse. Il est possible de croiser ces résultats avec les données textuelles égyptiennes et levantines. C'est ce que nous ferons dans la partie suivante, en présentant les inscriptions historiques qui évoquent les conditions difficiles dans la région avant la fin de l'âge du Bronze.

Parmi les nombreuses conséquences de l'effondrement présumé de la fin du Bronze, la migration et le déplacement massif de populations à travers le Levant sont considérés comme les plus significatives. Parmi ces populations, on compte les fameux « Peuples de la mer », qui se seraient installés sur la côte palestinienne, en y apportant leur propre culture matérielle. Ce sont les Égyptiens qui seraient

responsables de l'installation de ces peuples dans le pays de Canaan après avoir réussi à leur barrer le passage vers l'Égypte. Les combats contre ces peuples sont attestés par les sources égyptiennes à partir de la période d'Amara. D'après les inscriptions de MedinetHabu, les « Peuples de la mer » ont été défaits, tués, et emprisonnés par Ramsès III, avant d'être installés dans le pays de Canaan. Parmi les peuples clairement cités, nous pouvons mentionner les Tjekker, les Sherden, les Sheklesh, les Lukka, les Tursha, les Akawasha et les Philistins.

Un autre groupe de populations qui, d'après de nombreux chercheurs, aurait été présent après la fin de l'âge du Bronze dans les hautes terres est constitué par les Israélites. Les recherches sur les Israélites ont débuté il y a plus d'un siècle, produisant de nombreuses théories qui localisent ce peuple dans le pays de Canaan. Le passage en revue des différentes théories concernant les Israélites montre que les spécialistes ne sont jamais arrivés à un consensus sur la question, ce qui rend difficile toute conclusion d'ordre historique ou archéologique concernant ce peuple.

Le chapitre 1, qui reprend les principaux éléments caractéristiques de l'histoire et de l'archéologie du pays du Canaan, nous permet donc de mettre en lumière les questions les plus débattues pour les âges du Bronze récent et du Fer. En utilisant les sources archéologiques et textuelles, nous avons pu comprendre les caractéristiques principales de cette période, tout en replaçant Tell Dothan et, plus particulièrement, la tombe 1, dans le contexte archéologique et historique du pays de Canaan. L'analyse des modes d'occupation du territoire, de la culture locale, de la culture matérielle, des croyances et des environnements reflète la nature complexe du pays de Canaan, qui est influencé par des événements de grande ampleur, qui ont laissé leurs traces dans les sources historiques et archéologiques. De par sa localisation et sa continuité culturelle, l'étude de Tell Dothan permet d'apporter une contribution non négligeable au débat et ouvre des perspectives jusqu'alors encore inédites dans l'étude de Bronze récent et du Fer I, et de la phase de transition entre ces deux périodes.

Dans le chapitre 2, nous verrons en détail le site de Tell Dothan. Les principaux thèmes abordés seront : la géographie, l'histoire, l'environnement, et les activités archéologiques et leur résultat. Tell Dothan (orthographié également des manières suivantes : Tel Dotan, Dothan, Tel Dothan) se situe à 22 km au nord-ouest de

Naplouse et à 10 km au sud-ouest de Jenin, dans la partie centrale des hautes terres palestiniennes. Le site se trouve à 321 m au-dessus du niveau de la mer, au sein du Sahl `Arraba (la vallée de Dothan). La superficie totale du site est de près de 101 *dunam*, en incluant le sommet du tell qui couvre 40 *dunam*. Les collines sous le tell font environ 60,5 *dunam*. Le tell, qui est à 60 m au-dessus de la vallée environnante, est constitué de 15 m de niveaux stratifiés, qui se sont accumulés sur un monticule naturel de 45 m de haut.

Le site a été mentionné de nombreuses fois, et ce, depuis les plus anciens temps. Nous pouvons citer, entre autres, l'ancien historien Eusèbe, qui l'évoque dans son *Onomasticon* (76 : 13) comme appartenant au territoire de Sébaste (Samarie), 12 milles au nord de cette dernière. Tell Dothan fut également visité par des voyageurs et des explorateurs des XIX-XX<sup>ème</sup> siècles, comme Van de Velde, qui a découvert Tell Dothan lors de sa visite en Palestine en 1851. Celui-ci indique la position exacte du site sur la carte de Palestine qu'il réalisa (*Map of the Holy Land Constructed by C.M.W. Van de Velde, fifthsheet, 1858*). Le tell est également mentionné par Edward Robinson lors de son voyage en Palestine – juste après Van de Velde – dans son ouvrage *Biblical Researches in Palestine*.

Tell Dothan appartient à deux ensembles géographiques plus larges. Il se trouve, bien sûr, dans la vaste région de Naplouse, et, plus précisément, au nord de celle-ci, dans le Sahl `Arabba. Ce Sahl fait environ 65 m carrés et ses frontières suivent les crêtes de la falaise qui l'entoure. Ses limites sont constituées au nord par les chaînes de Ya`bad et d'el`Asy, à l'est par la route Jenin-Qabatiyeh et au sud par les crêtes d'el-Rakbah. Le Sahl `Arraba est une plaine alluviale qui a été formée par des roches éocènes et des dépôts de calcaire sénoniens.

Les premières fouilles sur le site, dirigées par J. P. Free du Wheaton College (Illinois), ont commencé en 1953 et ont duré jusqu'à dans le milieu des années 1960. Seuls des rapports incomplets ont été publiés sur les trouvailles. Des traces de l'occupation ont été trouvées pour les époques du Chalcolithique, du Bronze ancien, du Bronze moyen IIB, du Bronze récent, du Fer, hellénistique, romaine et mamelouke. La décision de fouiller Dothan fut longuement murie par Free, qui visita le site bien avant le début des opérations archéologiques. Les fouilles durèrent plus d'une décennie, avec un total de neuf campagnes qui ont eu lieu en 1953, 1954, 1955,

1956, 1958, 1959, 1960, 1962 et 1964. Il n'y a pas eu de recherche sur le terrain durant les années 1957, 1961 et 1963. Les fouilles ont été menées sur de nombreuses zones du tell (zones T, B, A, D, L et K). Chacune de ces zones a révélé de riches trouvailles archéologiques.

En 1959, l'équipe de fouille trouva une fosse circulaire délimitée par des pierres dans la zone K, sur le versant ouest du site ; il s'agissait en fait du « Cimetière Ouest » qui fut par la suite fouillé durant les années 1959, 1960 et 1964. Ce cimetière est constitué de trois tombes (tombes 1, 2 et 3), comme nous l'avons déjà évoqué au début de ce résumé. La tombe 1 est la plus grande et la mieux préservée de toutes. Cet édifice était couvert par une accumulation datant de Bronze ancien. À la fin de la campagne de 1959, les fouilleurs trouvèrent la fosse, qui se rétrécissait jusqu'à atteindre un petit puits carré creusé dans la roche. Un mètre plus bas se trouvait l'entrée de la tombe. Trois saisons de fouilles furent nécessaires pour dégager les trois tombes. La tombe 1 est la plus grande tombe qui a été trouvée, non seulement à Tell Dothan, mais aussi dans toute la Palestine.

Comme la tombe a été utilisée pendant plus de 400 ans, nous pouvons distinguer cinq niveaux différents : 1, 2, 3, 4 et 5. Chacun de ces niveaux représente une phase d'utilisation de la tombe. Ces phases vont du Bronze récent IIB au Fer IA. Tous les niveaux sont bien stratifiés et scellés les uns par rapport aux autres par des pierres calcaires. La tombe mesure 5,5 m de haut depuis la roche mère jusqu'au plafond effondré (Cooley, Pratico 1994 : 78). Le dépôt correspondant à l'effondrement du plafond est assez conséquent : 3,65 m (Cooley, Pratico 1995 : 152). Les dépôts incluent les niveaux de pierres calcaires et les remblais de terres qui séparent les niveaux. Le tableau 6 montre l'épaisseur des strates de la tombe, tandis que les figures 18, 19 et 20 illustrent les étapes de la fouille, l'importance des trouvailles et l'état de la vaisselle en terre cuite.

Voici les principales caractéristiques architecturales de la tombe 1 :

- L'entrée : qui est escarpée et enterrée, elle diminue jusqu'à un puits creusé dans la roche de 1,75 x 1 m pour une profondeur de 1,51 m. Une dalle de pierre (1 x 1,10 x 0,12 m) se trouvait dans la partie inférieure du puits et formait l'entrée de la tombe. Les fragments de jarres et d'anses qui étaient placés à l'entrée sont probablement des restes d'offrandes. Deux séries de



marches, une première de trois marches et une seconde de quatre marches, formaient le passage qui permettait d'accéder à la chambre funéraire.

- La chambre principale : il s'agit de la partie principale de la tombe. Creusée directement dans la roche durant le Bronze récent, elle fut utilisée jusqu'à l'âge du Fer.
- Huit cryptes : dans la chambre principale, il y a huit cryptes. Six ont été creusées dans la roche alors que deux sont délimitées par des murs de pierres. Les cryptes se trouvent tout autour de la chambre, sur les côtés nord, sud et ouest. Elles sont désignées par les lettres A, B, C, D, E, F, G et H. Les cryptes B et G, qui sont construites en pierre sur les dépôts antérieurs, sont les plus récentes.

Nous pouvons également évoquer la présence de ce qui semble être une fenêtre ou une arrivée d'eau.

En tout, ce sont 3 484 trouvailles (objets et squelettes) qui proviennent de cet édifice :

- 288 squelettes répartis dans les cinq niveaux ;
- 154 ornements corporels ;
- 94 armes ;
- 31 amulettes et objets rituels ;
- 19 restes de faune et de flore ;
- 34 outils ;
- 235 os d'animaux ;
- 60 « dépôts divers »
- 2804 poteries qui peuvent être classées en 18 catégories (Cooley 1968: 128-129, 165-167).

Ci-dessous, nous donnons le nombre des différentes poteries et la distribution de chaque groupe et type dans les cinq niveaux de la tombe 1.

La collection de trouvailles les plus riches est constituée par les poteries (2 804 fragments et spécimens complets). Il s'agit d'une collection importante pour les âges du Bronze récent et du Fer I en Palestine. Nous allons procéder à la présentation de cette collection.

La datation de la tombe 1 est fondée sur les assemblages céramiques qui ont été mis au jour dans les niveaux 1 à 5. Elle se présente comme suit :

Niveau 1 : il représente le début de l'âge du Fer et correspond au dernier niveau de la tombe. Les niveaux 2, 3, 4 et 5 se trouvent au-dessus. Le niveau est juste en dessous de l'effondrement du plafond de la tombe. D'après la céramique, ce niveau est daté entre 1200 et 1110.

Niveau 2 : c'est de ce niveau que provient le plus grand nombre d'objets. Free et Cooley l'ont daté du Bronze récent IIB et du début du Fer (1 200) compte tenu de l'assemblage céramique qui contient à la fois des spécimens de la fin du Bronze récent et du début du Fer I. Nous pouvons donc dire que ce niveau 2 constitue la période de transition entre le Bronze récent et le Fer.

Niveau 3 : il est daté du Bronze récent IIB (1300-1200). La tombe fut élargie durant ce niveau avec plus de cryptes dans la partie nord. C'est à la fois les caractéristiques de la poterie locale et la présence de céramique importée de type chypriote et mycénienne qui permettent de dater ce niveau.

Niveau 4 : Free et son équipe placent ce niveau au Bronze récent IIA (1400-1300) en raison de la céramique importée ou imitée localement de type chypriote et mycénienne. Nous pouvons évoquer, par exemple, les « Milk bowl », très populaires durant cette période.

Niveau 5 : il s'agit du niveau le plus ancien de la tombe. Cooley la date du Fer IIA (1400-1300). Comme ce niveau n'est pas mentionné par Free, il a sûrement été fouillé lors des deux dernières campagnes de fouilles (en 1962 et 1964). Seul un petit nombre d'objets a été retrouvé dans ce niveau. Les objets proviennent tous de la partie la plus basse de la tombe. Le niveau 5 est daté de la même période que le niveau 4 en raison de l'assemblage céramique qui inclut, notamment, de la « Whiteware ».

La céramique provenant de la tombe 1 sera le sujet principal des prochains chapitres, dans lesquels nous analyserons ce matériel du point de vue typologique et technologique, en incluant tous les détails qui s'y rattachent. Dans le chapitre suivant, nous donnerons un aperçu général de la céramique en Palestine au Bronze récent et au Fer. La tombe 1 de Tell Dothan, comme nous avons essayé de le démontrer, permet de nourrir les réflexions culturelles en ce qui concerne les symboliques, la quantité et

la qualité des objets – essentiellement la céramique. Ci-dessous, nous donnons une idée générale des caractéristiques de la collection céramique étudiée dans la thèse. Nous ferons ceci par type de poterie.

**Bols :** pour notre étude, nous avons sélectionné 118 bols parmi les 607 de la collection. Ils sont divisés par taille (grand, moyen, petit), selon leur profondeur (profond, peu profond) et par type (hémisphérique, arrondi, biconique, carénés). La majorité des bols sont hémisphériques, arrondis ou biconiques, tandis que seulement quelques-uns sont carénés. Il y a des bols du type « Milk bowl » et du type « Shallow wide plate ». Les bases les plus communes sont annulaires ou en disque. Quelques bases sont arrondies ou concaves.

« Milk bowl », bols carénés et bols importés : ces vases se distinguent par leur fabrique et leur origine. Si les bols carénés sont héritiers du Bronze moyen, les « Milk bowl » et les autres bols sont importés ou imités. On voit là l'influence des relations entre le Levant et les régions voisines.

**Marmites :** elles sont très rares (8 spécimens). Il s'agit d'un type commun au Bronze récent et au Fer. Elles ont un profil caréné, une lèvre triangulaire et une base arrondie.

**Cratères-chopes :** nous sommes ici en présence d'un type très particulier et très rare de cratère. Très peu d'exemplaires en sont conservés. Les caractéristiques principales de ce récipient sont les parois verticales et droites avec une carène dans la partie médiane, la base annulaire ou plate, et, surtout, l'anse verticale qui va de la lèvre au corps, donnant ainsi la forme de chope à ce cratère.

**Cratères et cratères à anses multiples :** 47 cratères ont été sélectionnés parmi un nombre incertain de cratères mis au jour dans la tombe 1. Cette situation est due au fait que les cratères sont mentionnés de manière brève et à de nombreuses reprises par les fouilleurs, sans mention exacte et certaine du nombre total. Nous pouvons diviser notre sélection en quatre groupes :

- cratères à anses multiples : il s'agit d'une forme ouverte et profonde avec un profil biconique. Les bases sont soit annulaires, soit en disque ;

cratères à pied : quelques exemples de ce type sont connus. Le corps est placé sur une haute base en forme de trompette. Ces cratères ressemblent presque à des calices.

Jarres : 50 jarres font partie de notre collection. Elles sont divisées en quatre types principaux :

- cananéennes : ce type est caractérisé par un haut corps fin, de larges épaules horizontales et une épaisse base pointue. Il est connu pour être utilisé dans le transport maritime ;
- jarres de stockage globulaires et ovoïdes : généralement utilisées dans les habitats, ces jarres possèdent une base arrondie et des anses ;
- vases à étrier : des jarres fines et décorées qui sont importées – de type mycénien ;

Jarres biconiques : 46 jarres de petite taille, avec anses, une base annulaire ou en disque et dont le corps est de forme biconique – ce qui donne son nom à ce type de vase. Par conséquent, le récipient est le plus large au niveau du centre de sa panse. Il y a des différences dans les lèvres et les bases, le placement des anses et la présence ou l'absence de bec verseur au niveau des épaules. Le profil biconique peut-être plus ou moins aigu ou plus ou moins arrondi.

Cruches : 483 cruches et cruchons ont été mis au jour dans la tombe 1. Ils sont classés en quatre catégories :

- larges cruches régulières : il s'agit du type le plus courant de la collection. Ces cruches sont larges, ont un profil globulaire et possèdent un haut col et une base annulaire, en disque ou plate. Dans les niveaux les plus récents, elles ont une ou deux anses qui vont de la lèvre aux épaules, alors que dans les niveaux les plus anciens, ces anses vont des épaules à la panse.
- Jarres à bec-passoire : ces jarres sont peu courantes parmi les trouvailles céramiques de la tombe 1. Leurs caractéristiques principales sont la passoire à la base du bec verseur et leurs anses attachées sur la lèvre – qui font ainsi penser aux anses d'un panier d'osier ;

« Cruchons-louches » et cruchons :

- « cruchons-louches » : il s'agit d'un type connu depuis le Bronze moyen. La forme est haute et large, avec une base arrondie, une lèvre en forme de trèfle et des anses ;
- cruchons : de petites tailles, ils sont de profil ovoïde ou globulaire avec un col haut et des anses reliant les épaules à la lèvre.

Pyxides : une sélection de 86 pyxides, sur les 567 qui ont été trouvées, fera l'objet de notre étude. Il n'y a pas de sous-types. Nous pouvons distinguer plusieurs caractéristiques pour les pyxides de la tombe 1 :

- la base : elle peut être annulaire, en disque, plate ou arrondie. La forme de la base semble varier selon les époques ;
- le corps : il existe des corps hauts et des corps courts ;
- la forme du corps : elle varie entre des bords droits saillants et des bords plus arrondis ;
- anses : elles peuvent être en boutons ou en forme d'anneau ;
- la taille : de grande (22 x 18) ou de petite (9 x 7) taille.

Vases à étrier : 10 vases de ce type ont été étudiés. Il s'agit d'une forme typique du Bronze récent qui est originaire de Chypre. Les caractéristiques principales de cette vaisselle sont un profil globulaire ou caréné, une ouverture en forme de trompette et des anses semblables à des anses de panier d'osier. Ces vases sont généralement décorés avec des bandes horizontales épaisses de couleur marron ou rouge sur toutes les parties du corps, des anses et de l'ouverture. Très peu d'exemplaires de ce type proviennent de la tombe 1.

Gourdes : nous avons retenu 16 des 57 gourdes trouvées dans la tombe. Certaines sont petites, quand d'autres peuvent avoir de très grandes dimensions. Il s'agit d'une forme trouvée traditionnellement partout en Palestine durant le Bronze récent et le Fer. Elles ont un profil en forme de « lentille », un col haut ou court, un grand diamètre au niveau de la lèvre et deux anses attachées verticalement depuis la lèvre jusqu'aux épaules. Une de ces gourdes à une fabrique particulière : un dégraissant dense composé de basalte ; ce qui suggère une origine du sud de la Syrie (plus précisément, dans le Hauran).

Calices : 29 calices ont été retenus parmi les 119 qui ont été trouvés dans la tombe 1. Ils sont composés par un bol arrondi attaché à une haute base en forme de « trompette » ou à un haut pied. La forme générale du calice ressemble à un « champignon ». Ces calices sont divisés en deux grandes catégories :

- calices courts, formés d'un bol arrondi plus ou moins profond attaché à une base en forme de trompette ou à un haut pied ;

calices hauts : avec un grand corps et constitué d'un bol plus ou moins profond attaché à une base en forme de trompette ou à un haut pied. Ils sont plus anciens que les calices courts.

Lampes à huile : parmi les 578 lampes à huile trouvées dans la tombe 1, nous en avons sélectionné 52. Elles sont présentes dans tous les niveaux. Elles se composent d'une base qui est pincée, basse et arrondie, tandis que leur corps ressemble à un petit bol plié. Une des lampes avait peut-être un pied. Il est difficile de distinguer des différences entre ces récipients selon leur niveau de trouvaille. Néanmoins, il semble que les lampes les plus anciennes aient été plus grandes et plus larges que les lampes les plus récentes.

Nous avons analysé avec attention, en utilisant plusieurs procédures d'études, l'aspect technologique des poteries. Il en ressort que la méthode principale qui a été utilisée est le montage sur tour. Une grande majorité de vaisselles a été réalisée avec cette méthode, surtout les bols, les lampes à huile, les cruches et d'autres vaisselles de petite taille. La seconde méthode qu'il a été possible d'identifier grâce à notre étude du façonnage des poteries est celle du colombin. Elle n'a été utilisée que pour faire certaines parties très larges des grandes formes.

L'étude des cuissons révèle l'existence de deux groupes : 1) des poteries qui ont été bien cuites, sans distinction pour le cœur de la pâte ; 2) des poteries cuites en atmosphère réductrice dont on peut distinguer des différences entre le cœur et la paroi. En ce qui concerne la finition, 391 (86%) des vases sont faits avec une argile fine, alors que 48 (10,06%) sont faits à partir d'une argile grossière. Les deux modes de cuisson montrent que la nature de la pâte joue un rôle important dans le processus de cuisson. Les éléments organiques ont été utilisés de manière égale. Des bulles d'air ont fréquemment été identifiées sur la surface et les sections des poteries, surtout sur

les grandes formes, ce qui indique une cuisson basse et un haut taux de sel dans l'argile.

La nature de la fabrique des poteries a été analysée. Deux facteurs principaux ont été étudiés : 1) la nature de la fabrique en ce qui concerne l'argile, la couleur, la texture et la composition, que ce soit en surface ou en section ; 2) l'observation des inclusions dans l'argile en cassant les poteries afin d'observer la section pour faire des constatations sur les mesures, la nature, la couleur, la densité, le type, la forme, et l'homogénéité des inclusions. Pour enregistrer les données relatives à la fabrique, nous avons procédé au comptage des inclusions et constaté leurs différentes caractéristiques (couleur, forme, taille et type). Tout cela nous permet de faire une classification des fabriques.

Lors de l'examen de la collection, nous avons pu identifier huit groupes différents de fabriques :

- le groupe 1 : 505 pièces = 96.03%. C'est le groupe principal. Il possède sept variantes ;
- le groupe 2 : 8 pièces = 10.4%, il possède deux variantes ;
- le groupe 3 : 3 pièces = 0.05%
- le groupe 4 : 11 pièces = 0.5%
- le groupe 5 : 1 pièce = 0.01%
- le groupe 6 : 8 pièces = 1.04%
- le groupe 7 : 3 pièces = 0.5%
- le groupe 8 : 5 pièces = 0.9%.

Les groupes 3 à 8 sont tous minoritaires et ne représentent que quelques spécimens de la collection.

La typologie de la poterie sera présentée par type et par niveau. Nous commencerons par un aperçu de chaque type, et ceci dans chaque niveau. Les types seront décrits d'après plusieurs critères importants, comme la taille, la forme du corps, l'aspect et l'orientation de la lèvre, le type de base, l'emplacement des éléments rapportés et les traits distinctifs. Chaque type sera introduit par un paragraphe, qui sera suivi d'une étude typologique détaillée avec des références à des récipients similaires trouvés dans d'autres sites et dans d'autres régions. La typologie sera

accompagnée d'un catalogue avec les dessins de toutes les poteries qui seront commentées.

Le catalogue sera composé de 15 catégories qui correspondent aux types et sous-types de poteries : les bols, les jarres biconiques, les calices, les marmites, les gourdes, les jarres, les cruchons-louches, les cruchons, les cruches, les cratères, les cratères à anses multiples, les cratères-chopes, les lampes à huile, les pyxides et les vases à étrier qui sont considérés comme étant une production étrangère importée ou imitée. Pour le catalogue, nous utiliserons l'échelle 1 : 3 pour toutes les formes, sauf pour les gourdes, qui seront dessinées à l'échelle 1 : 4. 88 planches avec 38 tableaux sont dédiés à la présentation de la collection céramique. Chaque vaisselle sera identifiée par un numéro et, en plus, seront indiqués le numéro de fouilles, le type, la couleur, la fabrique. Pour créer une chronologie relative, nous donnerons une correspondance entre nos spécimens et les spécimens similaires datables provenant d'autres régions.

Nous mentionnerons ici de manière brève les résultats obtenus. Les poteries de la tombe 1 de Tell Dothan sont datées entre le Bronze récent IIA et le Fer I. Des mélanges de tessons de différentes phases ont été remarqués dans le niveau 1, ce qui est probablement le résultat de pollutions provenant de niveaux plus anciens durant l'utilisation de la tombe ou durant les fouilles. Les poteries ont des caractéristiques assez similaires, notamment en ce qui concerne les variantes au niveau des anses, des bases, des lèvres. Malgré ces variantes, le profil général des vaisselles n'est pas altéré durant les 5 niveaux d'utilisation de la tombe. Néanmoins, il faut noter que certaines poteries qui étaient déjà présentes au Bronze moyen changent légèrement ou disparaissent au fur et à mesure. Il en va de même des terres cuites importées ou imitées, qui disparaissent presque totalement dans les niveaux 2 et 1, alors qu'elles étaient abondantes dans les niveaux 3, 4 et 5. D'autres types sont courants dans les niveaux 1 et 3, alors qu'ils sont absents des niveaux les plus anciens.

Au niveau régional, les caractéristiques des poteries à grande échelle seront abordées dans le texte de manière détaillée. Mais nous pouvons dire ici qu'elles montrent une continuité de la culture matérielle à Tell Dothan entre le Bronze récent et le Fer. De même, nous remarquons cela pour tout le pays de Canaan. En effet, seuls



des changements mineurs apparaissent et les développements concernant les poteries semblent être plus locaux que régionaux.

Pour finir, nous pouvons dire qu'apparaît la nécessité de produire d'autres études de ce type, qui mettent en valeur du matériel non publié de sites dans les hautes terres, pour nous permettre de mieux connaître et de changer notre compréhension des hautes terres durant l'âge du Bronze récent et le début de l'âge du Fer.

Tell Dothan, l'âge du Bronze récent, l'âge du Fer, Canaan, typologies céramiques, des modes d'occupation.

## Pottery Catalog

Sorted by open and then closed vessels according to levels.

Drawn by G. Nagagreh, with pots adopted from Cooley and Parteco 1995 marked with (+).

**Plate 1: Bowls of level 5**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 2558	5	Bowl	G.1, V.7	Very Pale Brown 8/4 HUE 10 YR
2	T.D 2538	5	Bowl	G.1, V.2	Pink 8/4 HUE 7.5 YR
3	T.D 2628	5	Bowl	G.1, V.1	Pink 7/4 HUE 7.5 YR
4	T.D 2609	5	Bowl	G.1, V.2	Pink 7/4 HUE 7.5 YR
5	T.D 2630	5	Bowl	G.1, V.2	Pink 7/4 HUE 7.5 YR.
6	T.D 2758	5	Bowl	G.1, V.2	Pink 7/4 HUE 7.5 YR
7	T.D 2616	5	Bowl	G.1, V.4	Very Pale Brown 7/4 HUE 10 YR
8	T.D 2544	5	Bowl	G.1, V.2	Very Pale White 7/4 HUE 10 YR
9	T.D 2724	5	Bowl	G.1, V.1	Pink 7/4 HUE 7.5 YR

**Plate 2: Bowls of level 5**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 2761	5	Bowl	G.1, V.2	Very Pale Brown 7.4 HUE 10 YR
2	T.D 2765	5	Bowl	G.1, V.1	White 8/2 HUE 10 YR
3	T.D 2601	5	Bowl	G.1, V.2	White 8/2 HUE 7.5 YR
4	T.D 2720	5	Bowl	G.1, V.7	Red 5/6 HUE 2.5 YR
5	T.D 2551	5	Bowl	G.1, V.2	Pink 7/4 HUE 7/5 YR
6	T.D 2597	5	Bowl	G.1, V.6	Very Pale Brown 7/4 HUE 10 YR
7	T.D 2778	5	Bowl	G.1, V.1	Pink 7/4 HUE 7.5 YR
8	T.D 2716	5	Bowl	G.1, V.5	Pink 7/4 HUE 7.5 YR

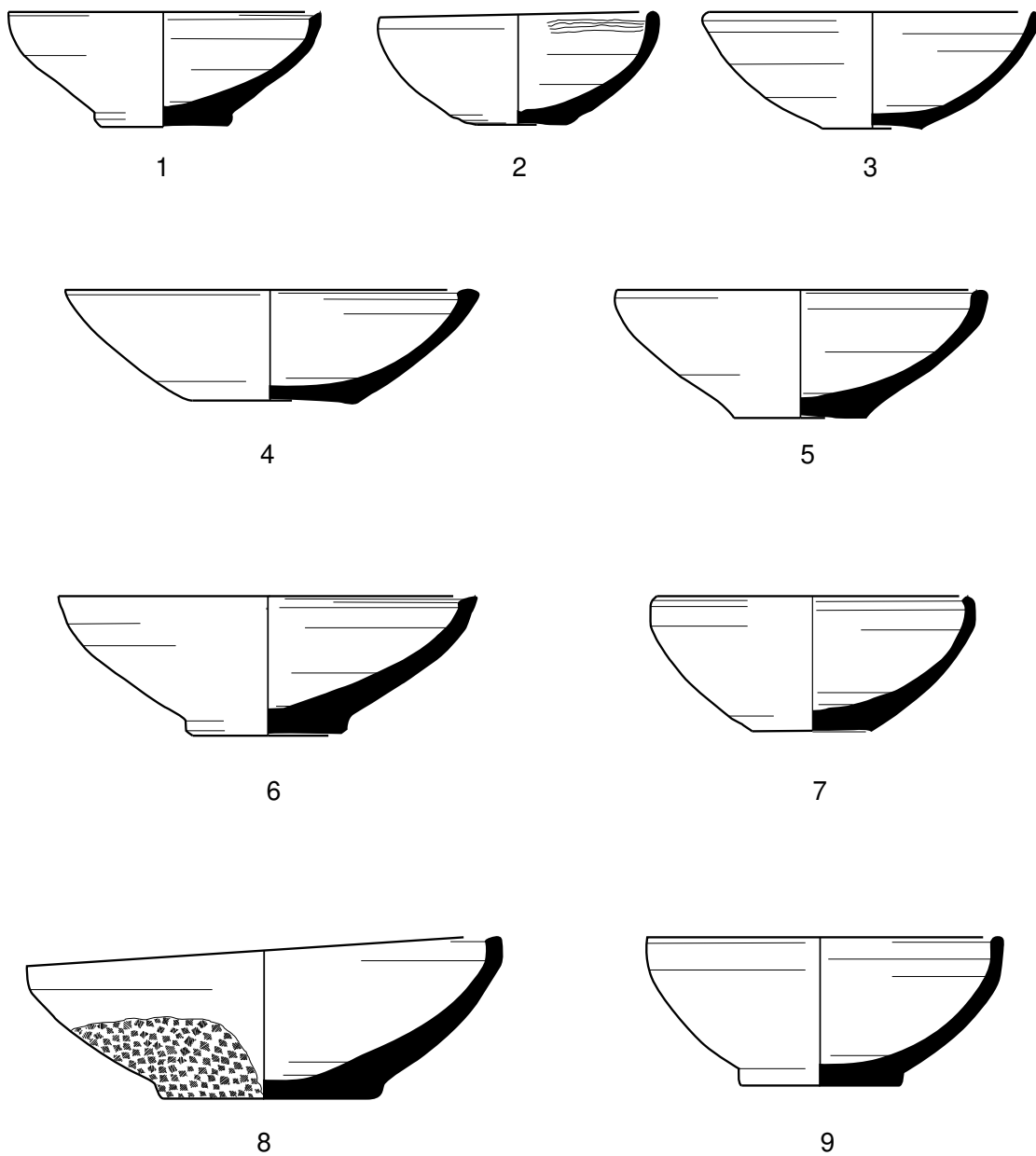
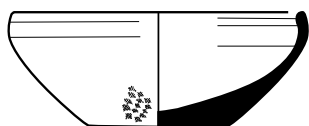
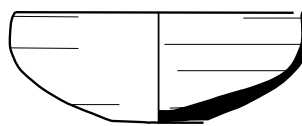


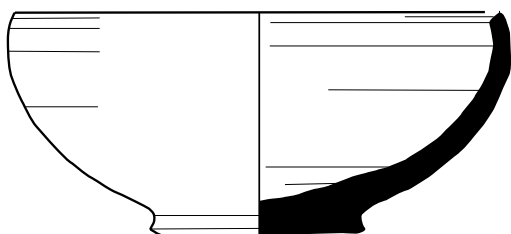
Plate 1



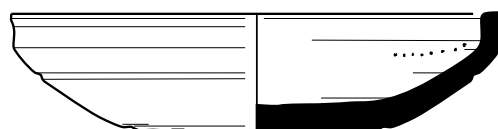
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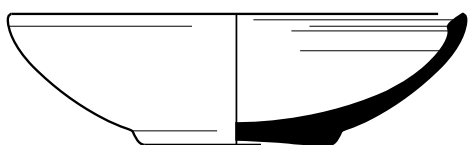
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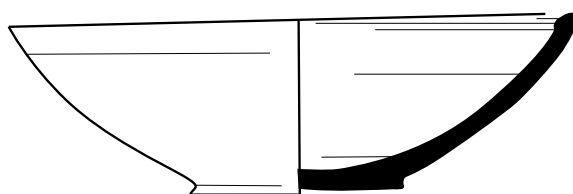
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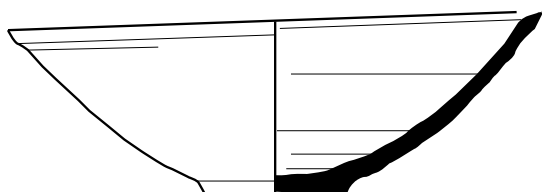
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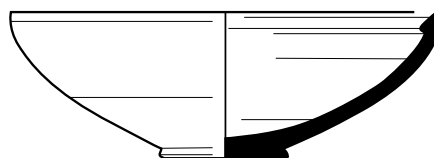
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Plate 2

**Table 3: bowls of level 4 of the tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 806	4	Bowl	G.1, V.1	Pink 7/4 HUE 5 YR
2	T.D 805	4	Bowl	G.1, V.2	Very Pale Brown 8/3 HUE 10 YR
3	T.D 833	4	Bowl	G.1, V.3	Pinkish White 8/2 HUE 7.5 YR
4	T.D 2289	4	Bowl	G.1, V.1	Light Reddish Brown 6/4 HUE 5 YR
5	T.D 2281	4	Bowl	G.1, V.3	Pink 7/4 HUE 5 YR
6	T.D 724	4	Bowl	G.1, V.2	Very Pale Brown 8/3 HUE 10YR
7	T.D 2490	4	Bowl	G.1, V.2	Pink 7/4 HUE 5YR
8	T.D 2505	4	Bowl	G.1, V.1	Pink 7/4 HUE 7.5 YR

**Table 4: bowls of level 4 of tomb1 1**

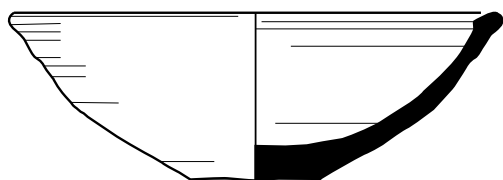
Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 844	4	Bowl	G.1, V.1	White 8/2 HUE 10 YR
2	T.D 739	4	Bowl	G.1, V.4	White 8/1 HUE 10 YR
3	T.D 2306	4	Bowl	G.1, V.7	White 8/1 HUE 10 YR
4	T.D 2391	4	Bowl	G.1, V.7	Pink 7/4 HUE 7.5 YR
5	T.D 2416	4	Bowl	G.1, V.1	White 8/2 HUE 10 YR
6	T.D 2356	4	Bowl	G.1, V.1	Pink 7.4 HUE 7.5 YR
7	T.D 2293	4	Bowl	G.1, V.2	Pink 7/4 HUE 5 YR
8	T.D 731	4	Bowl	G.1, V.7	Pink 8/4 HUE 5 YR
9	T.D 810	4	Bowl	G.1, V.1	Pink 7/4 HUE 7.5 YR
10	T.D 2347	4	Bowl	G.1, V.1	Light Reddish Brown 6/4 HUE 5 YR
11	T.D 2352	4	Bowl	G.1, V.7	White 8/1 HUE 5 YR



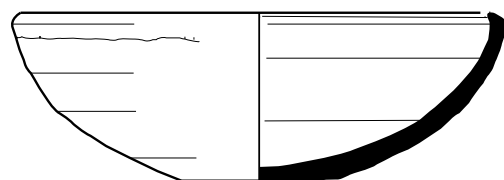
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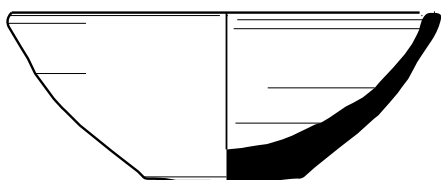
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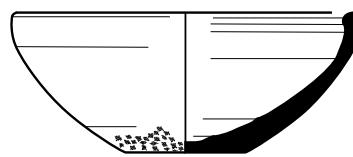
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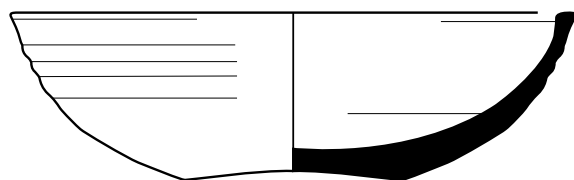
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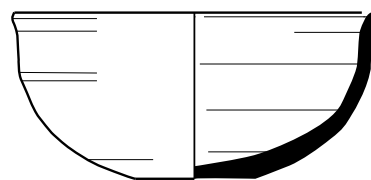
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Plate 3

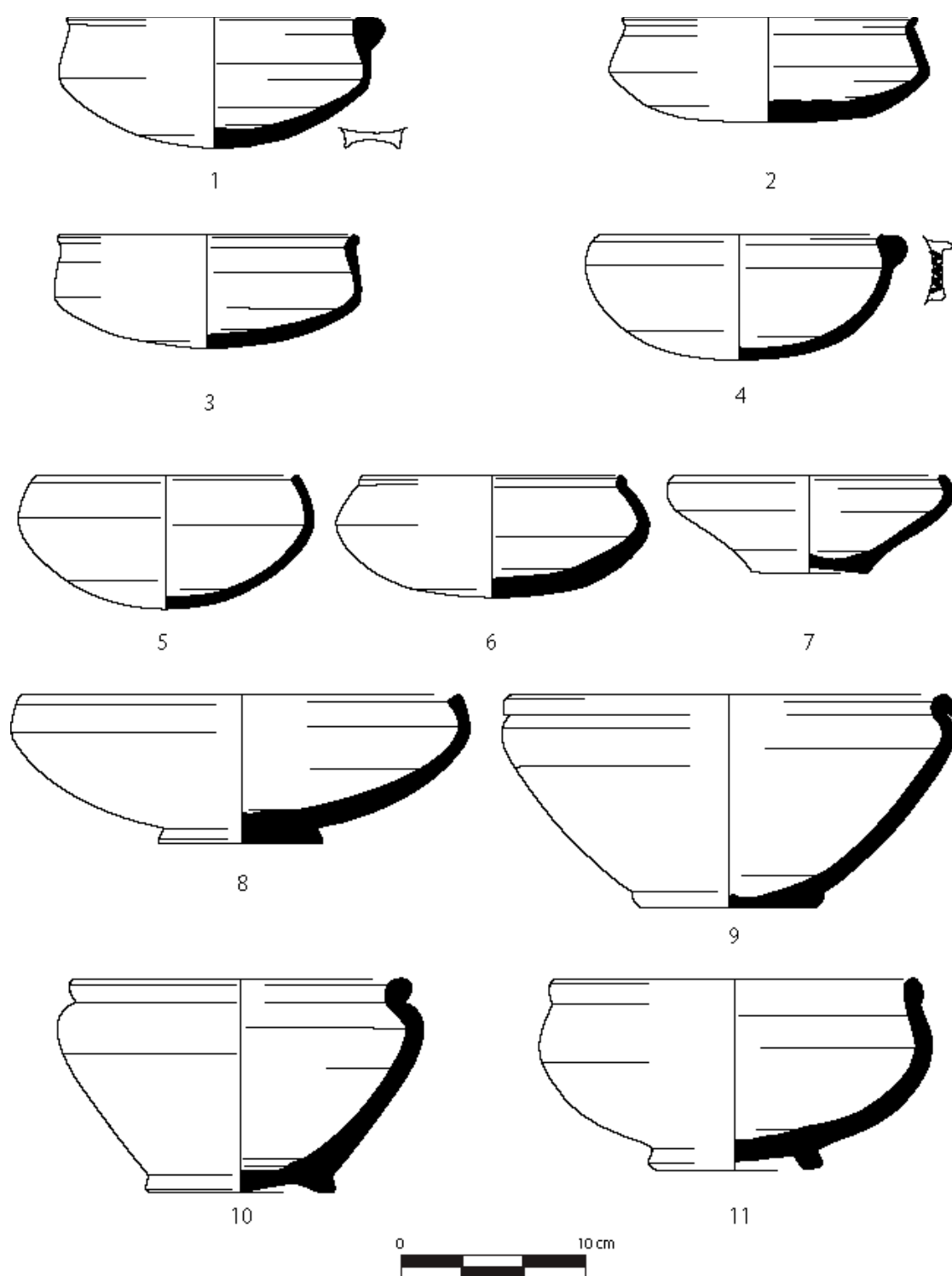


Plate 4



**Plate 5: Bowls of level 4 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 2401	4	Bowl	G.1, V.2	Pink 4/7 HUE 7.5 YR
2	T.D 2403	4	Bowl	G.1, V.2	Reddish Yellow 6/6 HUE 5 YR
3	T.D 2280	4	Bowl	G.1, V.3	Yellowish Red 5/6 HUE 5 YR
4	T.D 2423	4	Bowl	G.1, V.2	Pink 7/4 HUE 7.5 YR
5	T.D 2466	4	Bowl	G.1, V.2	Pink 7/4 HUE 7.5 YR
6	T.D 2377	4	Bowl	G.1, V.3	Dark Gray 4/1 HUE 5 YR

**Plate 6: Bowls of level 3 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 2159	3	Bowl	G.1, V.1	Pink 7/4 HUE 7.5 YR
2	T.D 2242	3	Bowl	G.1, V.1	Red 5/6 HUE 2.5 YR.
3	T.D 2092	3	Bowl	G.1, V.1	Very Pale Brown 7.4 HUE 10 YR
4	T.D 702	3	Bowl	G.1, V.1	Pink 8/4 HUE 7.5 YR
5	T.D 523	3	Bowl	G.1, V.2	Reddish Yellow 6/6 HUE 5 YR
6	T.D 2198	3	Bowl	G.1, V.1	Pink 7/4 HUE 5 YR
7	T.D 2248	3	Bowl	G.1, V.2	Reddish Yellow 6/6 HUE 5 YR
8	T.D 2054	3	Bowl	G.1, V.2	Pink 7/4 HUE 7.5 YR
9	T.D 2259	3	Bowl	G.1, V.2	Pink 7.4 HUE 5 YR
10	T.D 2257	3	Bowl	G.1, V.1	Pink 8/2 HUE 7.5 YR
11	T.D 2258	3	Bowl	G.1, V.2	White 8/2 HUE 10 YR

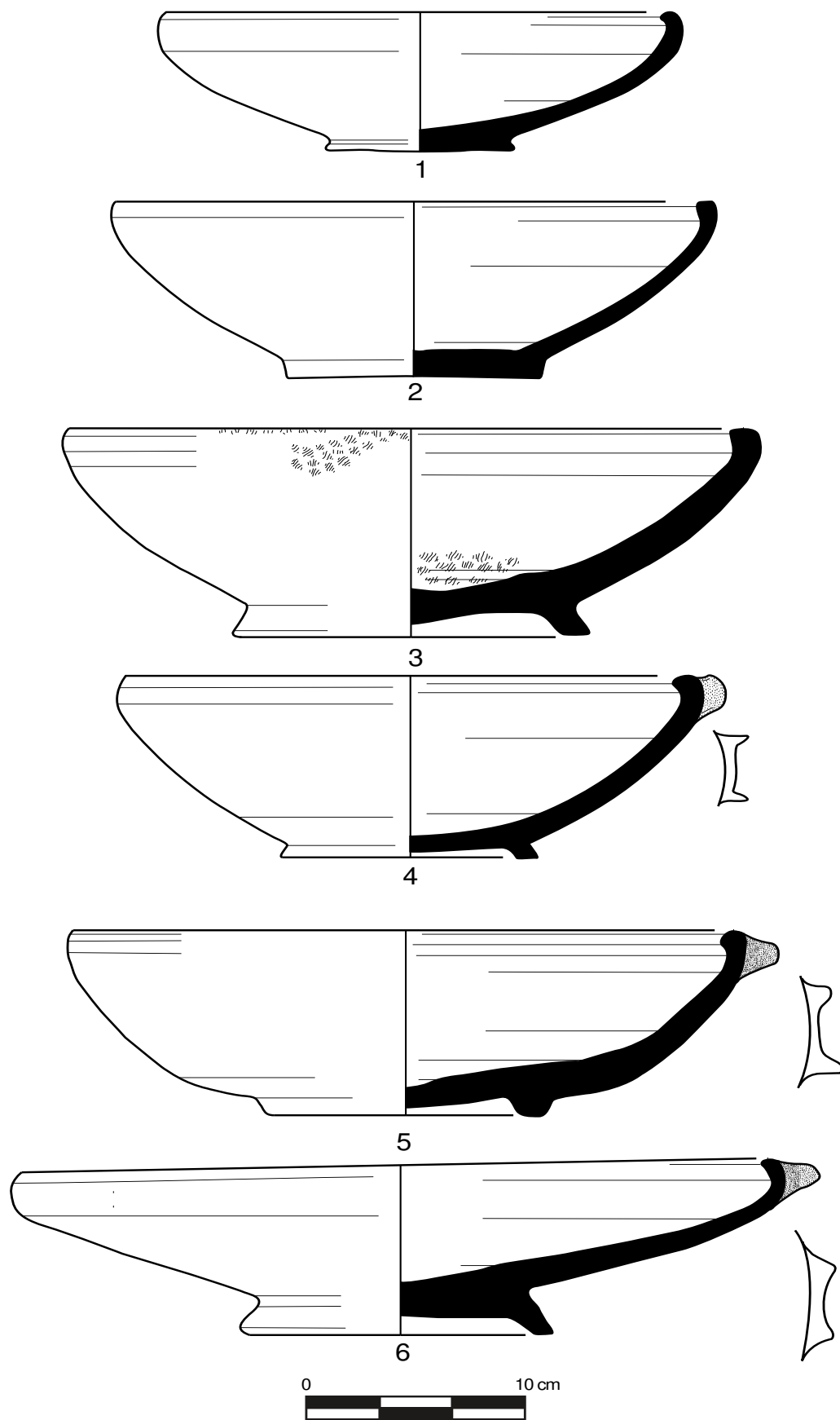
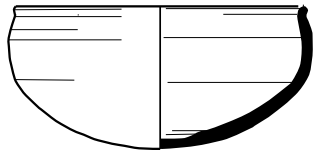
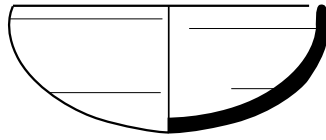


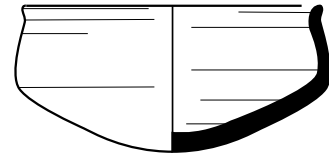
Plate 5



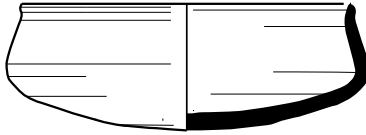
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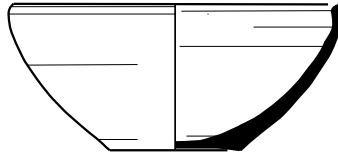
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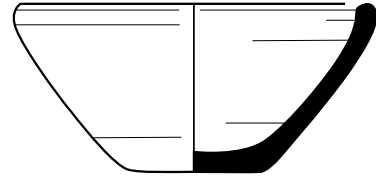
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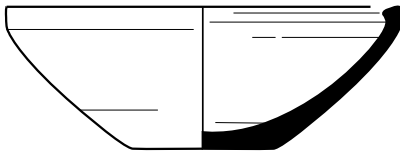
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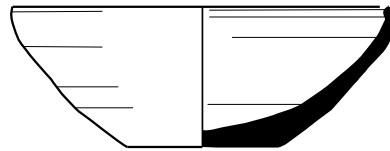
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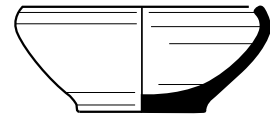
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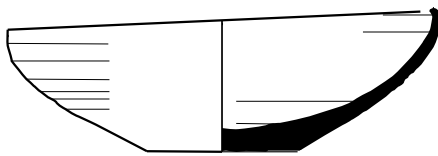
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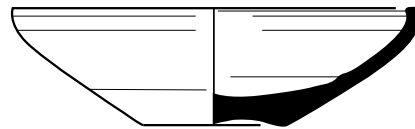
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Plate 6

**Plate 7: Bowls of level 3 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 1970	3	Bowl	G.1, V.2	Pink 7/4 HUE 7.5 YR
2	T.D 2073	3	Bowl	G.1, V.2	Pink 7/4 HUE 7.5 YR
3	T.D 543	3	Bowl	G.1, V.1	Pink 7/4 HUE 7.5 YR
4	T.D 1902	3	Bowl	G.1, V.2	Reddish Yellow 6/6 HUE 7.5 YR
5	T.D 2070	3	Bowl	G.1, V.1	Light Reddish Brown 6/4 HUE 5 YR
6	T.D 2091	3	Bowl	G.1, V.2	Reddish Yellow 7/6 HUE 5 YR

**Plate 8: Bowls of level 3 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 2124	3	Bowl	G.1, V.3	Light Red 6/6 HUE 2.5 YR
2	T.D 2126	3	Bowl	G.1, V.1	Very Pale Brown 7/4 HUE 10 YR
3	T.D 2037	3	Bowl	G.1, V.4	Very Pale Brown 7/3 HUE 10 YR
4	T.D 2175	3	Bowl	G.1, V.2	Pink 7/4 HUE 5 YR
5	T.D 2210	3	Bowl	G.1, V.3	Red 5/8 HUE 2.5 YR
6	T.D 2086	3	Bowl	G.1, V.5	Pink 7/4 HUE 5 YR
7	T.D 2227	3	Bowl	G.1, V.2	White 8/2 HUE 10 YR

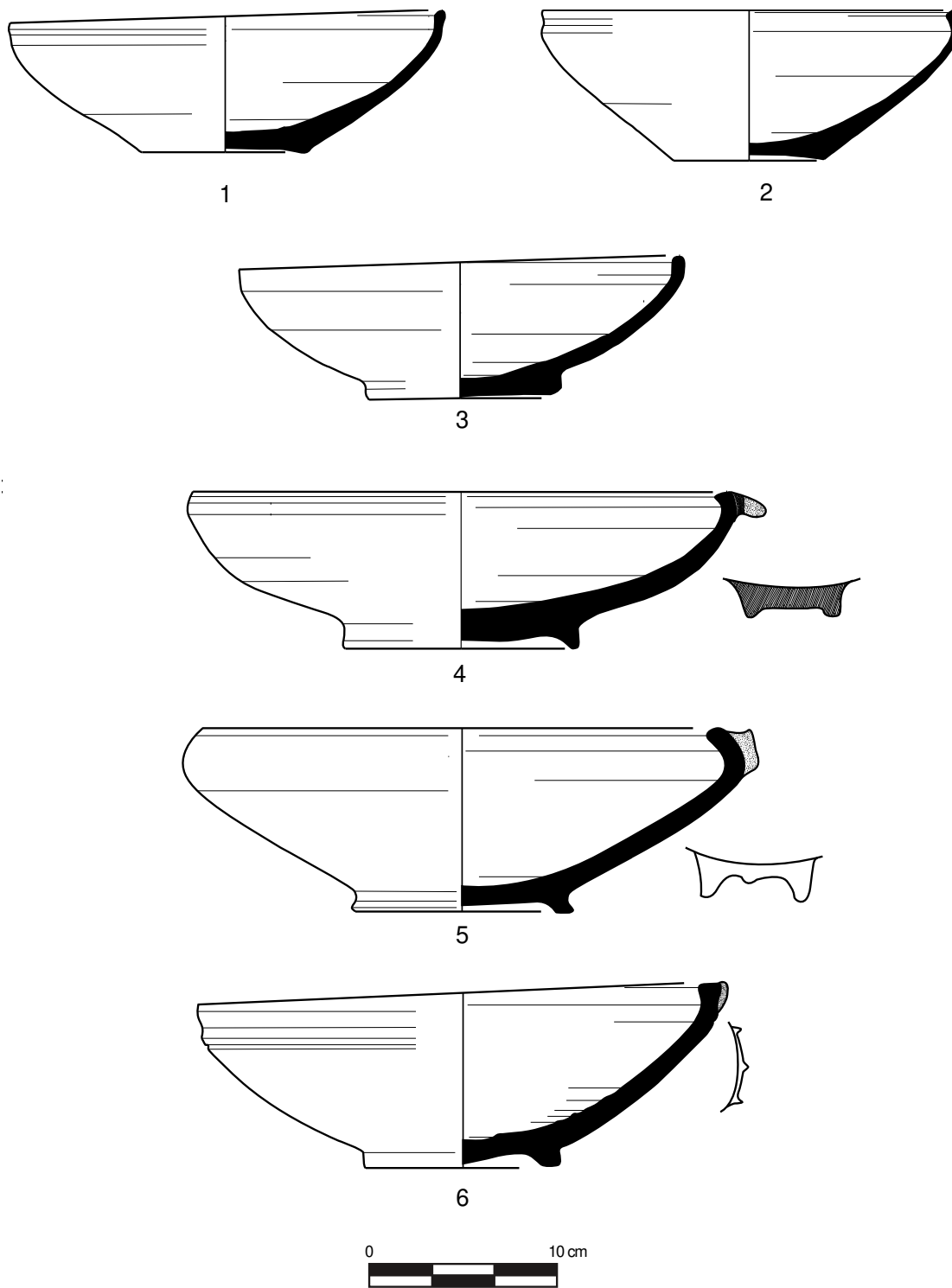


Plate 7

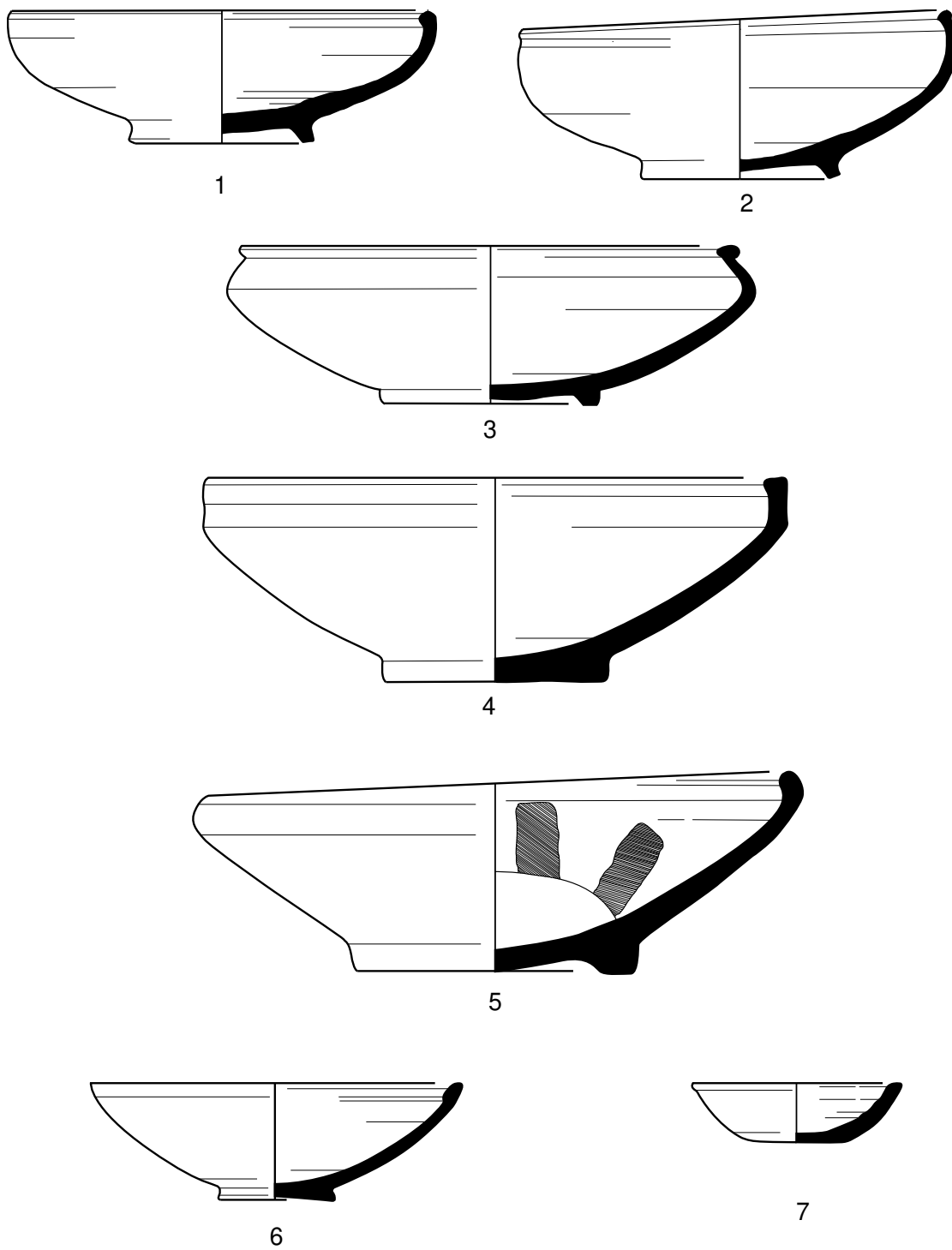


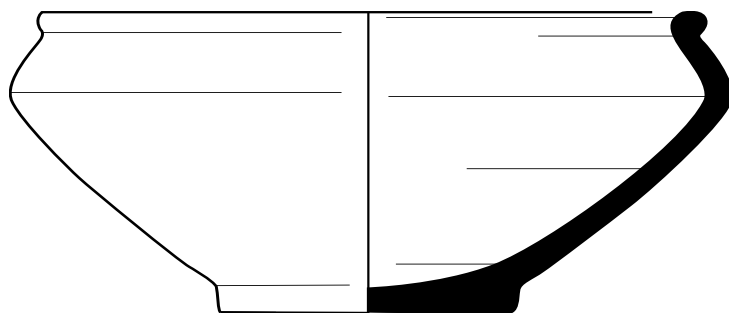
Plate 8

**Plate 9: Bowls of level 3 of tomb 1**

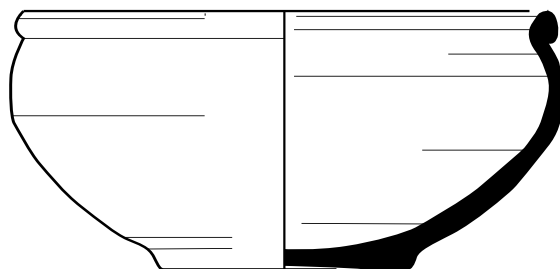
Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 2154	3	Bowl	G.1, V.2	Pinkish Gray 7/2 HUE 7.5 YR
2	T.D 2006	3	Bowl	G.1, V.2	Pinkish White 8/2 HUE 7.5 YR
3	T.D 2032	3	Bowl	G.1, V.4	Pink 7/4 HUE 5 YR
4	T.D 2220	3	Bowl	G.1, V.2	Reddish Yellow 6/6 HUE 7.5 YR

**Plate 10: Bowls of level 2 of tomb 1**

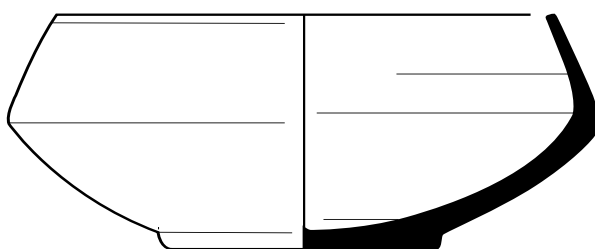
Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 296	2	Bowl	G.1, V.4	White 8/2 HUE 10 YR
2	T.D 1577	2	Bowl	G.1, V.2	Pink 7/4 HUE 7.5 YR
3	T.D 1724	2	Bowl	G.1, V.2	Very Pale Brown, 8/3 HUE 10 YR
4	T.D 1695	2	Bowl	G.1, V.7	White 8/2 HUE 10 YR
5	T.D 1786	2	Bowl	G.1, V.7	Pink 7/4 HUE 5 YR
6	T.D 1785	2	Bowl	G.1, V.2	Very Pale Brown: 7/4 HUE 10 YR
7	T.D 311	2	Bowl	G.1, V.1	Very Pale Brown 8/4 HUE 10 YR
8	T.D 1492	2	Bowl	G.1, V.1	Pink 7/4 HUE 5 YR
9	T.D 1543	2	Bowl	G.1, V.1	Pinkish White 8/0 HUE 7.5 YR
10	T.D 471	2	Bowl	G.1, V.7	Reddish Yellow 8/6 HUE 7.5 YR
11	T.D 1834	2	Bowl	G.1, V.3	Red 5/6 HUE 10 R



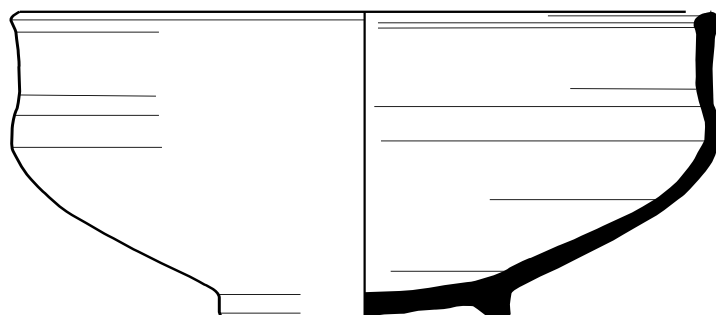
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Plate 9



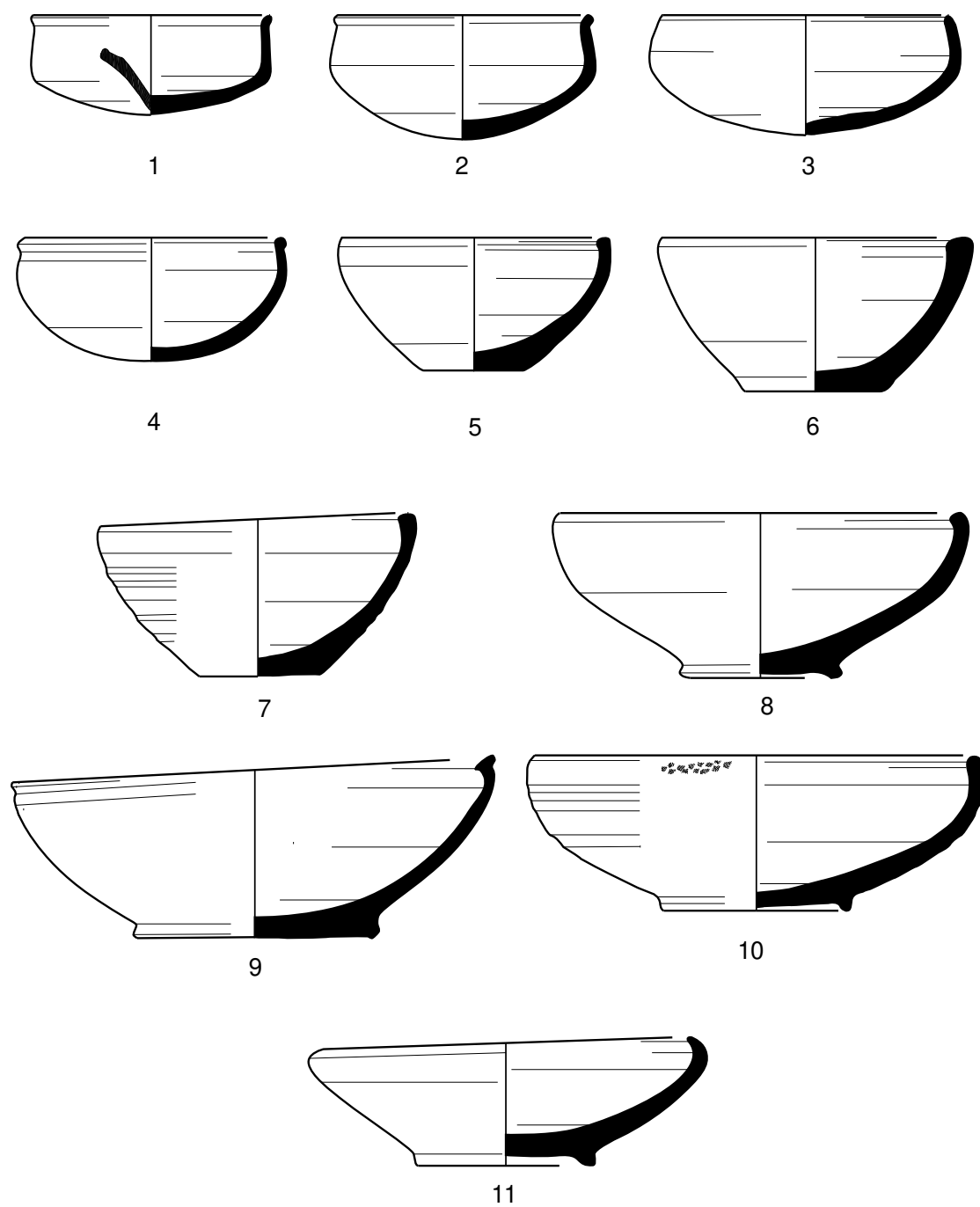


Plate 10

**Plate 11: Bowls of level 2 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 1691	2	Bowl	G.1, V.1	Very Pale Brown 7/3 HUE 10 YR
2	T.D 1865	2	Bowl	G.1, V.2	Pinkish White 8/2 HUE 7.5 YR
3	T.D 1848	2	Bowl	G.1, V.2	Pink 8/3 HUE 5 YR
4	T.D 1776	2	Bowl	G.1, V.7	Reddish Yellow 7/6 HUE 5 YR
5	T.D 1870	2	Bowl	G.1, V.1	Very Pale Brown 8/3 HUE 10 YR
6	T.D 1879	2	Bowl	G.1, V.1	White 8/1 HUE 10 YR
7	T.D 1736	2	Bowl	G.1, V.2	Pink 7/4 HUE 7.5 YR

**Plate 12: Bowls of level 2 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 1839	2	Bowl	G.1, V.4	Reddish Yellow 6/6 HUE 5 YR
2	T.D 1693	2	Bowl	G.1, V.1	Pink 7/4 HUE 5 YR
3	T.D 1896	2	Bowl	G.1, V.2	Reddish Yellow 7/6 HUE 7.5 YR

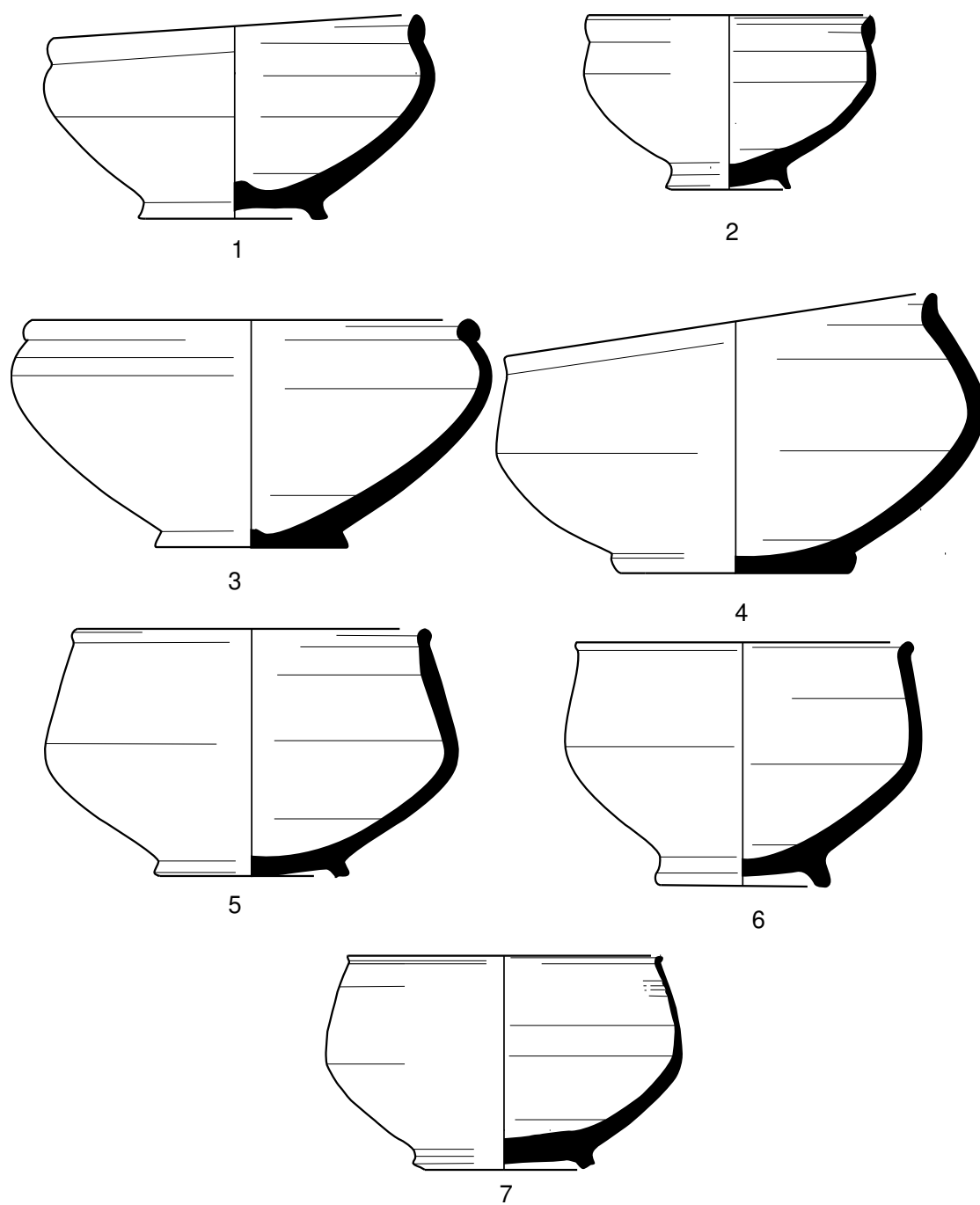
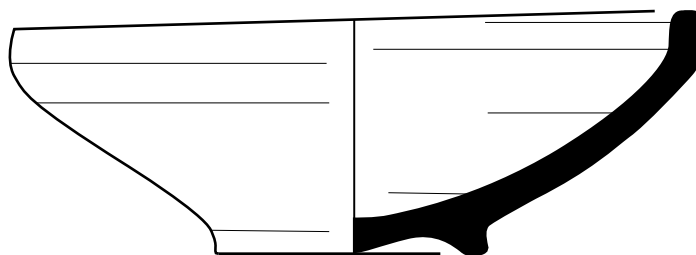
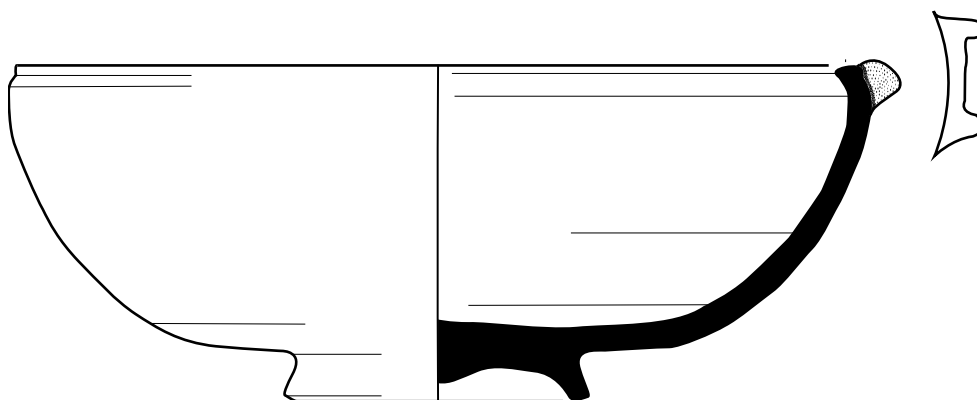


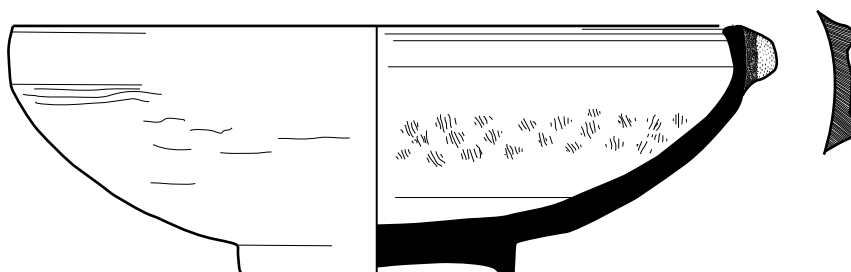
Plate 11



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Plate 12

**Plate 13: Bowls of level 1 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 180	1	Bowl	G.1, V.2	Pink 7.4 HUE 7.5 YR
2	T.D 1162	1	Bowl	G.1, V.2	Pink 7/4 HUE 5 YR
3	T.D 1167	1	Bowl	G.1, V.1	Pink 7/4 HUE 5 YR
4	T.D 1019	1	Bowl	G.1, V.1	White 8/2 HUE 2.5 Y
5	T.D 1238	1	Bowl	G.1, V.2	Reddish Yellow 7/6 HUE 7.5 YR
6	T.D 1248	1	Bowl	G.1, V.2	Reddish Yellow 7/6 HUE 7.5 YR
7	T.D 1199	1	Bowl	G.1, V.7	Reddish Yellow 7/6 HUE 7.5 YR
8	T.D 1010	1	Bowl	G.1, V.2	Pink 7/4 HUE 7.5 YR
9	T.D 1015	1	Bowl	G.1, V.1	Pinkish-Orange
10	T.D 959	1	Bowl	G.1, V.2	Pinkish White 8/2 7.5 YR
11	T.D 69	1	Bowl	G.1, V.1	Very Pale Brown 7/3 HUE 10 YR
12	T.D 1271	1	Bowl	G.1, V.2	White 8/2 HUE 2.5 Y
13	T.D 1081	1	Bowl	G.1, V.2	White 8/2 HUE 7.5 YR
14	T.D 1036	1	Bowl	G.1, V.7	Pink 7/4 HUE 7.5 YR

**Plate 14: Bowls of level 1 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 1200	1	Bowl	G.1, V.2	Pink 7/4 HUE 7.5 YR
2	T.D 1305	1	Bowl	G.1, V.2	Pinkish White 8/2 HUE 7.5 YR
3	T.D 965	1	Bowl	G.1, V.2	Pinkish White 8/2 HUE 7.5 YR
4	T.D 937*	1	Bowl	G.1, V.3	Dark Red 6/8 HUE 10 R
5	T.D 937	1	Bowl	G.1, V.2	Pink 7/4 HUE 10 YR
6	T.D 1024	1	Bowl	G.1, V.3	Reddish Brown 5/4 HUE 2.5 YR
7	T.D 918	1	Bowl	G.1, V.1	Reddish Yellow 6/6 HUE 5 YR
8	T.D 1108	1	Bowl	G.1, V.3	Light Reddish Brown 6/3 HUE 5 YR

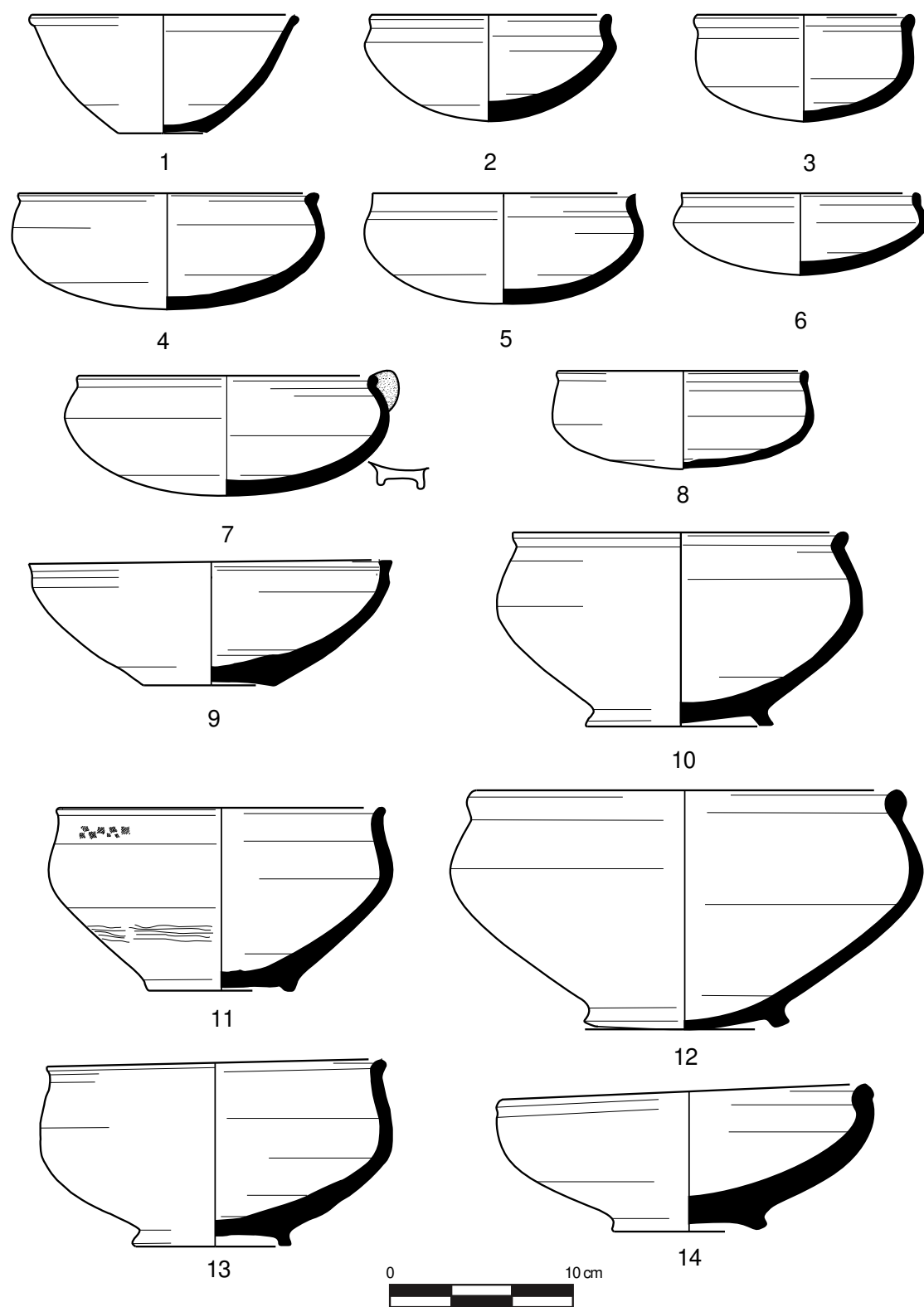


Plate 13

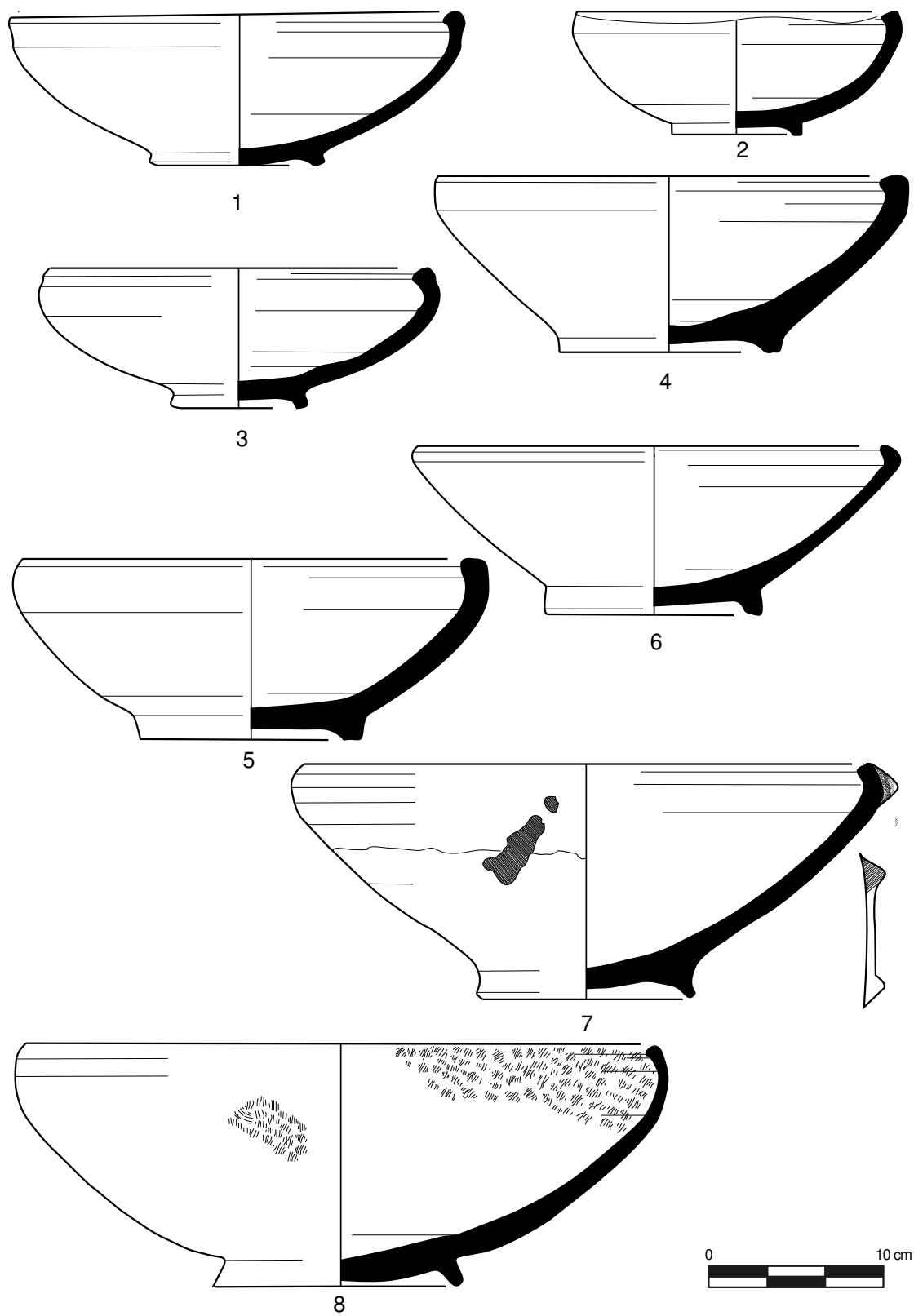


Plate 14

**Plate 15: Carinated bowls of level 5, 4, and 3 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 2776	5	Bowl	G.1, V.2	Very Pale Brown 7.3 HUE 10 YR
2 *	T.D 2615	5	Bowl	G.1, V.7	Very Pale Brown 7/3 HUE 10 YR
3	T.D 2612	5	Bowl	G.1, V.5	Very Pale Brown 7/3 HUE 10 YR
4	T.D 2541	5	Bowl	G.1, V.2	White 8/1 HUE 5 YR
5	T.D 2496	4	Bowl	G.1, V.5	Very Pale Brown 7/3 HUE 10 YR
6	T.D 2470	4	Bowl	G.1, V.1	Pink 7/4 HUE 7.5 YR
7	T.D 2060	3	Bowl	G.1, V.2	G.1, V.2

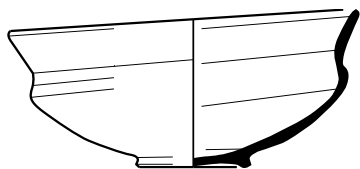
\*Double number

**Plate 16: Milk and "imported" bowl of levels 5, 4, and 3 of tomb 1**

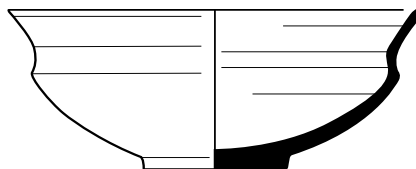
Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 2731	5	Bowl	G.2, V.2	Light Brown Gray 6/2 HUE 10 YR
2	T.D 2680	5	Bowl	G.2, V.1	Brown 5/2 HUE 7.5 YR
3	T.D 2677	5	Bowl	G.2, V.2	White 8/2 HUE 10 YR
4	T.D 2574	5	Bowl	G.2, V.1	Pale Brown 6/3 HUE 10 YR
5	T.D 2498	4	Bowl	G.1, V.1	Light Yellowish Brown 6/4 HUE 10 YR
6	T.D 2775	5	Bowl	G.8	Very Dusky Gray 3/1 HUE 5 YR
7	T.D 2615	5	Bowl	G.8	Light Red 6/6 HUE 2.5 YR
8	T.D 2221	3	Bowl	G.8	Yellowish Brown 5/8 HUR 10 YR
9	T.D 1680	2	Bowl	G.1, V.4	Very Pale Brown 7/4 HUE 10 YR
10	T.D 1568	2	Bowl	G.1, V.4	Reddish Yellow 7/6 HUE 5 YR
11	T.D 1943	3	Bowl	G.8	Very Pale Brown 7/4 HUE 10 YR
12 *	T.D	1 ?	Bowl	G.1, V.2	Light Brown: 6/4 HUE 7.5 YR

\* no number (missing)

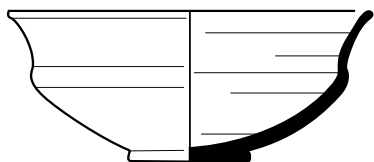




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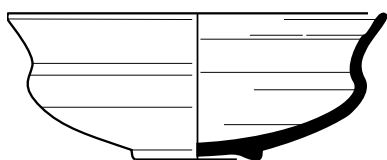
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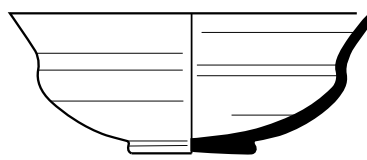
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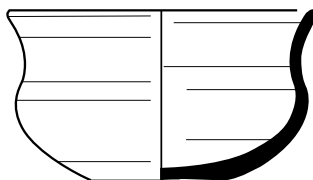
4



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7



Plate 15

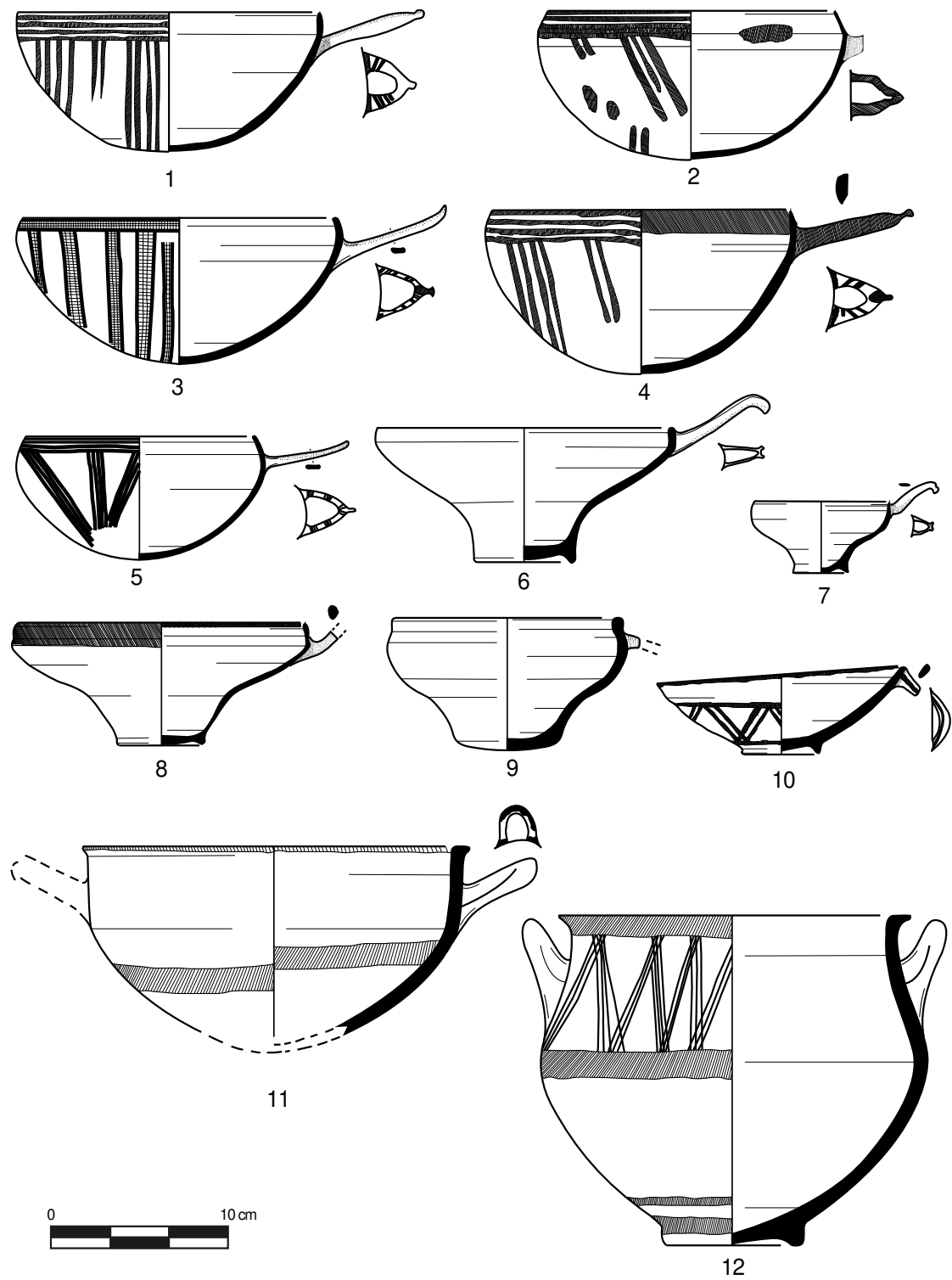


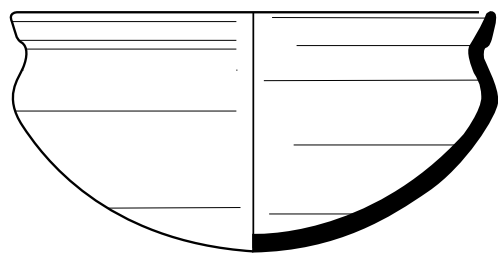
Plate 16

**Plate 17: Cooking pots of levels 5, 4, 3, and 2 of tomb 1**

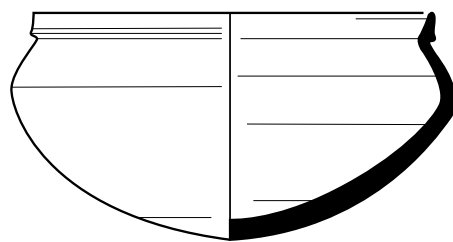
Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 2588	5	Cooking Pot	G.6	Reddish Brown 5/3 HUE 5 YR
2	T.D 2481	4	Cooking Pot	G.6	Light Brown 6/4 HUE 7.5 YR
3	T.D 2331	4	Cooking Pot	G.6	Pale Brown 6/3 HUE 10 YR
4	T.D 2314	4	Cooking Pot	G.6	Pink 7.4 HUE 5 YR
5	T.D 1990	3	Cooking Pot	G.6	Light Brown 6/4 HUE 7.5 YR
6	T.D 2195	3	Cooking Pot	G.6	Pinkish Brown 6/2 HUE 7.5 YR
7	T.D 270	2	Cooking Pot	G.6	Light Reddish Brown 6/4 HUE 5 YR
8	T.D 1846	2	Cooking Pot	G.6	Light Yellowish Brown 6/4 HUE 10 YR

**Plate 18: Kraters of levels 5 and 4 of tomb 1**

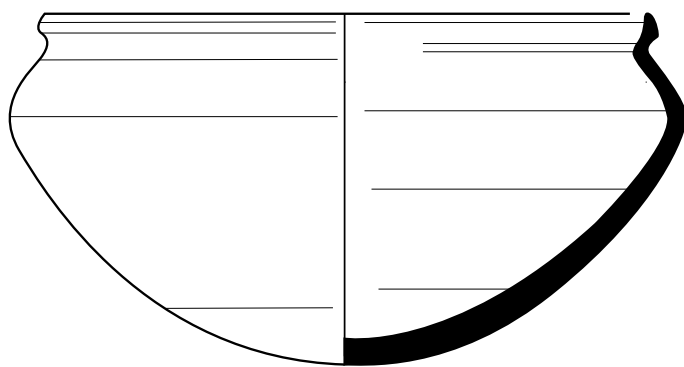
Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 2621	5	Krater	G.1, V.4	Light Red 6/8 HUE 2.5 YR
2	T.D 2575	5	Krater	G.1, V.7	Very Pale Brown 7/4 HUE 10 YR
3	T.D 2342	4	Krater	G.1, V.2	Very Pale Brown 7/4 HUE 10 YR
3	T.D 2439	4	Krater	G.1, V.1	Pink 7/4 HUE 5 YR



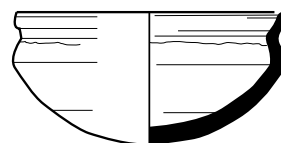
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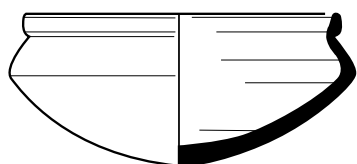
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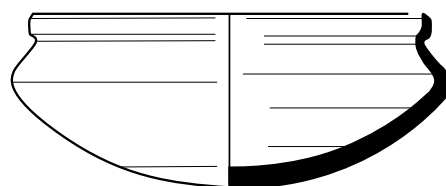
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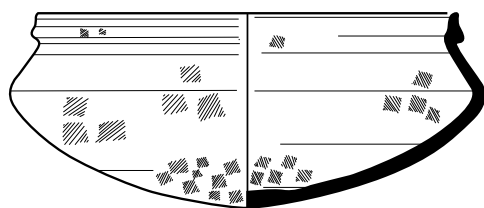
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5



6



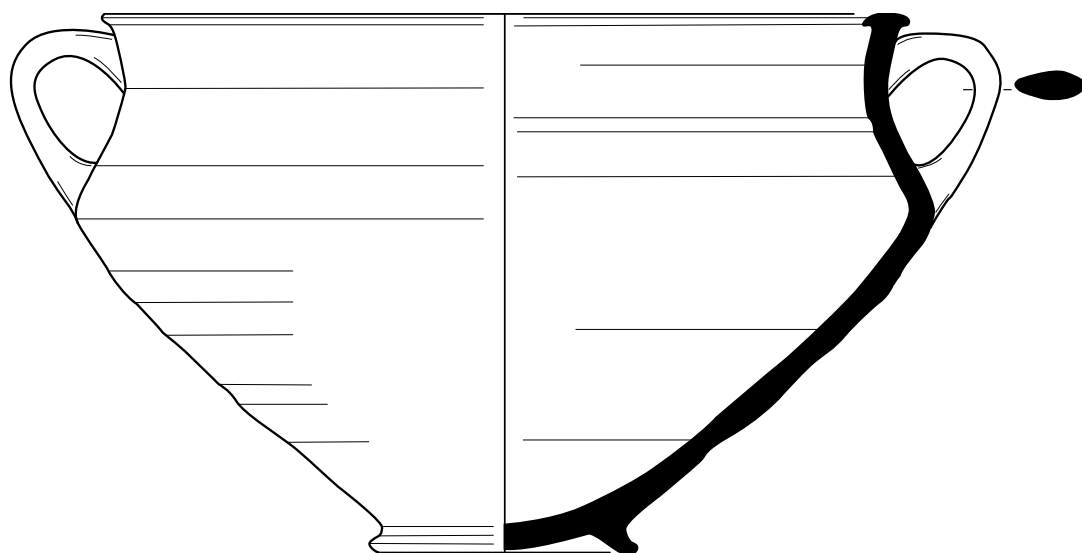
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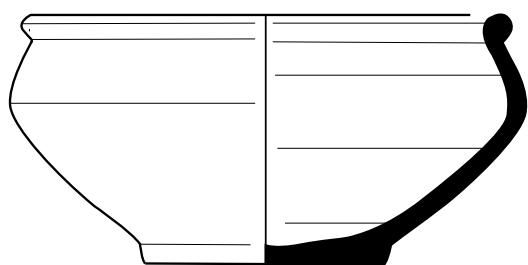
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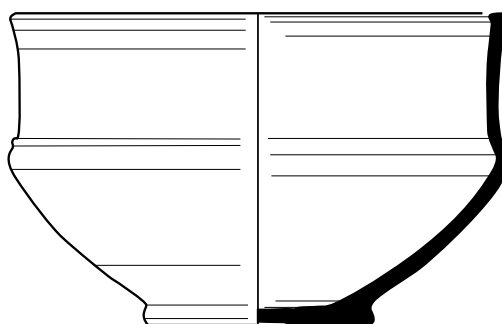
Plate 17



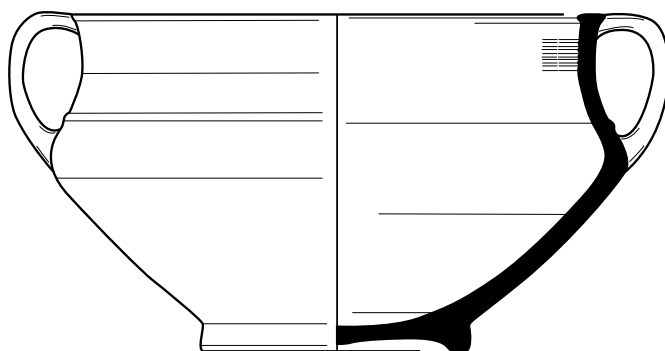
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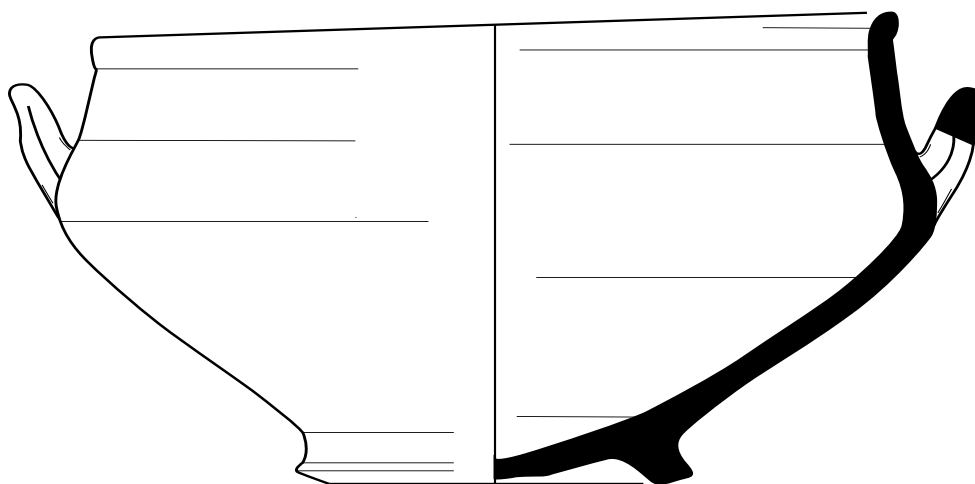
Plate 18

**Plate 19: karters of level 3 of tomb 1**

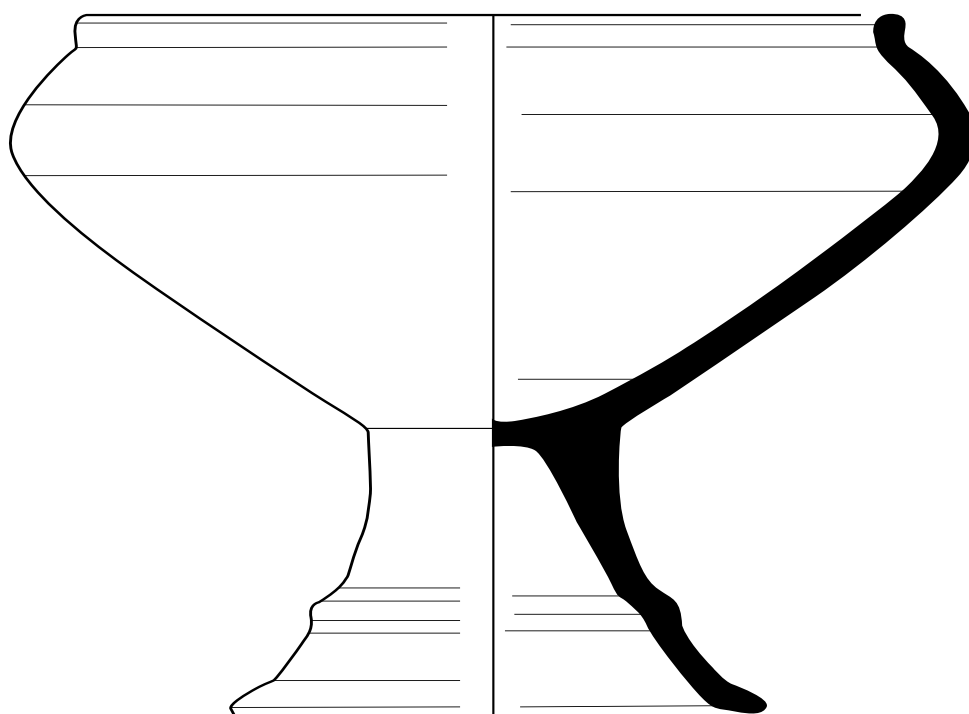
Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 2122	3	Krater	G.1, V.3	Weak Red 4/2 HUE 10 R
2	T.D 2043	3	Krater	G.1, V.3	Red 5/8 HUE 10 R

**Plate 20: Kraters of level 2 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 1866	2	Krater	G.1, V.1	Reddish Yellow 7/6 HUE 5 YR
2	T.D 1758	2	Krater	G.1, V.3	Weak Red 5/2 HUE 2.5 YR
3	T.D 341	2	Krater	G.1, V.2	Red 5/8 HUE YR



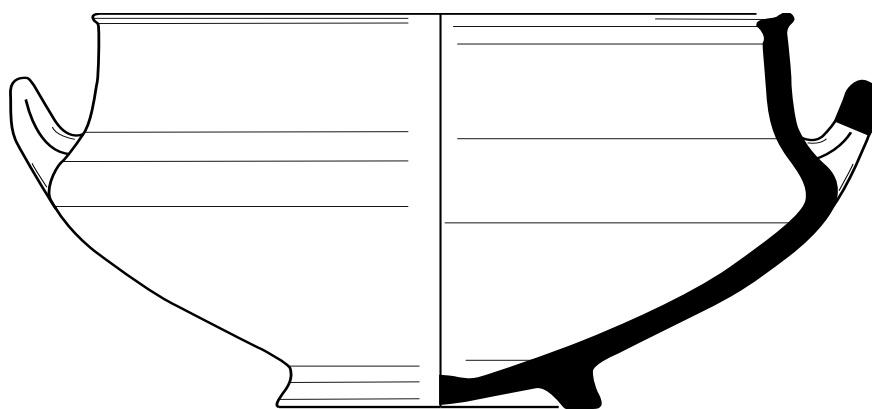
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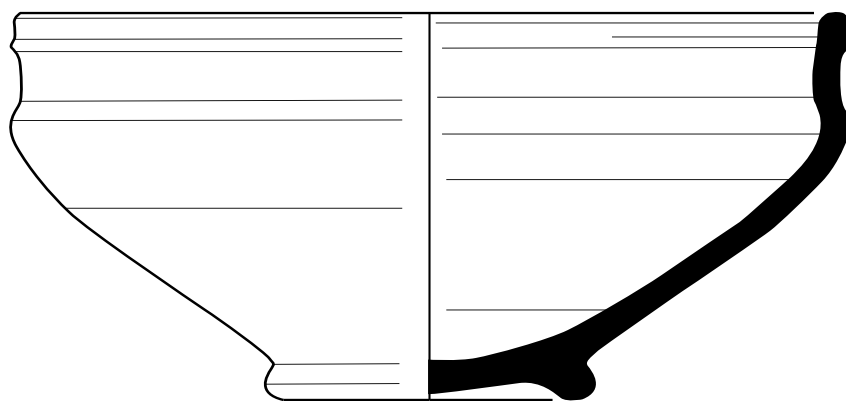
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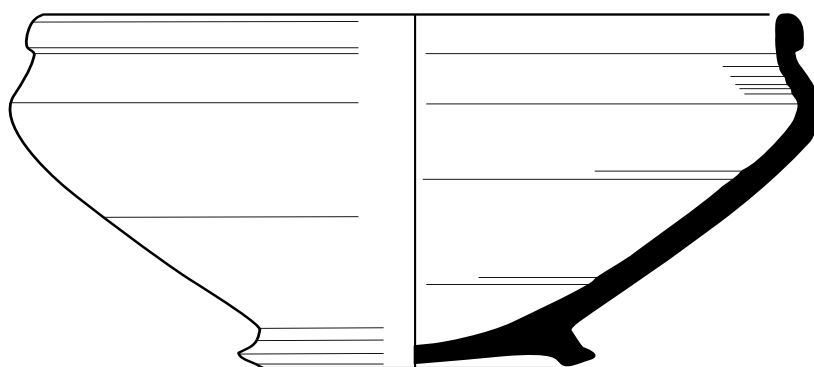
Plate 19



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Plate 20

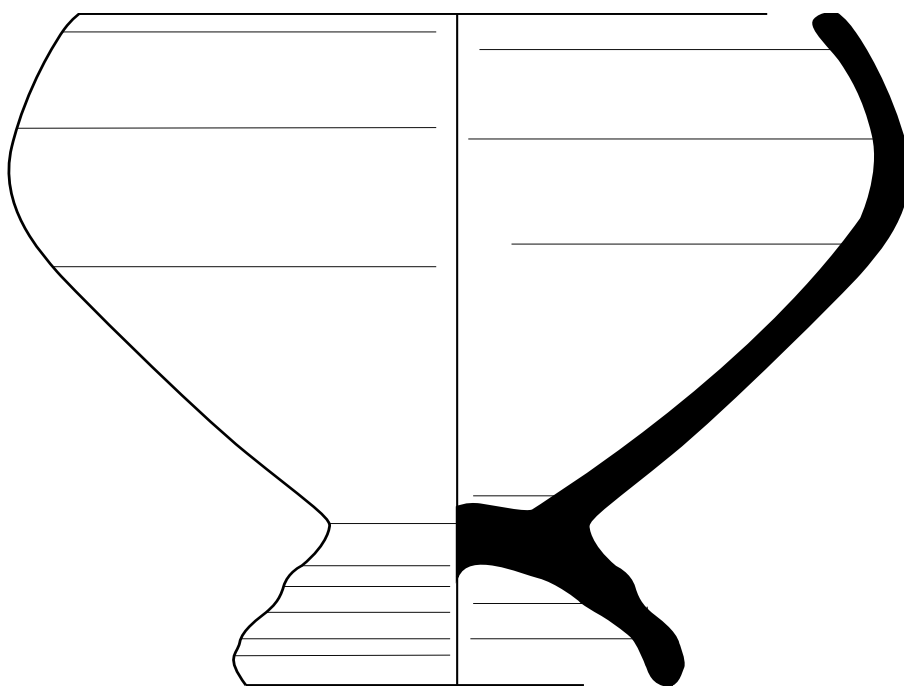


**Plate 21: Kraters of level 2 and 1 of tomb 1**

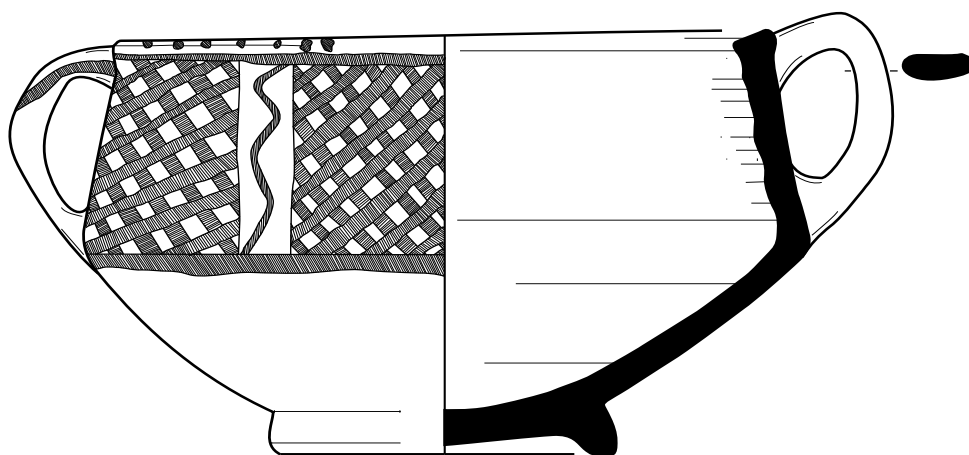
Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 1798	2	Krater	G.1, V.2	Light Brown 6/4 HUE 5 YR
2	T.D 1434	2	Krater	G.1, V.1	Pink 8/3 HUE 5 YR

**Plate 22: Kraters of level 1 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 1335	1	Krater	G.1, V.1	White 8/2 HUE 2.5 Y
2	T.D 1161	1	Krater	G.1, V.2	Light Gray HUE 10 YR



1



2



Plate 21

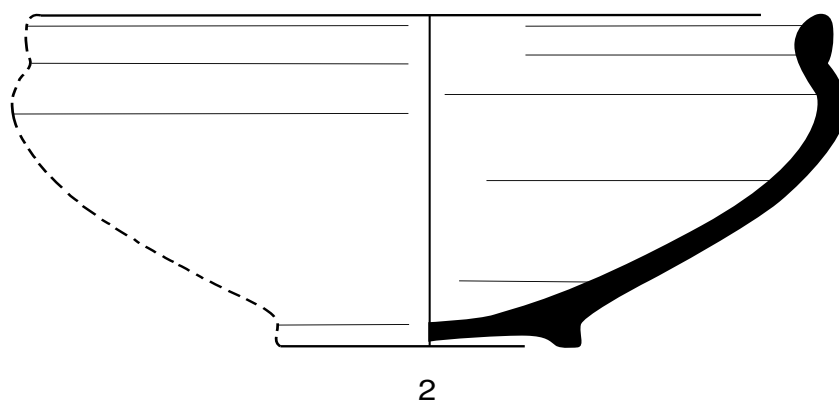
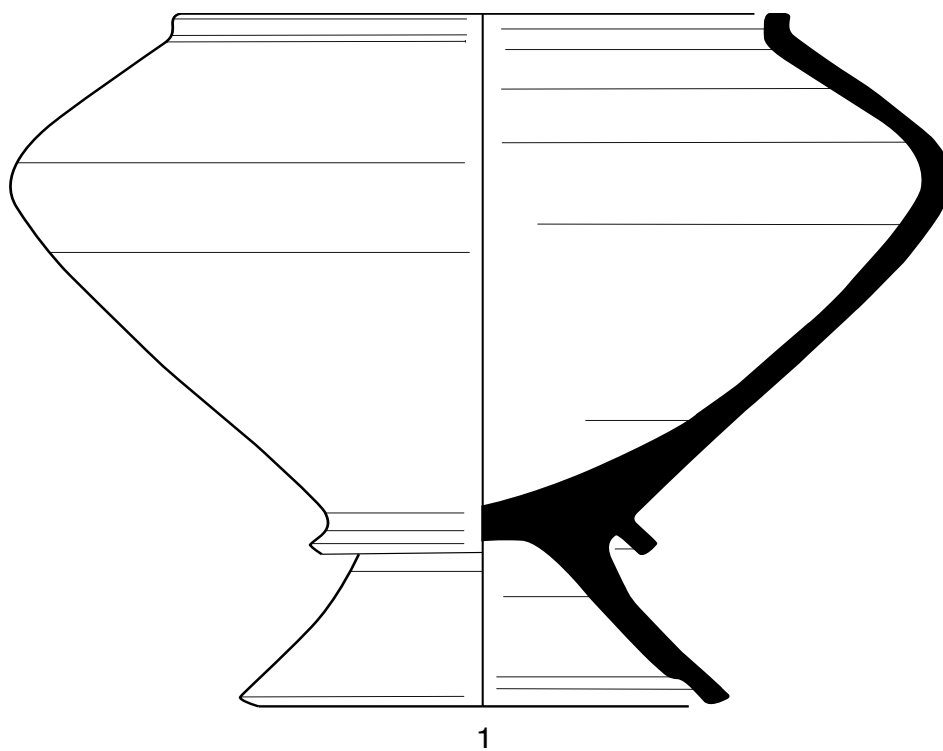


Plate 22

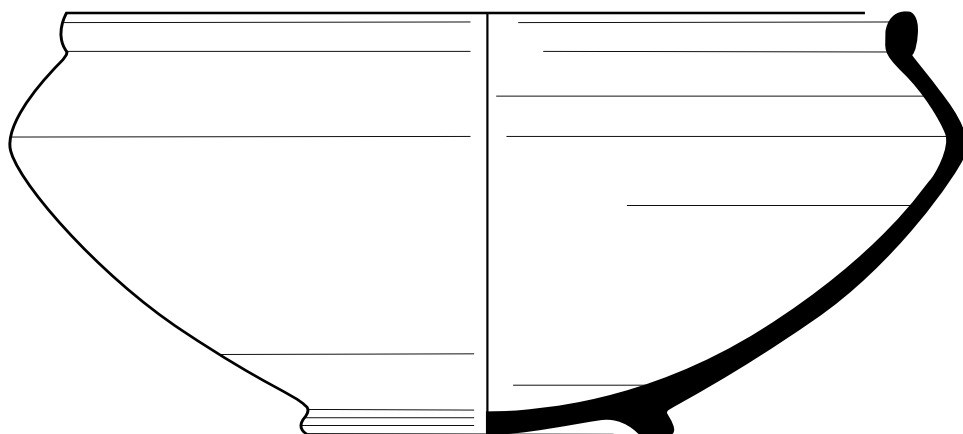
**Plate 23: Kraters of level 1 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 182	1	Krater	G.1, V.2	Reddish Yellow 7/6 HUE 7.5 YR
2	T.D 1214	1	Krater	G.1, V.1	White 8/2 HUE 2.5 Y

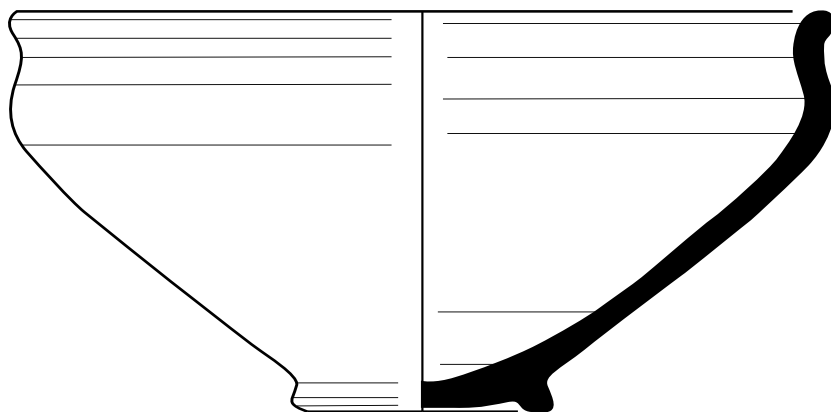
**Plate 24: Multi-Handled Kraters of level 4 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 2308	4	M-H Krater	G.1, V.2	White 8/2 HUE 2.5 Y
2	T.D 744	4	M-H Krater	G.1, V.1	Reddish yellow 6/6 HUE 5 YR
3 +	T.D 2427	4	M-H Krater	G.1, V.1	White 8/2 HUE 10 YR

+ 2427: Drawn and published by Cooley and Pratico 1995, fig. 34. 5, Pp. 189.



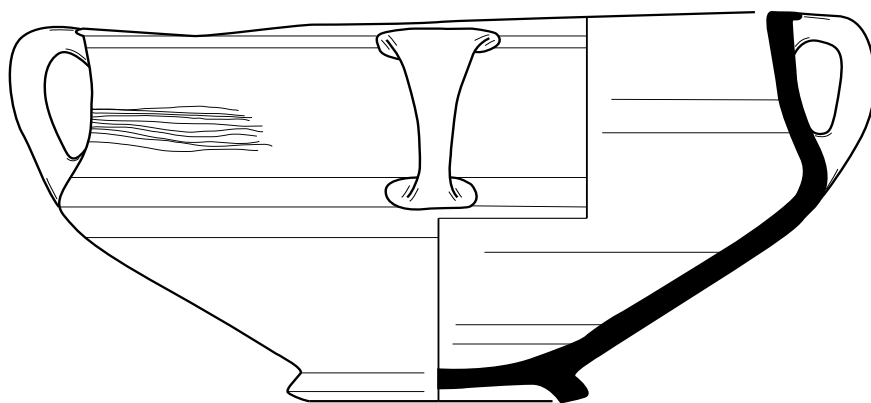
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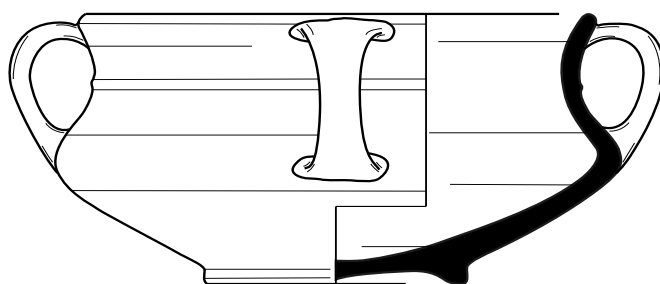
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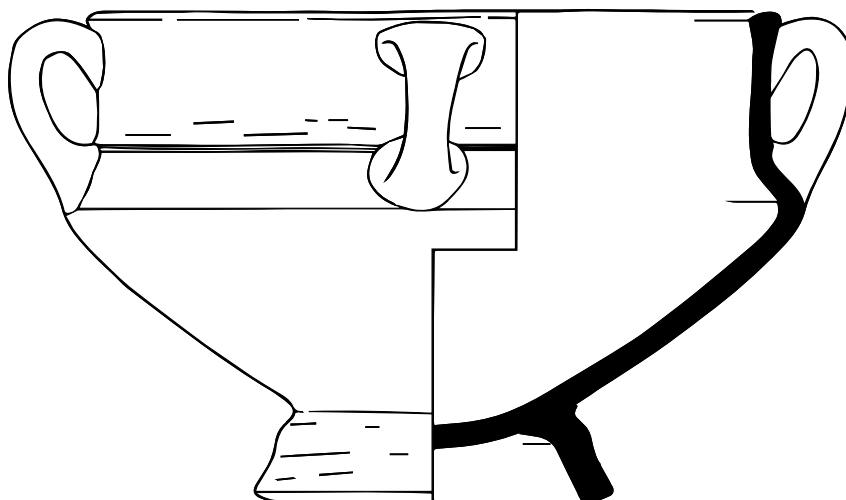
Plate 23



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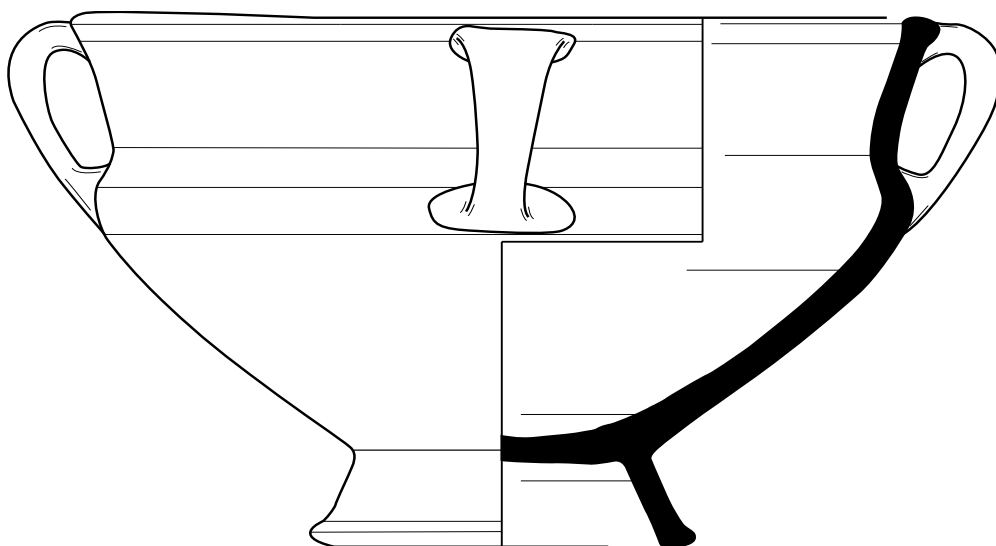
Plate 24

**Plate 25: Multi-Handled Kraters of levels 4 and 3 of tomb 1**

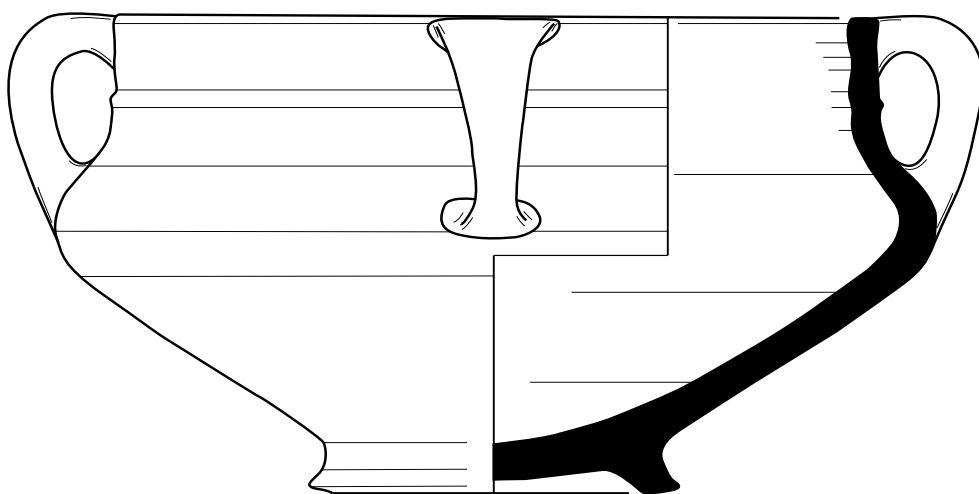
Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 2399	4	M-H Krater	G.1, V.2	White 8/1HUE 10 YR
2	T.D 2025	3	M-H Krater	G.1, V.2	Reddish Yellow 7/6 HUE 5 YR

**Plate 26: Multi-Handled Kraters of level 2 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 1761	2	M-H Krater	G.1, V.2	Pink 7/4 HUE 7.5 YR
2	T.D 1546	2	M-H Krater	G.1, V.2	White 8/2 HUE 2.5 Y



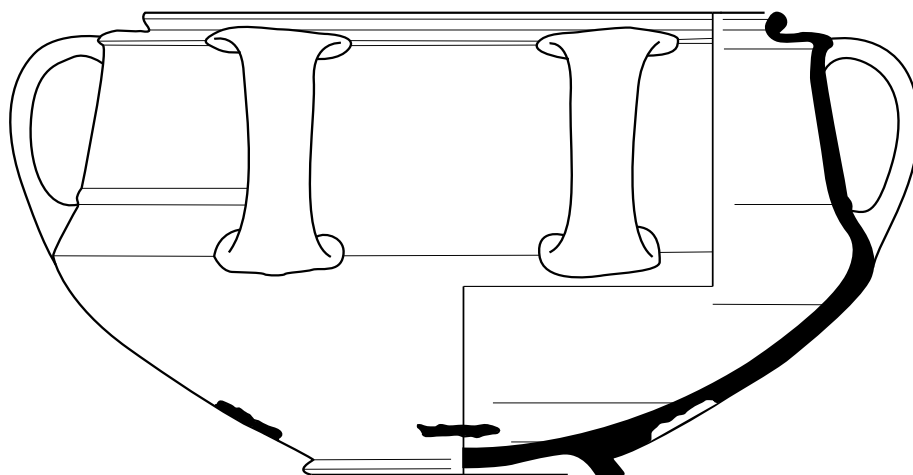
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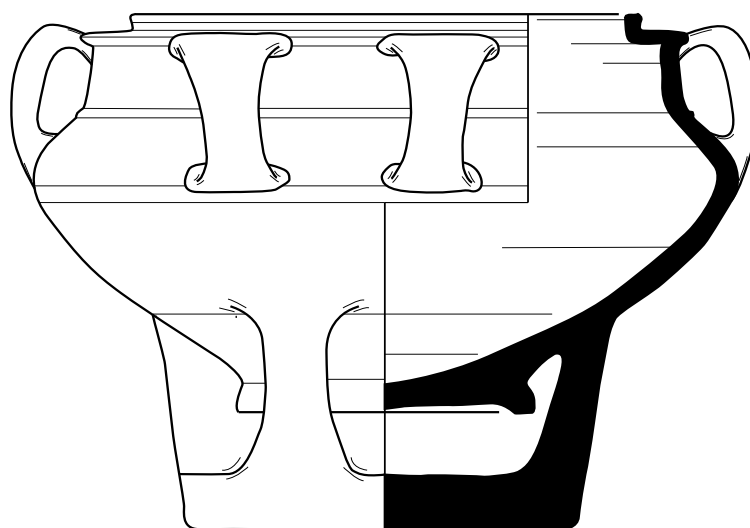
2







1



2



Plate 26

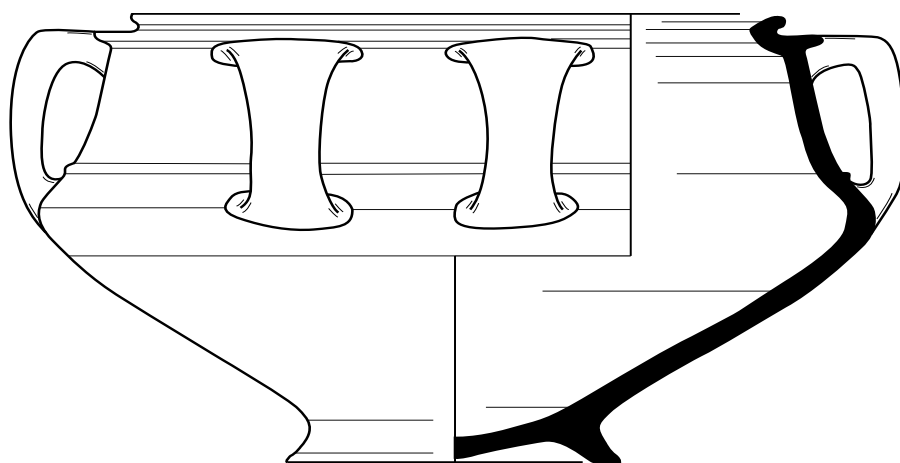
**Plate 27: Multi-Handled Kraters of level 2 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 1753	2	M-H Krater	G.1, V.1	White 8/2 HUE 2.5 Y
2	T.D 1657	2	M-H Krater	G.1, V.2	Light Brown 6/4 HUE 7.5 YR

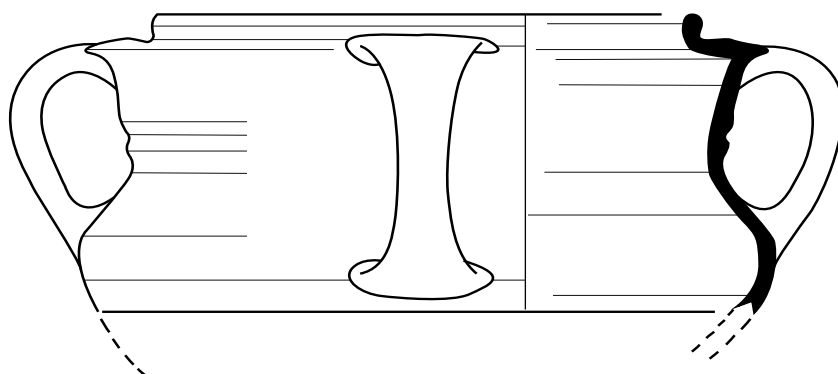
**Plate 28: Multi-Handled Kraters of level 2 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1 +	T.D 1722	2	M-H Krater	G.1, V.2	Reddish Yellow HUE 7.5 YR
2	T.D 1704	2	M-H Krater	G.1, V.1	White 8/2HUE 2.5 Y

+ 1722: Drawn and published by Cooley and Pratico 1995, fig. 27.3, Pp. 182.



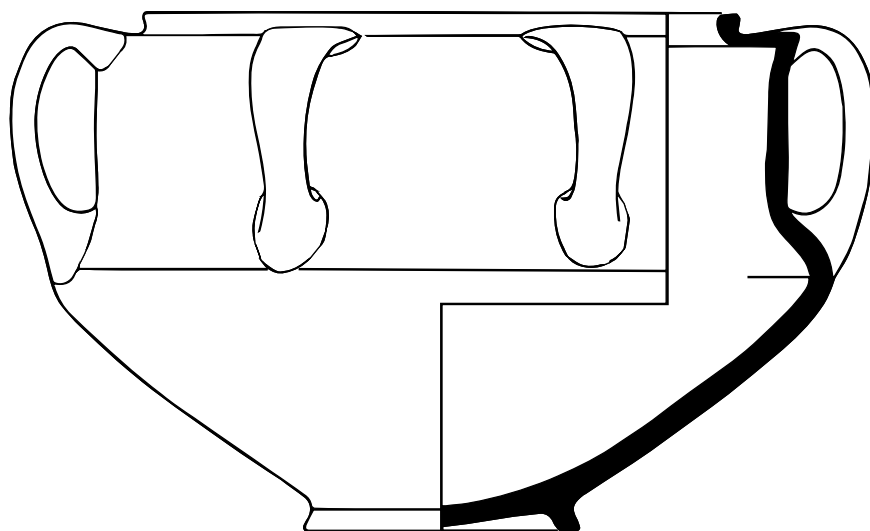
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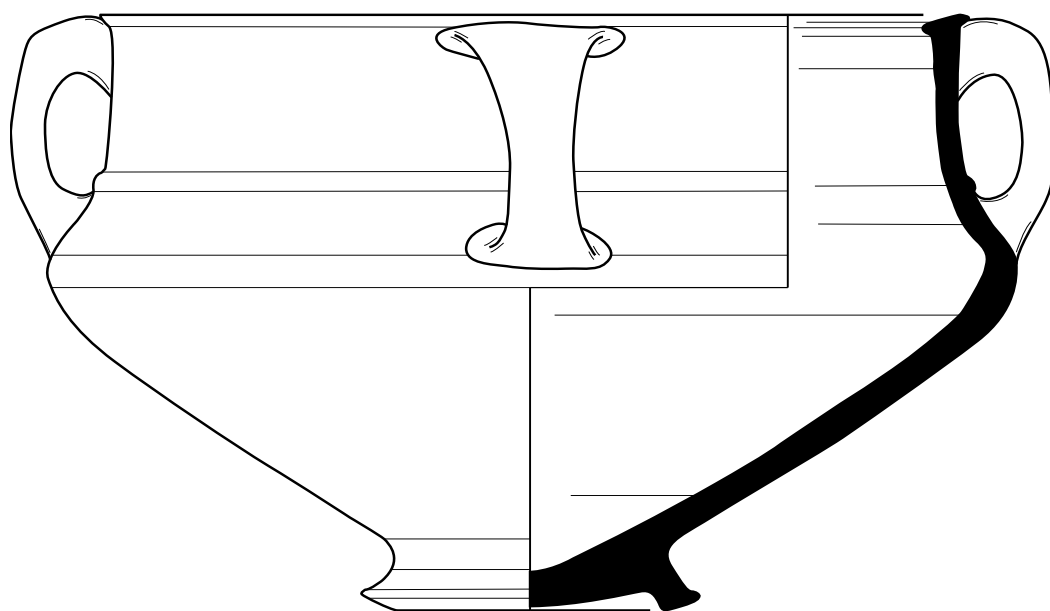
2



Plate 27



1



2



Plate 28

**Plate 29: Multi-Handled Kraters of level 2 of tomb 1**

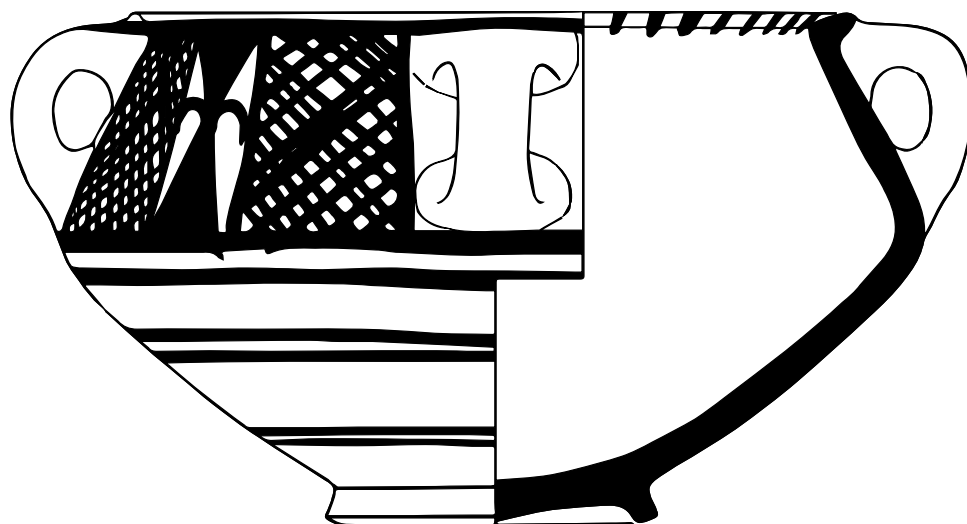
Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1 +	T.D 339	2	M-H Krater	G.1, V.1	Pink 7/4 HUE 5 YR
2 +	T.D 1646	2	M-H Krater	G.1, V.2	Pink 7/4 HUE 7.5 YR

+ 339: Drawn and published by Cooley and Pratico 1995, fig. 27. 1, Pp. 182.

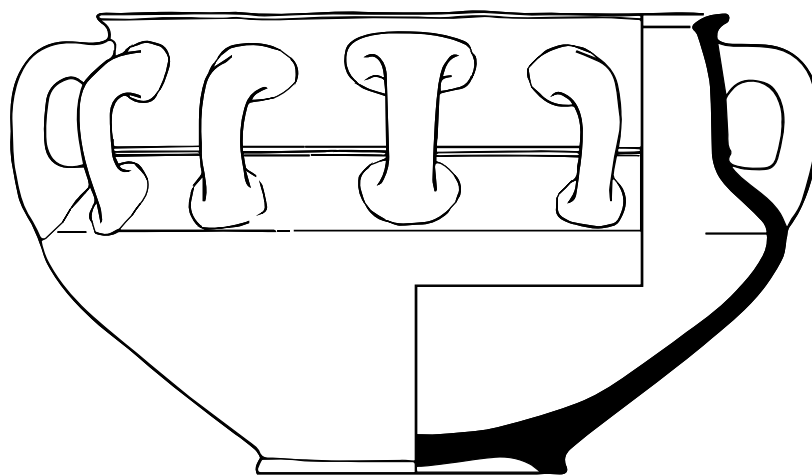
+ 1646: Drawn and published by Cooley and Pratico 1995, fig. 27. 2, Pp. 182.

**Plate 30: Multi-Handled Kraters of level 2 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 1753	2	M-H Krater	G.1, V.1	White 8/2 HUE 2.5 Y
2	T.D 1657	2	M-H Krater	G.1, V.2	Light Brown 6/4 HUE 7.5 YR



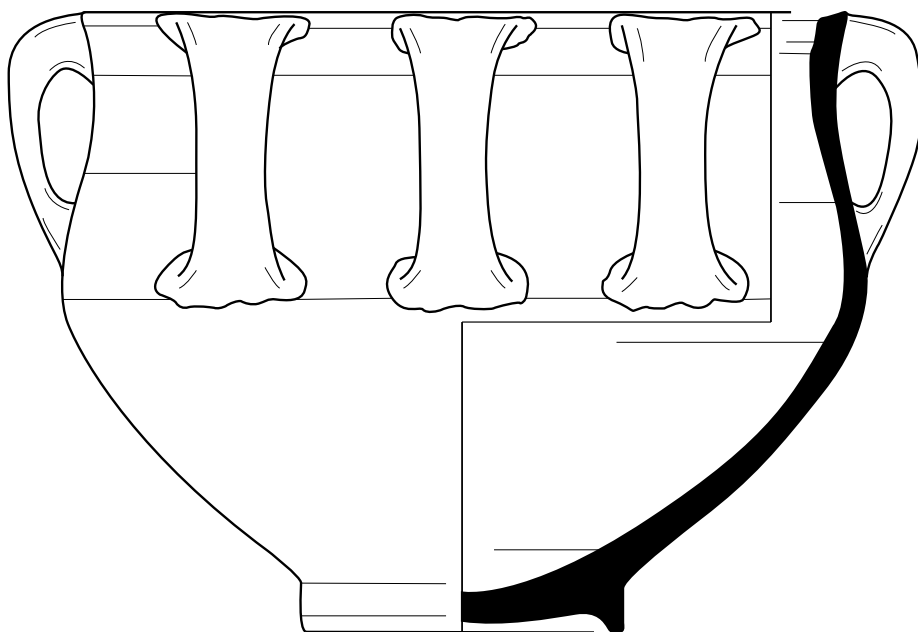
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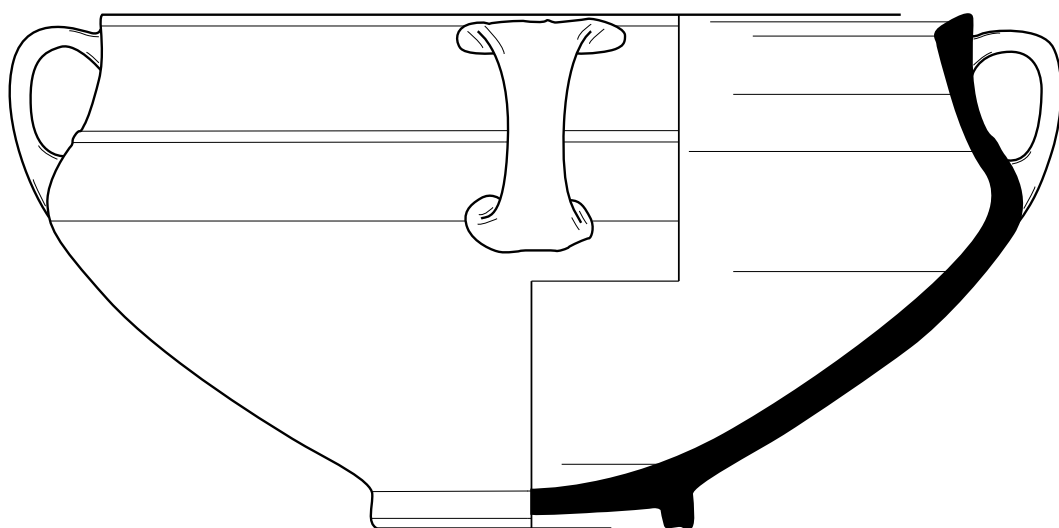
2



Plate 29



1



2



Plate 30

**Plate 31: Multi-Handled Kraters of level 1 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1 +	T.D 1224	1	M-H Krater	G.1, V.5	Reddish Yellow 7/6 HUE 5 YR
2 +	T.D 924	1	M-H Krater	G.1, V.3	Reddish Brown 7/6 HUE 5 YR

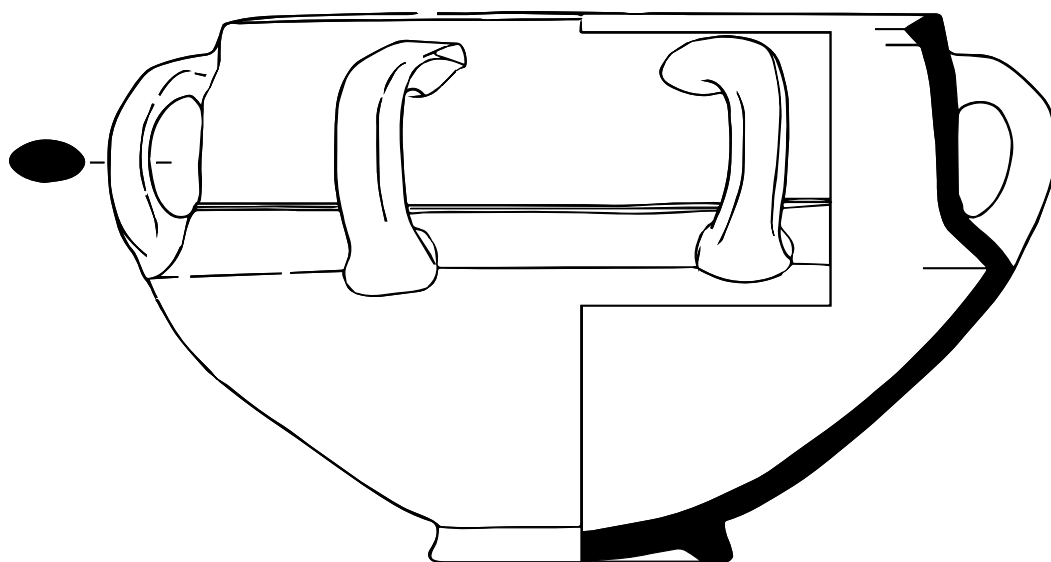
+ 1224: Drawn and published by Cooley and Pratico 1995, fig. 23.1, Pp. 178.

+ 924: Drawn and published by Cooley and Pratico 1995, fig. 23.1, pp. 178.

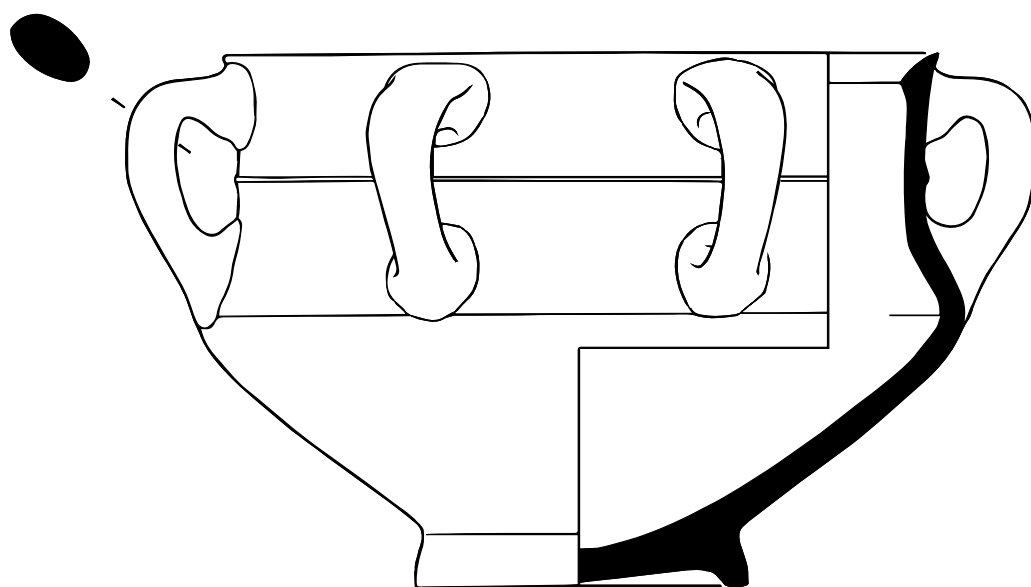
**Plate 32: Multi-Handled Kraters of level 1 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 1246	1	M-H Krater	G.1, V.2	Pink: 7/3 HUE 5 YR
2	T.D 1239	1	M-H Krater	G.1, V.2	Pink 7/3 HUE 5 YR
3	T.D 1099	1	M-H Krater	G.1, V.3	Weak Red 5/2 HUE 2.5 YR





1



2



Plate 31

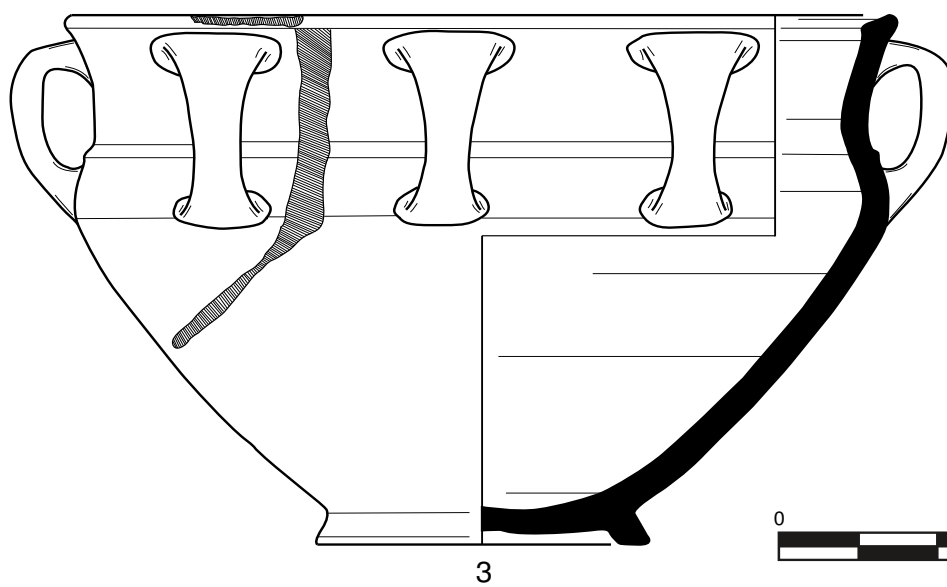
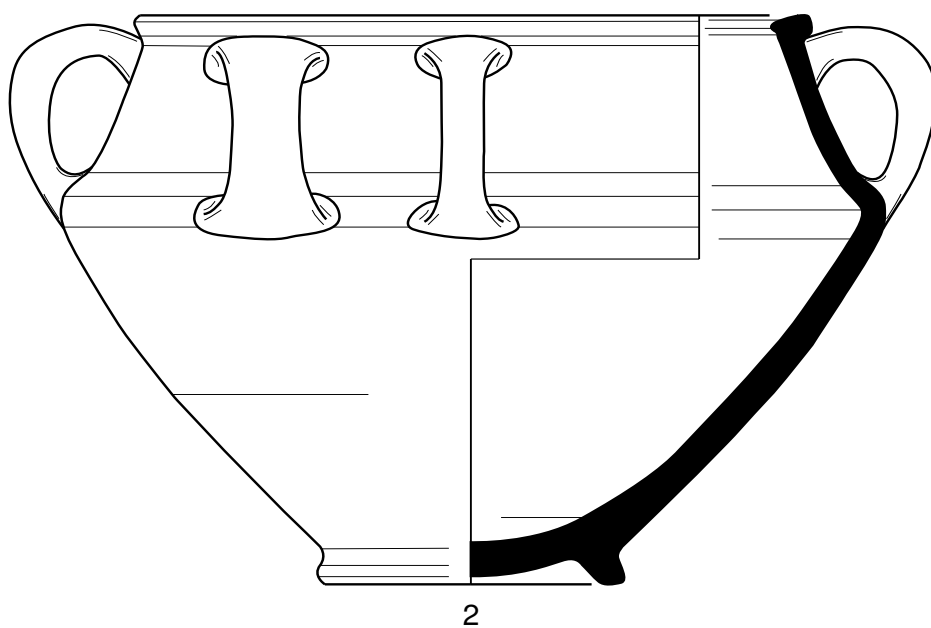
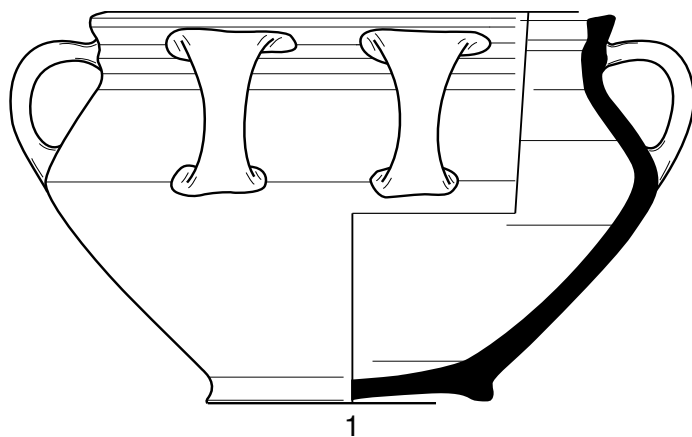


Plate 32

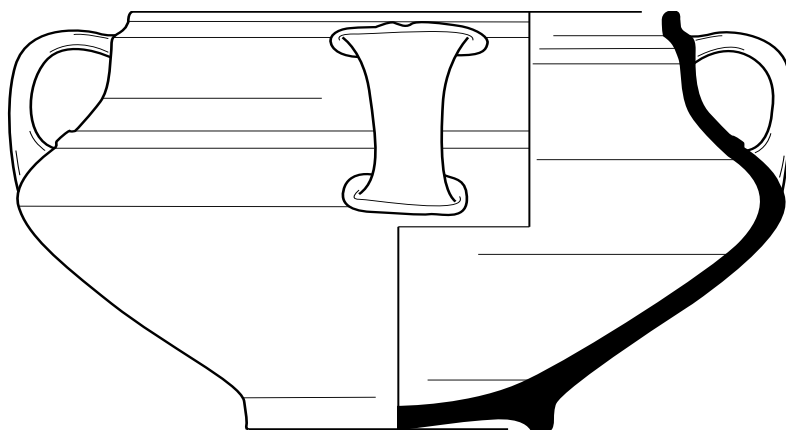
**Plate 33: Multi-Handled Kraters of level 1 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 1006	1	M-H Krater	G.1, V.2	Very Pale Brown 8/3 HUE 10 YR
2 +	T.D 114	1	M-H Krater	G.1, V.2	Pink 7/4 HUE 5 YR
3	T.D 1218	1	M-H Krater	G.1, V.2	White 8/2 "buff" HUE 10 YR

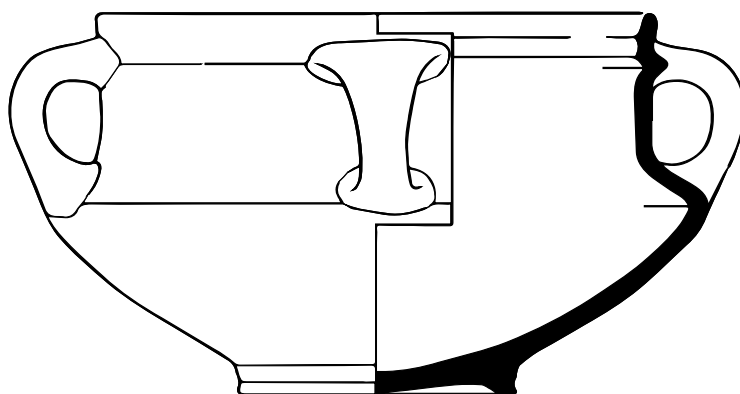
+ 114: Drawn and published by Cooley and Pratico 1995, fig. 22. 1, Pp. 177.

**Plate 34: Multi-Handled Kraters of level 1 of tomb 1**

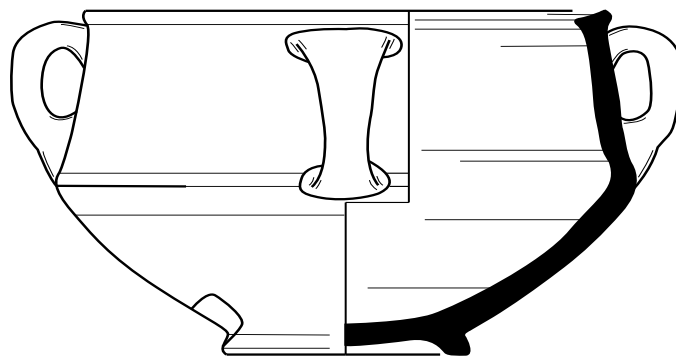
Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 1272	1	M-H Krater	G.1, V.5	White 8/2 HUE 7.5 YR
2	T.D 1125	1	M-H Krater	G.1, V.7	Reddish Yellow 6/6 HUE 5 YR
3	T.D 1290	1	M-H Krater	G.1, V.2	White 8/2 HUE 7.5 YR



1



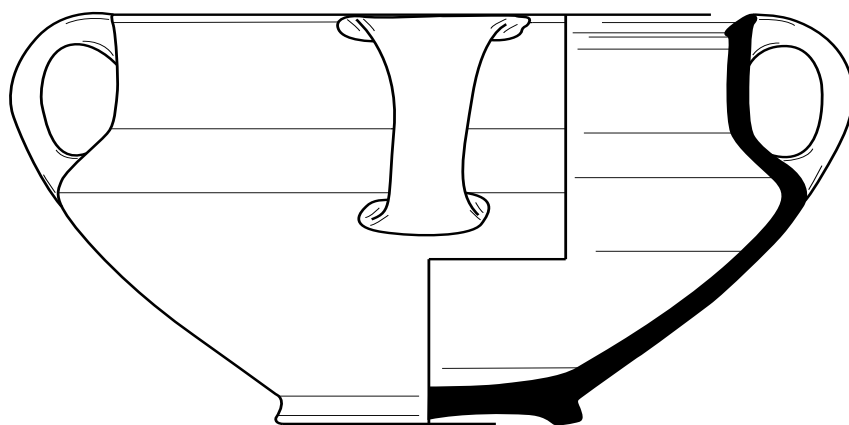
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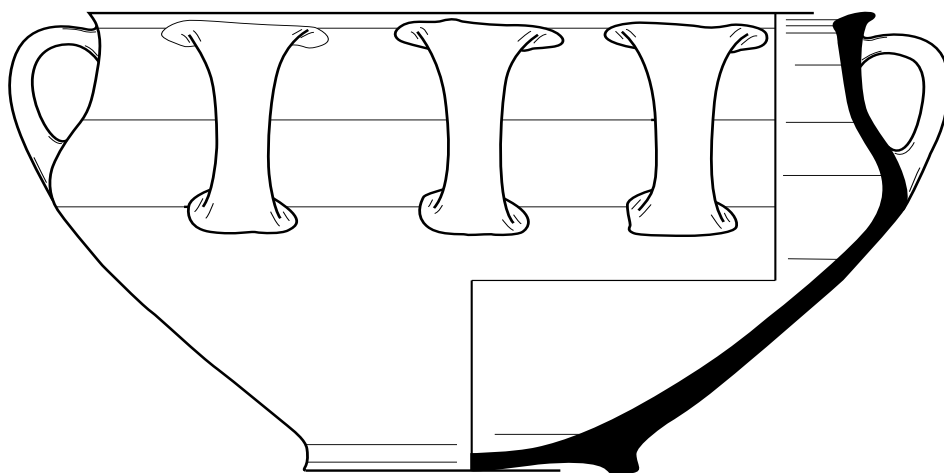
3



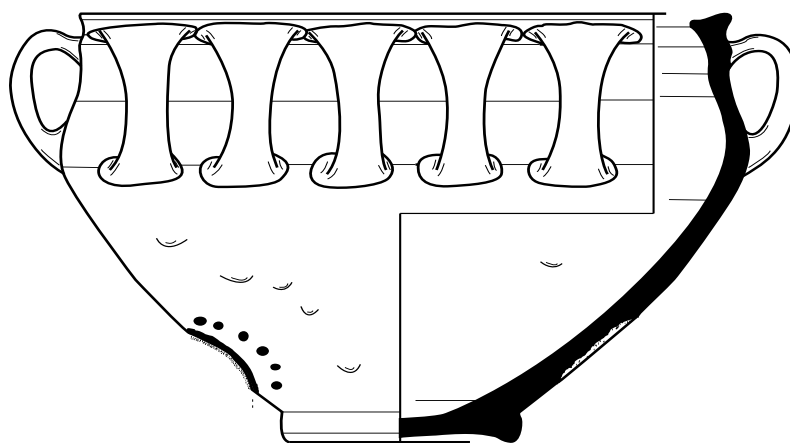
Plate 33



1



2



3



Plate 34

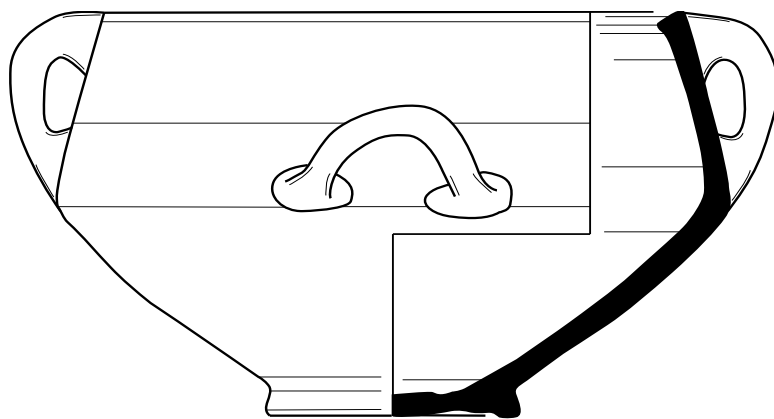
**Plate 35: Multi-Handled Kraters of level 1 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 972	1	M-H Krater	G.1, V.2	Very Pale Brown 7/3 HUE 10 YR
2	T.D 1314	1	M-H Krater	G.1, V.3	Very Pale Brown 7/3 HUE 10 YR

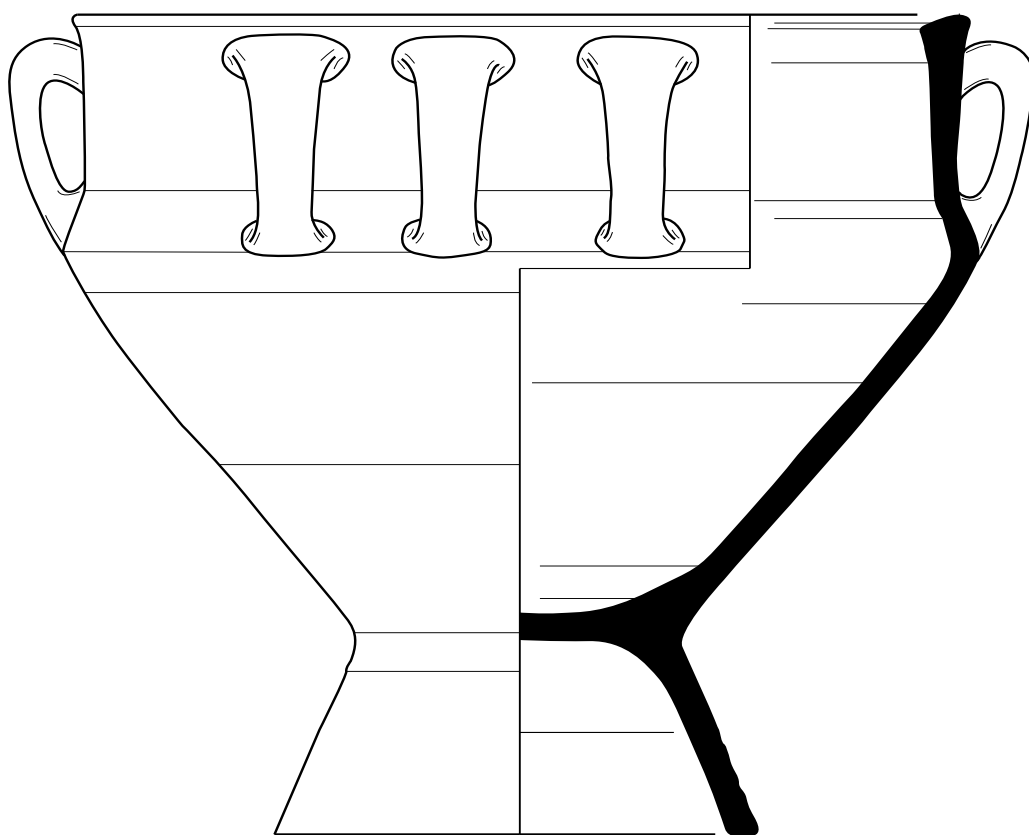
**Plate 36: Multi-Handled Kraters of level 1 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 1292	1	M-H Krater	G.1, V.3	Weak Red 5/4 HUE 10 R
2 +	T.D 1273	1	M-H Krater	G.1, V.3	Weak Red 5/4 HUE 10 R

+ 1273: Drawn and published by Cooley and Pratico 1995, fig. 21.6, Pp. 176.



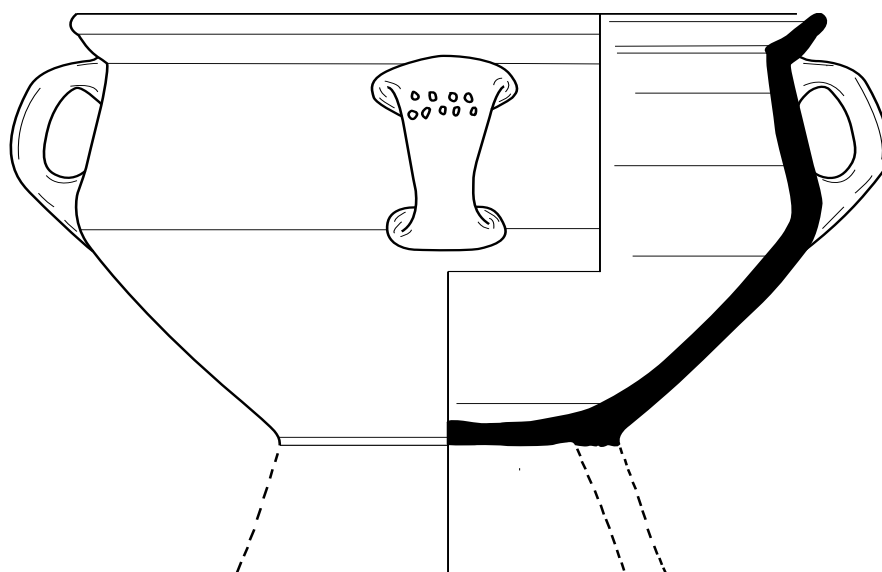
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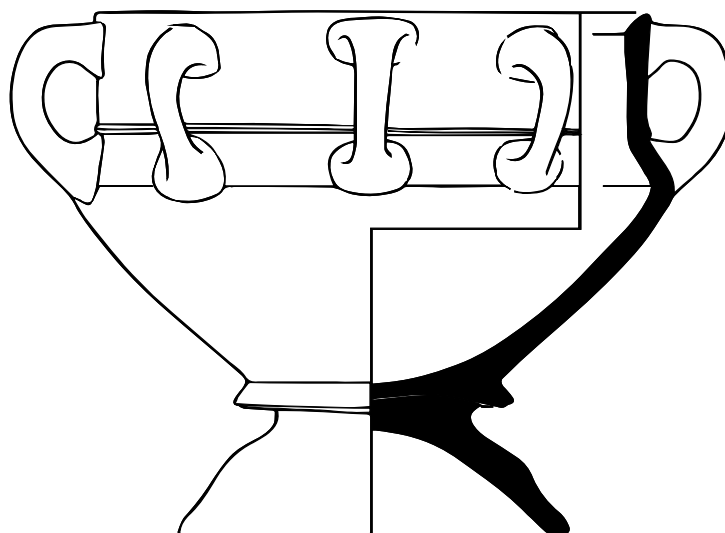
2



Plate 35



1



2



Plate 36



**Plate 37: Multi-Handled Kraters of level 1 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 1050	1	M-H Krater	G.1, V.2	Reddish Yellow 7/6 HUE 7.5 YR
2 +	T.D 966	1	M-H Krater	G.1, V.2	Very Pale Brown 8/3 HUE 10 YR

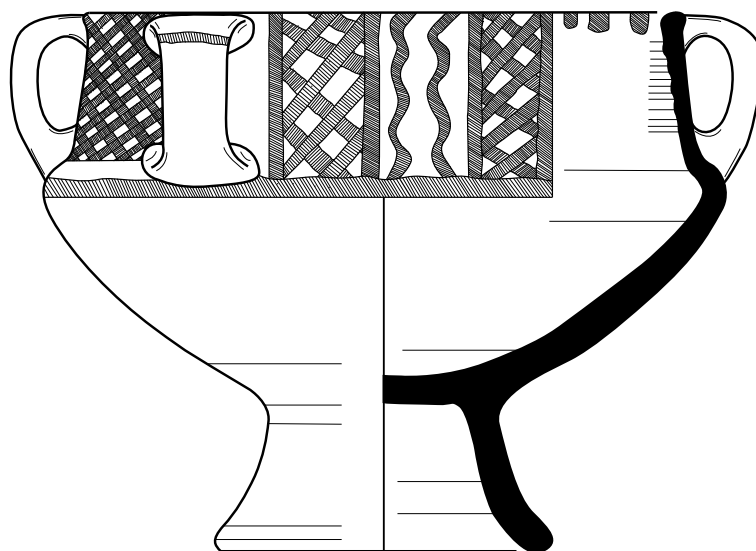
+ 966: Drawn and published by Cooley and Pratico 1995, fig. 22.3, Pp. 177

**Plate 38: Krater-Mugs of levels 5 and 4 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 2687	5	Krater-Mug	G.1, V.5	Very Pale Brown 8/4 HUE 10 YR
2	T.D 2543	5	Krater-Mug	G.1, V.7	Very Pale Brown 7/4 HUE 10 YR
3	T.D 2426	4	Krater-Mug	G.1, V.1	Very Pale Brown 7/4 HUE 10 YR
4	T.D 2395	4	Krater-Mug	G.1, V.7	Pinkish Gray 7/2 HUE 7.5 YR
5	T.D 737	4	Krater-Mug	G.1, V.7	Pink 7/4 HUE 7.5 YR
6 +	T.D 2338	4	Krater-Mug	G.1, V.1	Pink 7/4 HUE 5 YR
7 +	T.D 2415	4	Krater-Mug	G.1, V.2	Pink 7/4 HUE 5 YR

+ 2338: Drawn and published by Cooley and Pratico 1995, fig: 33. 7, Pp. 188.

+ 2415: Drawn and published by Cooley and Pratico 1995, fig: 33. 6, Pp. 188.



1



2



Plate 37

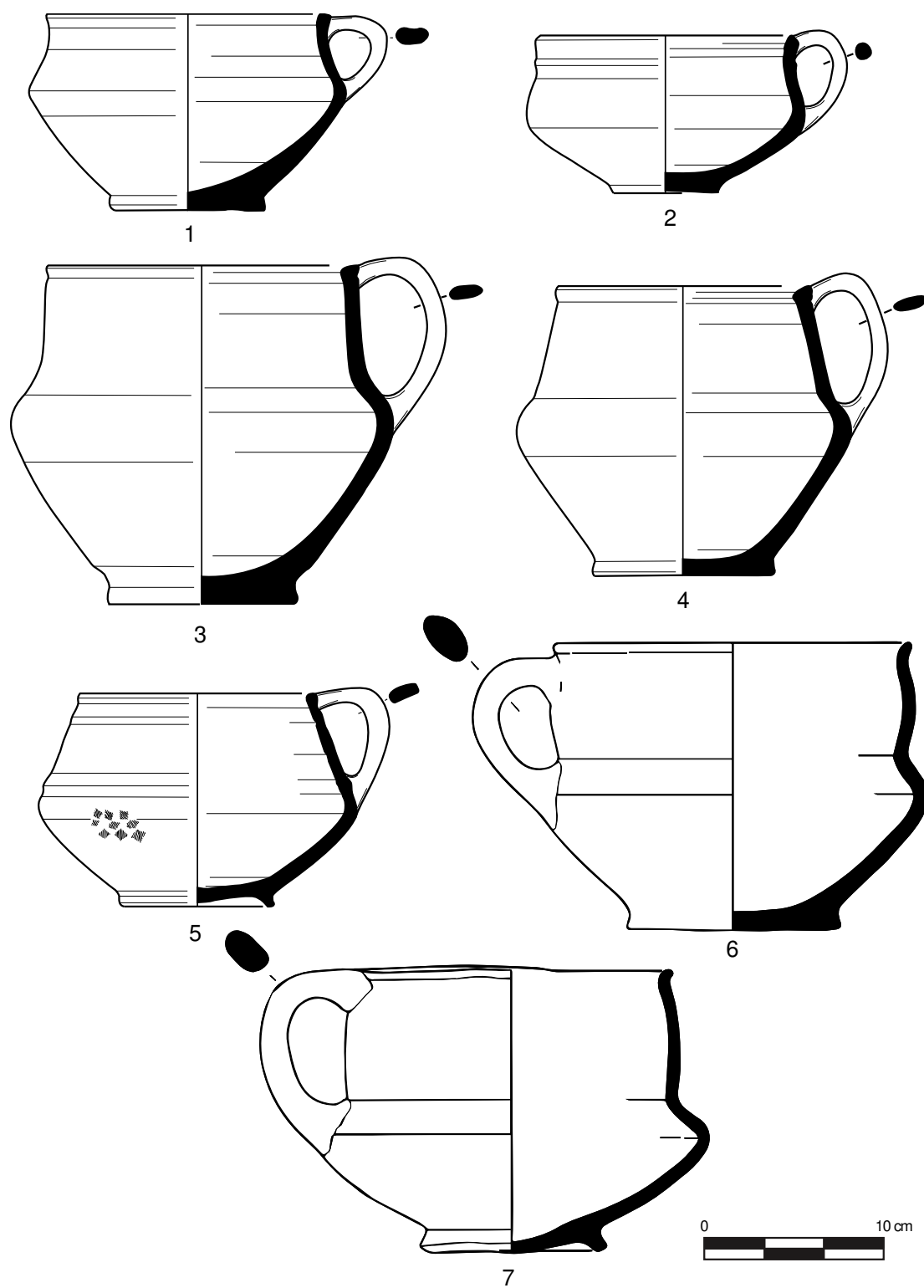


Plate 38

**Plate 39: Krater-Mugs of level 3 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 2204	3	Krater-Mug	G.1, V.1	Pink 7/4 HUE 5 YR
2	T.D 1996	3	Krater-Mug	G.1, V.4	Reddish Yellow 6/6 HUE 5YR
3	T.D 2236	3	Krater-Mug	G.1, V.7	Very Pale Brown 8/4 HUE 10 YR
4	T.D 2205	3	Krater-Mug	G.1, V.1	White 8/2 HUE 2.5 Y
5	T.D 545	3	Krater-Mug	G.1, V.2	Pink 7/4 HUE 5 YR
6 +	T.D 2143	3	Krater-Mug	G.1, V.1	Pink 7/4 HUE 5 YR
7 +	T.D 537	3	Krater-Mug	G.1, V.1	White 8/2 HUE 10 YR

+ 2143: Drawn and published by Cooley and Pratico 1995, fig: 31. 1, Pp. 186.

+ 537: Drawn and published by Cooley and Pratico 1995, fig: 31. 2, Pp. 186.

**Plate 40: Krater-Mugs of levels 3, 2 and 1 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1 +	T.D 2071	3	Krater-Mug	G.1, V.2	Reddish Yellow 7/6 HUE 5 YR
2	T.D 2108	3	Krater-Mug	G.1, V.2	Light Gray HUE 10 YR
3	T.D 2146	3	Krater-Mug	G.1, V.2	Pink 7/4 HUE 7.5 YR
4	T.D 460	2	Krater-Mug	G.1, V.2	White 8/2 HUE 2.5 Y
5	T.D 1552	2	Krater-Mug	G.1, V.7	Reddish Yellow 7/6 HUE 5 YR
6	T.D 240	2	Krater-Mug	G.1, V.1	Pink 7/3 HUE 10 YR
7 +	T.D 927	1	Krater-Mug	G.1, V.2	Pink 7/4 HUE 5 YR

+ 2071: Drawn and published by Cooley and Pratico 1995, fig: 31. 3, Pp. 186.

+ 927: Drawn and published by Cooley and Pratico 1995, fig: 21. 3. Pp. 176.

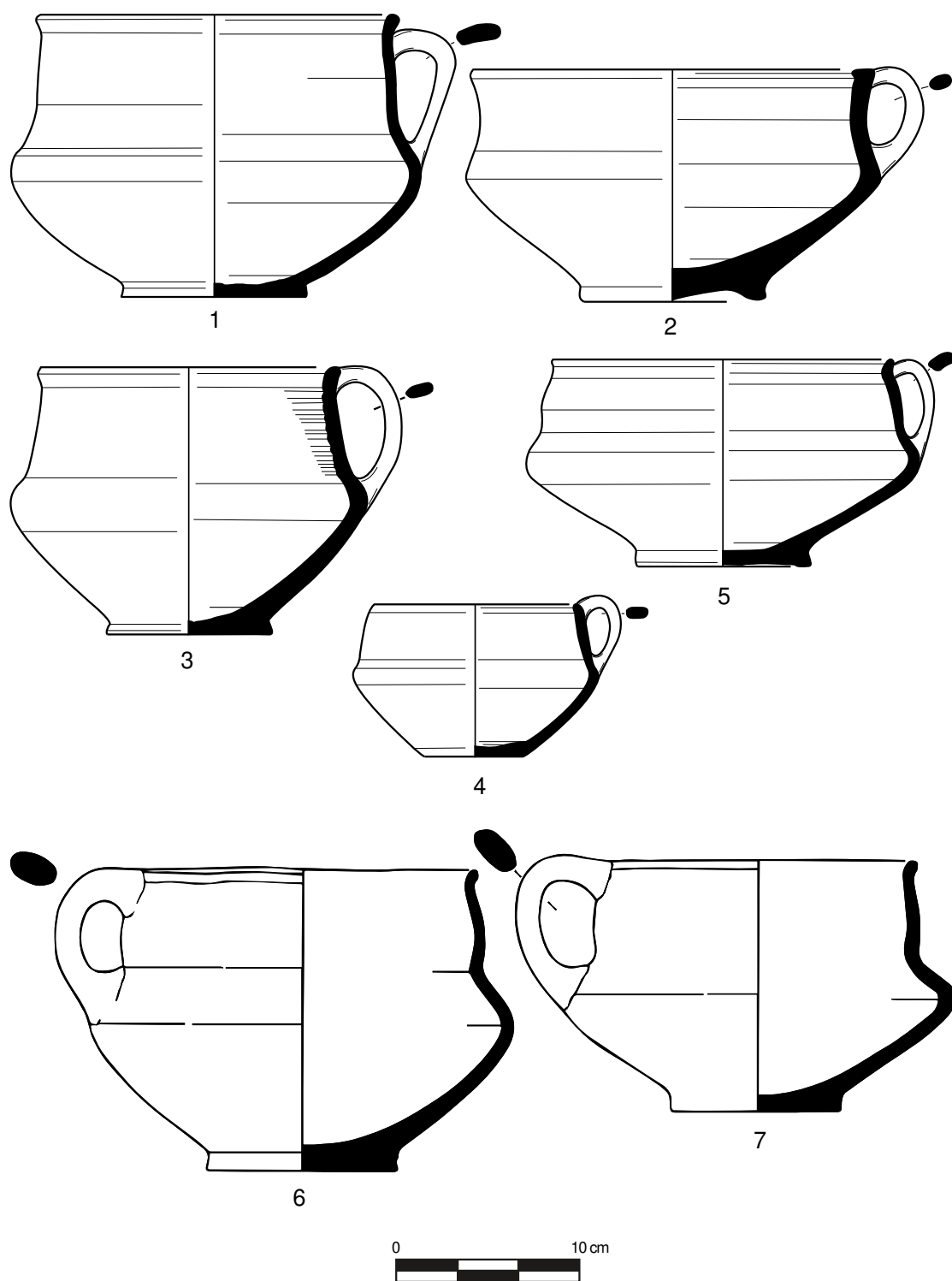


Plate 39

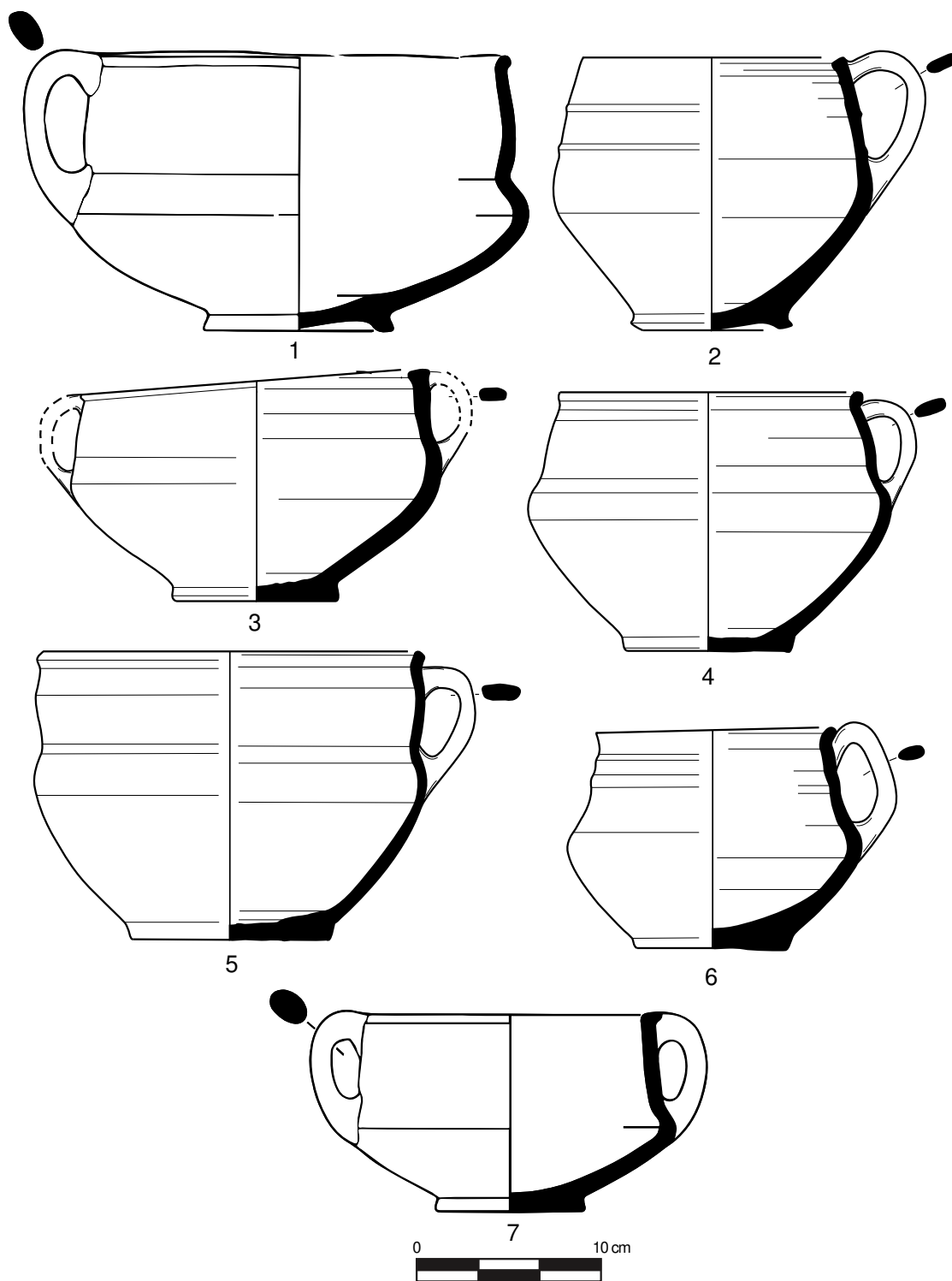


Plate 40

**Plate 41: Jars of level 5 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 2651	5	Jar	G.1, V.6	Dark Gray 4/1 HUE 5 YR
2	T.D 2632	5	Jar	G.7	Light Gray 7/1 HUE 5 Y

**Plate 42: Jars of levels 5 and 4 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 2543	5	Jar	G.1, V.4	White 8/2 HUE 2.5 Y
2	T.D 2412	4	Jar	G.1, V.1	Pink 7/4 HUE 5 YR

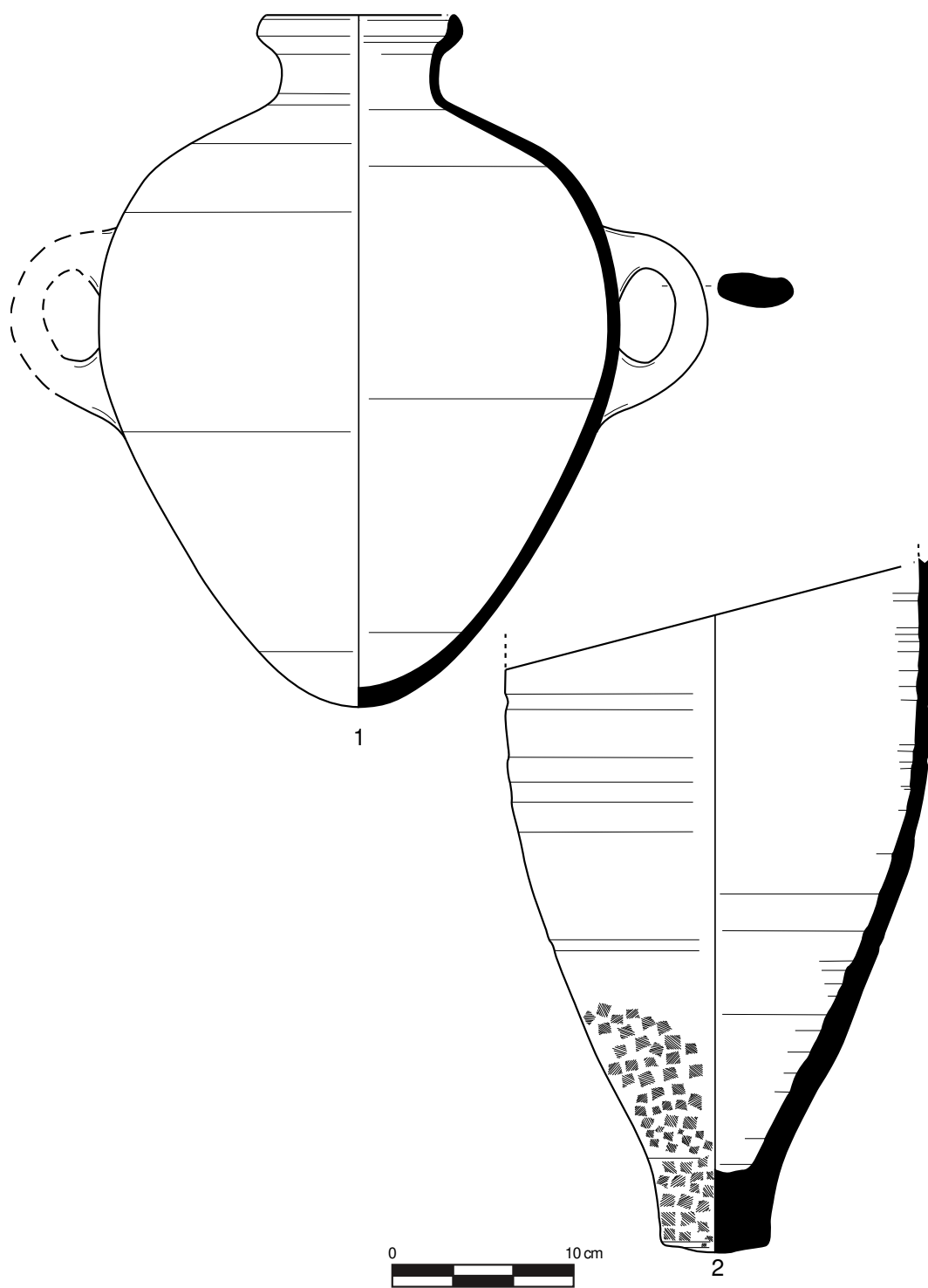
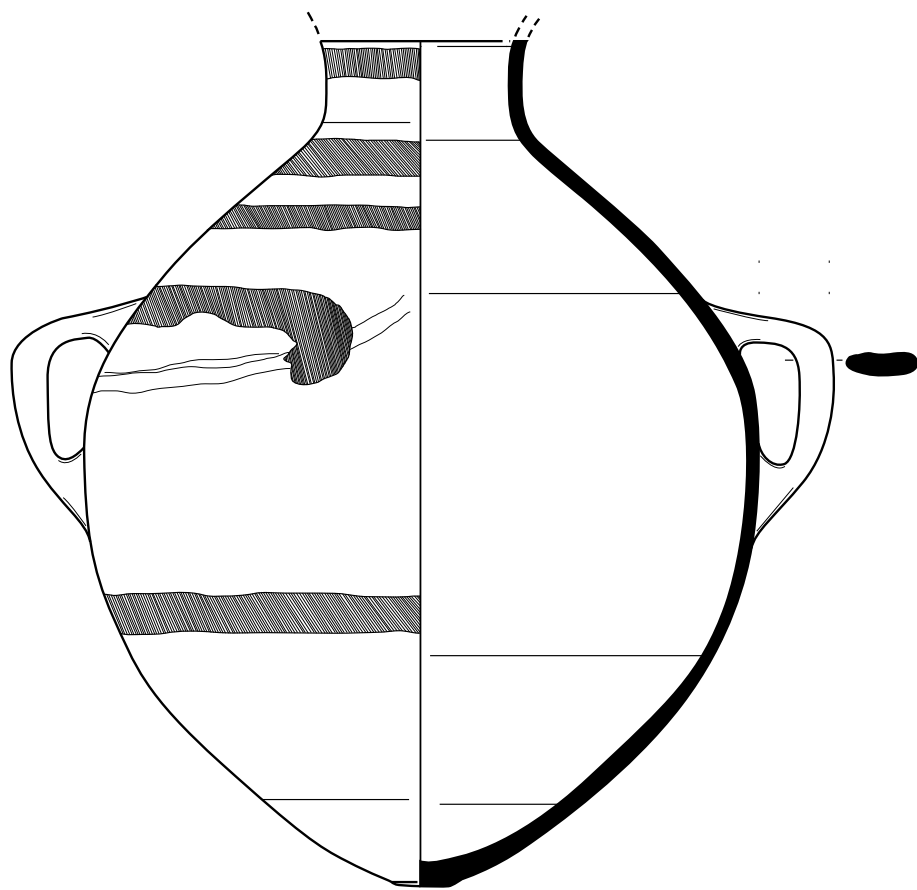
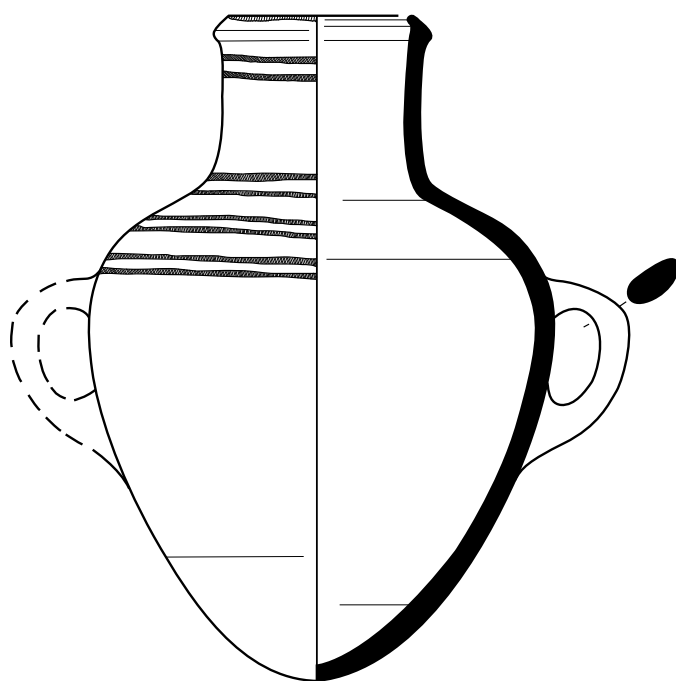


Plate 41





1



2



Plate 42

**Plate 43: Jars of levels 3, 2, and 1 of tomb 1**

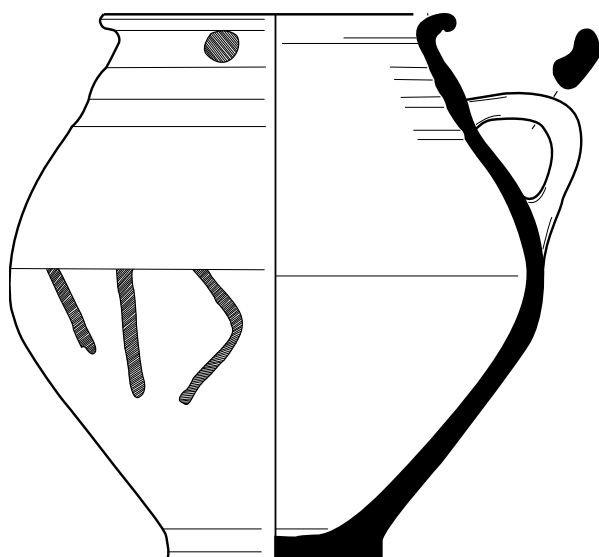
Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 1942	3	Jar	G.1, V.2	White 8/2 HUE 2.5 Y
2	T.D 2105	3	Jar	G.7	Pink 7/4 HUE 5 YR
3	T.D 479	2	Jar	G.7	Red 5/8 HUE 10 R
4	T.D 1201	1	Jar	G.1, V.1	White 8/2 HUE 10 YR

**Plate 44: Biconical Jars of level 5 of tomb 1**

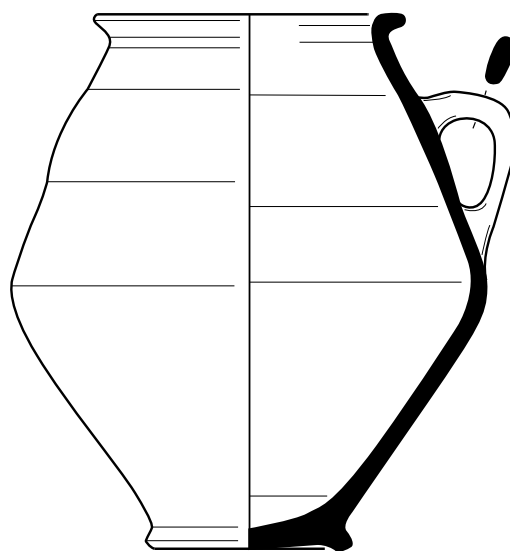
Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 2709	5	Bi-Jar	G.1, V.7	Very Pale Brown HUE 10 YR
2	T.D 2582	5	Bi-Jar	G.1, V.7	Pink 7/4 HUE 5 YR
3	T.D 2649	5	Bi-Jar	G.1, V.3	Dark Reddish Gray HUE 10 R
4	T.D 2741	5	Bi-Jar	G.1, V.3	Red 5/6 HUE 2.5 YR



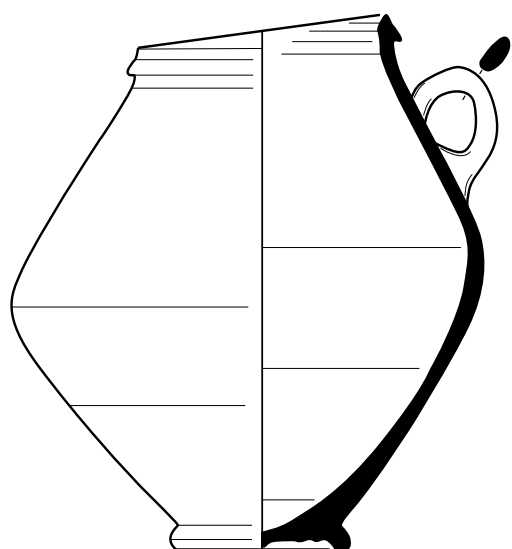
Plate 43



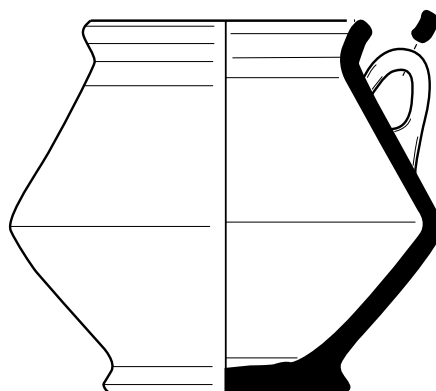
1



2



3



4



Plate 44

**Plate 45: Biconical Jars of level 4 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 888	4	Bi-Jar	G.1, V.5	Pale Yellow 8/4 HUE 2.5 Y
2 +	T.D 898	4	Bi-Jar	G.1, V.3	Reddish Brown 5/4 HUE 2.5 YR
3	T.D 2534	4	Bi-Jar	G.1, V.2	Pink 7/4 HUE 5 YR
4	T.D 2479	4	Bi-Jar	G.1, V.2	Reddish Yellow 7/6 HUE 5 YR
5 +	T.D 2351	4	Bi-Jar	G.1, V.2	White 8/2 HUE 10 YR
6 +	T.D 2431	4	Bi-Jar	G.1, V.5	White 8/2 HUE 10 YR

+ 898: Drawn and published by Cooley and Pratico 1995, fig: 32.9, Pp. 187.

+ 2351: Drawn and published by Cooley and Pratico 1995, fig. 33.1, Pp. 188.

+ 2431 Drawn and published by Cooley and Pratico 1995, fig. 32.8, Pp. 187.

**Plate 46: Biconical Jars of level 4 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 2291	4	Bi-Jar	G.1, V.4	Light Brown HUE 7.5 YR
2	T.D 2411	4	Bi-Jar	G.1, V.1	Pink 7/4 HUE 5 YR
3	T.D 2340	4	Bi-Jar	G.1, V.1	White 8/2 HUE 2.5 Y
4	T.D 2463	4	Bi-Jar	G.1, V.2	White 8/2 HUE 2.5 Y
5	T.D 2486	4	Bi-Jar	G.1, V.1	Pink 7/4 HUE 5 YR
6	T.D 912	4	Bi-Jar	G.1, V.4	Pink 7/4 HUE 5 YR
7	T.D 2526	4	Bi-Jar	G.1, V.7	White 8/1 HUE 10 YR

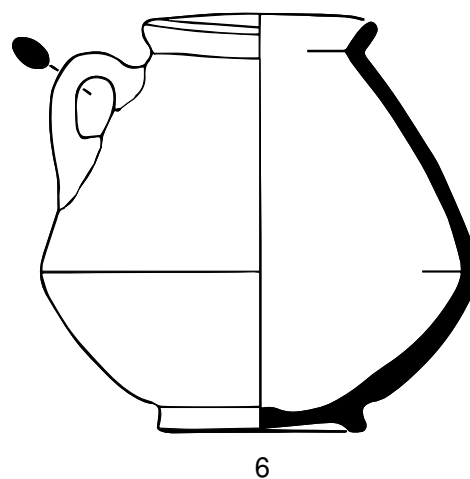
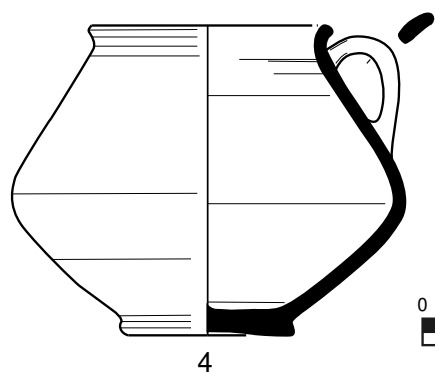
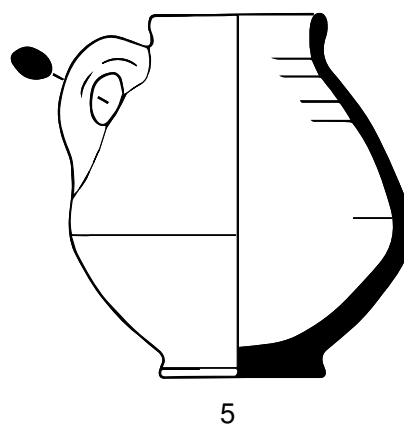
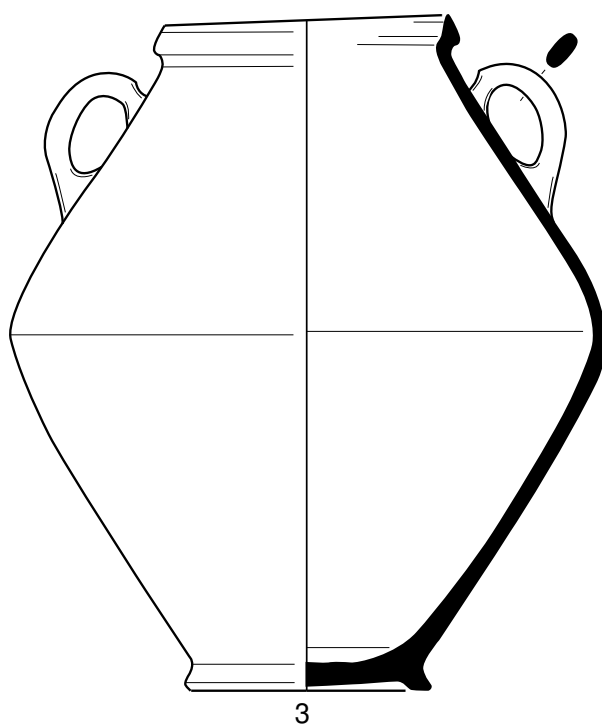
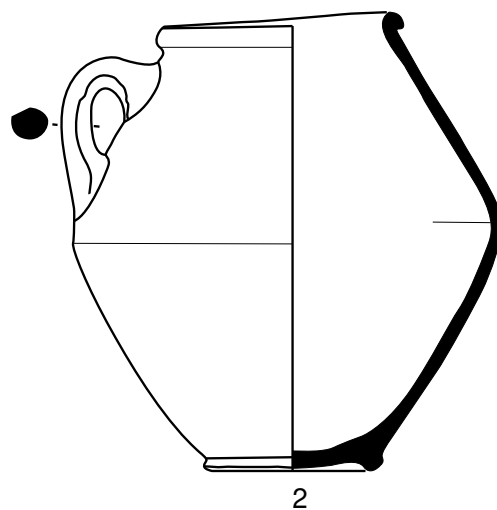
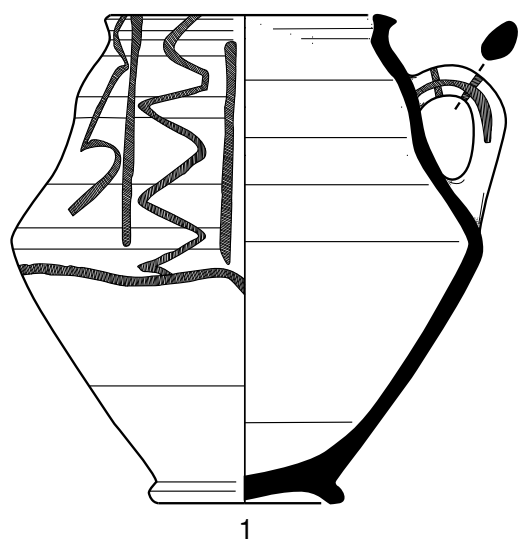


Plate 45

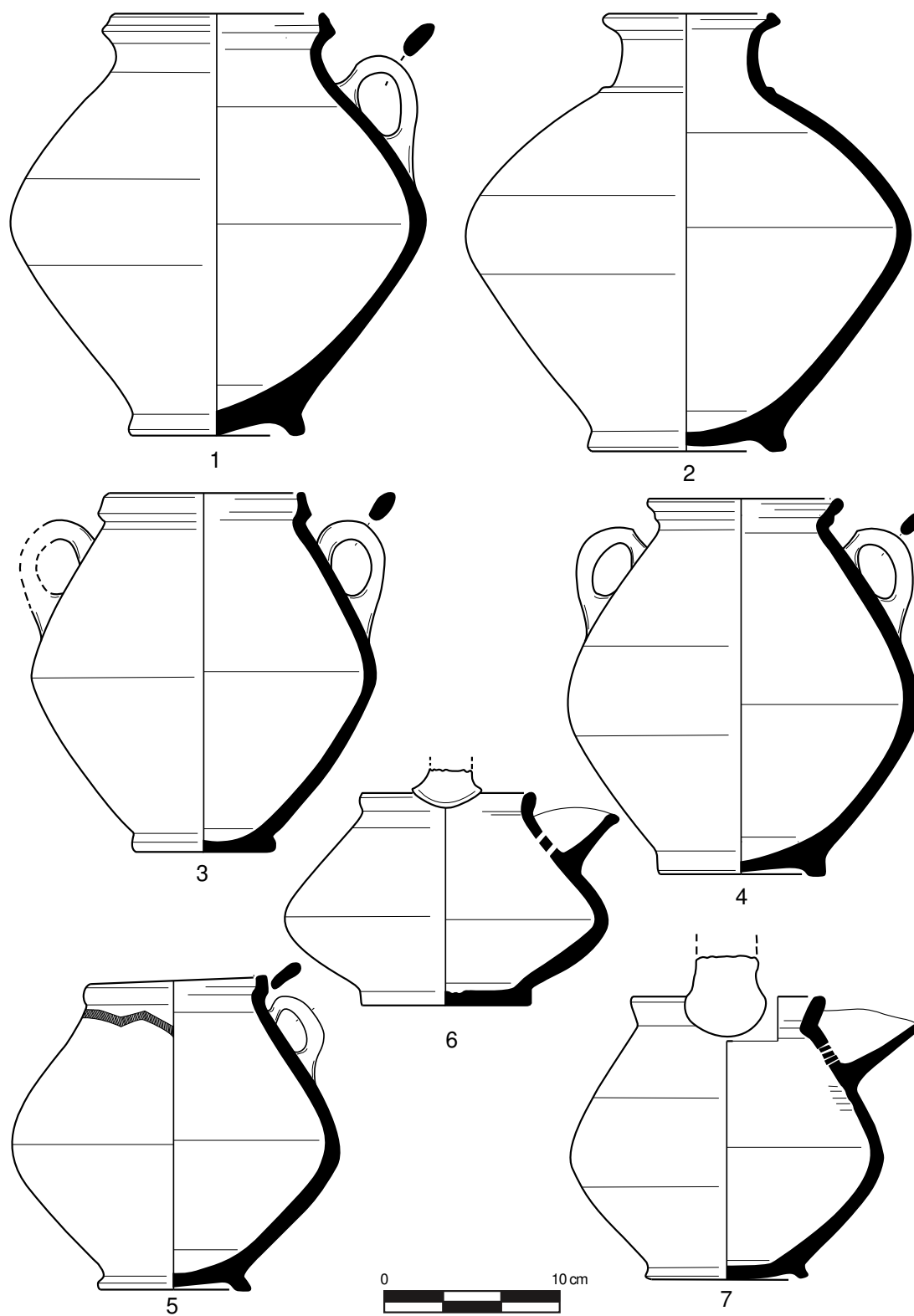


Plate 46

**Plate 47: Biconical Jars of level 3 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 1964	3	Bi-Jar	G.1, V.2	Pink 7/3 HUE 5 YR
2 +	T.D 2151	3	Bi-Jar	G.1, V.2	White 8/2 HUE 10 YR
3	T.D 1963	3	Bi-Jar	G.1, V.1	Reddish Yellow 6/6 HUE 5 YR
4	T.D 2238	3	Bi-Jar	G.1, V.1	Reddish Yellow 6/6 HUE 5 YR
5	T.D 534	3	Bi-Jar	G.1, V.1	White 8/2 HUE 2.5 Y

+ 2151: Drawn and published by Cooley and Pratico 1995, fig 29.1, Pp. 184.

**Plate 48: Biconical Jars of level 3 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 2017	3	Bi-Jar	G.1, V.1	White 8/2 HUE 2.5 Y
2	T.D 2120	3	Bi-Jar	G.1, V.5	White 8/2 HUE 10 YR
3 +	T.D 2072	3	Bi-Jar	G.1, V.1	White 8/2 HUE 10 YR
4 +	T.D 2023	3	Bi-Jar	G.1, V.1	Pink 7/4 HUE 5 YR
5	T.D 2047	3	Bi-Jar	G.1, V.1	White 8/2 HUE 10 YR
6	T.D 1982	3	Bi-Jar	G.1, V.1	White 8/2 HUE 10 YR
7	T.D 2263	3	Bi-Jar	G.1, V.2	Pinkish Gray 7/2 HUE 5 YR

+ 2072: Drawn and published by Cooley and Pratico 1995, fig: 29.2, Pp. 184.

+ 2023: Drawn and published by Cooley and Pratico 1995, fig. 29.5, Pp. 184.



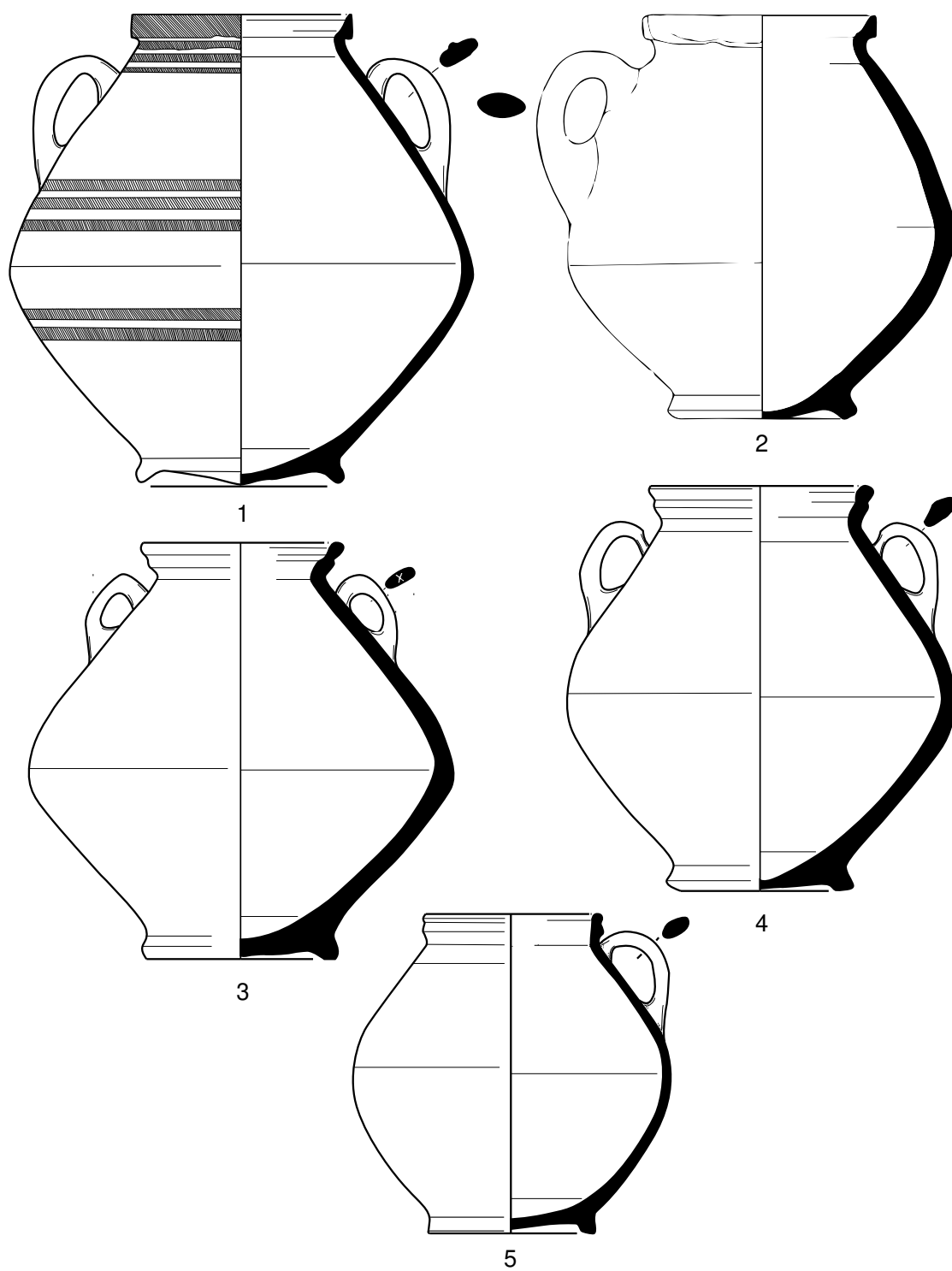


Plate 47

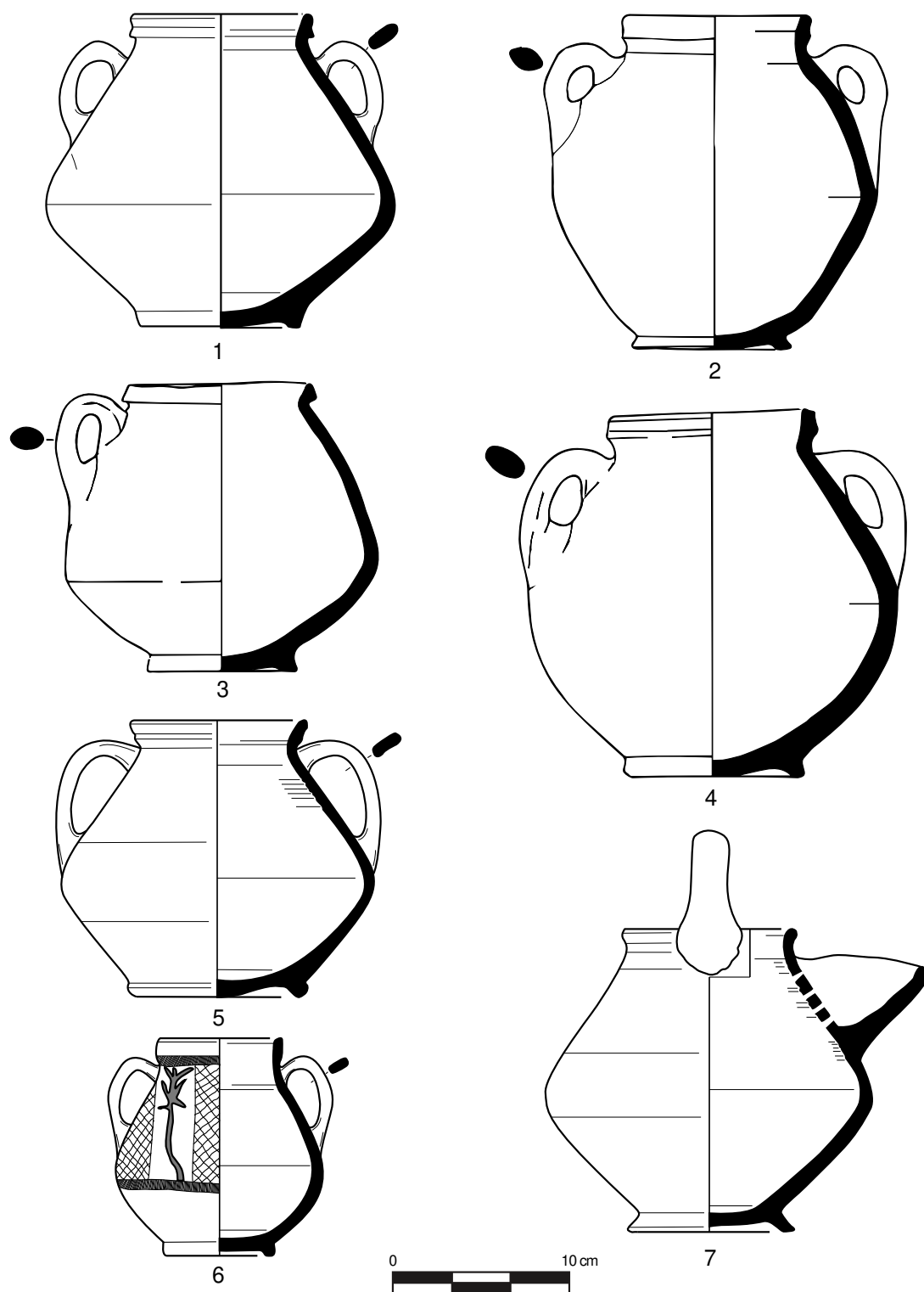


Plate 48

**Plate 49: Biconical Jars of level 2 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 1692	2	Bi-Jar	G.1, V.1	Light Gray 7/2 HUE 2.5 Y
2	T.D 1645	2	Bi-Jar	G.1, V.1	White 8/2 HUE 2.5 YR
3	T.D 1524	2	Bi-Jar	G.1, V.1	Reddish Yellow 6/6 HUE 5 YR
4	T.D 1510	2	Bi-Jar	G.1, V.2	Reddish Yellow 7/6 HUE 7.5 YR
5	T.D 1589	2	Bi-Jar	G.1, V.1	Very Pale Brown 7/3 HUE 10 YR

**Plate 50: Biconical Jars of level 2 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 1590	2	Bi-Jar	G.1, V.1	White 8/2 HUE 2.5 Y
2 +	T.D 1769	2	Bi-Jar	G.1, V.3	Pink 7/4 HUE 5 YR
3 +	T.D 1764	2	Bi-Jar	G.1, V.1	White 8/2 HUE 10 YR
4	T.D 1883	2	Bi-Jar	G.1, V.1	Pink 7/4 HUE 7.5 YR
5	T.D 1674	2	Bi-Jar	G.1, V.2	Reddish Yellow 7/6 HUE 5 YR

+ 1769: Drawn and published by Cooley and Pratico 1995, fig: 25.1, Pp. 180.

+ 1764: Drawn and published by Cooley and Pratico 1995, fig: 25.1, Pp. 180.

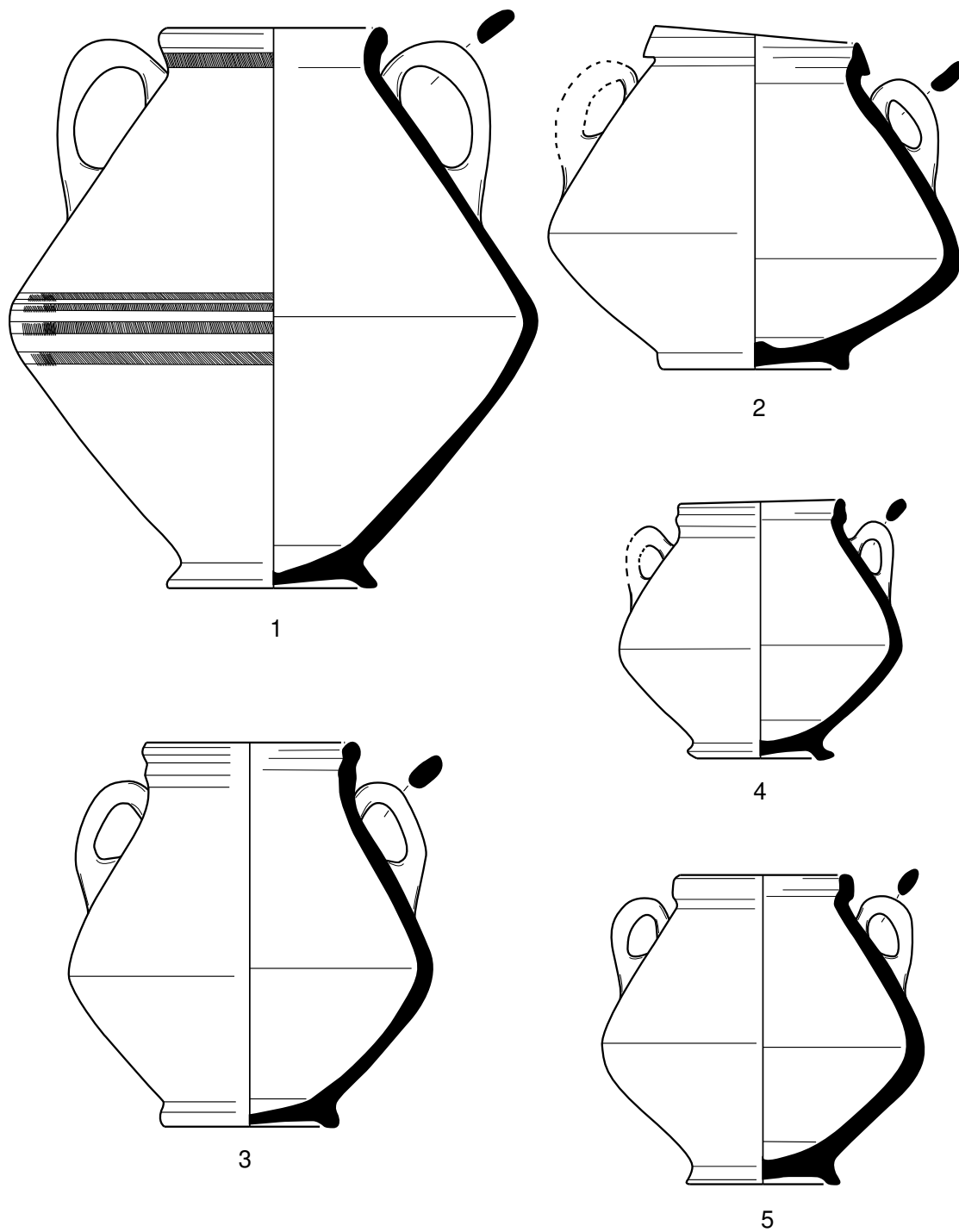
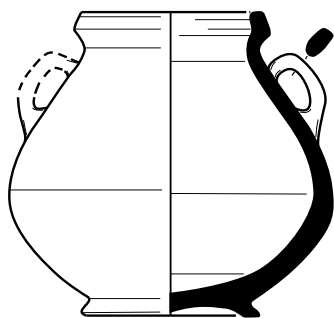
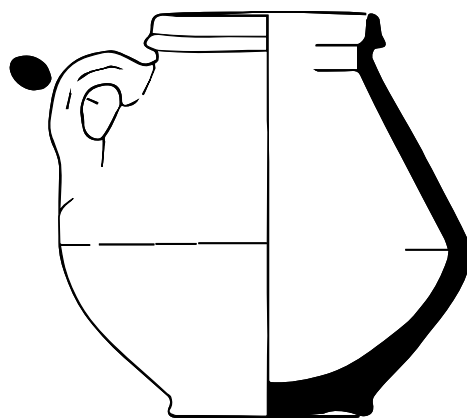


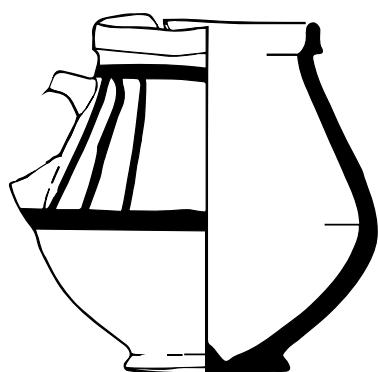
Plate 49



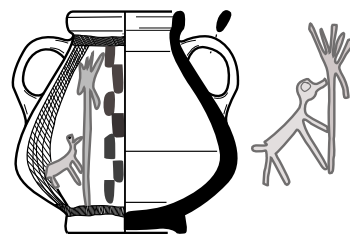
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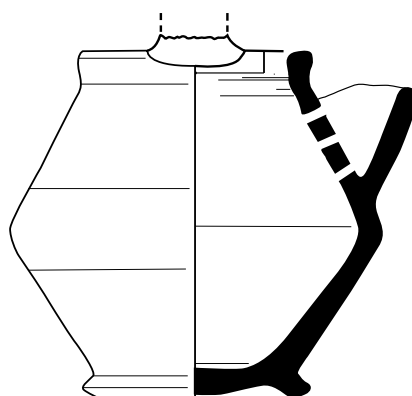
2



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Plate 50

**Plate 51: Biconical Jars of level 1 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 1313	1	Bi-Jar	G.1, V.7	White 8/2 HUE 10 YR
2	T.D 1216	1	Bi-Jar	G.1, V.1	White 8/2 HUE 10 YR
3 +	T.D 108	1	Bi-Jar	G.1, V.5	White 8/2 HUE 10 YR
4 +	T.D 56	1	Bi-Jar	G.1, V.5	Pink 7/4 HUE 5 YR
5 +	T.D 1300	1	Bi-Jar	G.1, V.5	Reddish Yellow 7/6 HUE 7.
6 +	T.D 1340	1	Bi-Jar	G.1, V.2	Reddish Yellow 7/6 HUE 7.5 YR
7 +	T.D 1170	1	Bi-Jar	G.1, V.2	Pink 7/4 HUE 5 YR

+ 108: Drawn and published by Cooley and Pratico 1995, fig 20:3, Pp. 175.

+ 56: Drawn and published by Cooley and Pratico 1995, fig: 20.1, Pp. 175.

+ 1300: Drawn and published by Cooley and Pratico 1995, fig: 20:2, Pp. 175.

+ 1340: Drawn and published by Cooley and Pratico 1995, fig: 20:7, Pp. 175.

+ 1170: Drawn and published by Cooley and Pratico 1995, fig: 20.4, Pp. 175.

**Plate 52: Jugs of Level 5 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 2622	5	Jug	G.1, V.3	Reddish Brown 5/4 HUE 2.5 YR
2	T.D 2627	5	Jug	G.1, V.2	White 8/2 HUE 10 YR
3	T.D 2705	5	Jug	G.1, V.6	Reddish Yellow 6/6 HUE 5 YR
4	T.D 2613	5	Jug	G.1, V.2	Pink 7/4 HUE 7.5 YR
5	T.D 2759	5	Jug	G.1, V.7	Reddish Yellow 7/6 HUE 5 YR
6	T.D 2592	5	Jug	G.1, V.5	Very Pale Brown 7/4 HUE 10 YR
7	T.D 2569	5	Jug	G.1, V.2	White 8/2 HUE 10 YR
8	T.D 2676	5	Jug	G.1, V.1	Pink 7.4 HUE 7.5 YR

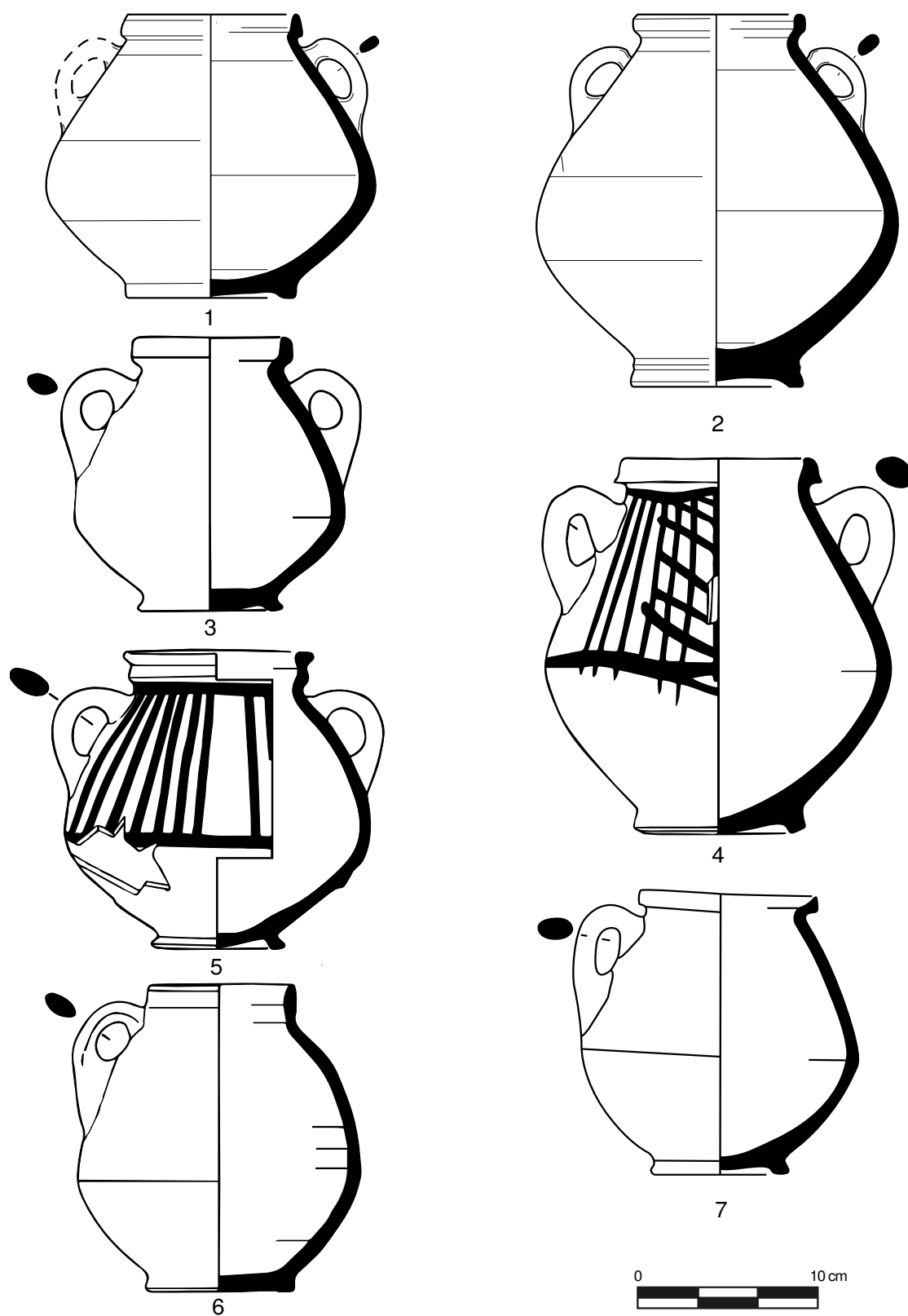


Plate 51

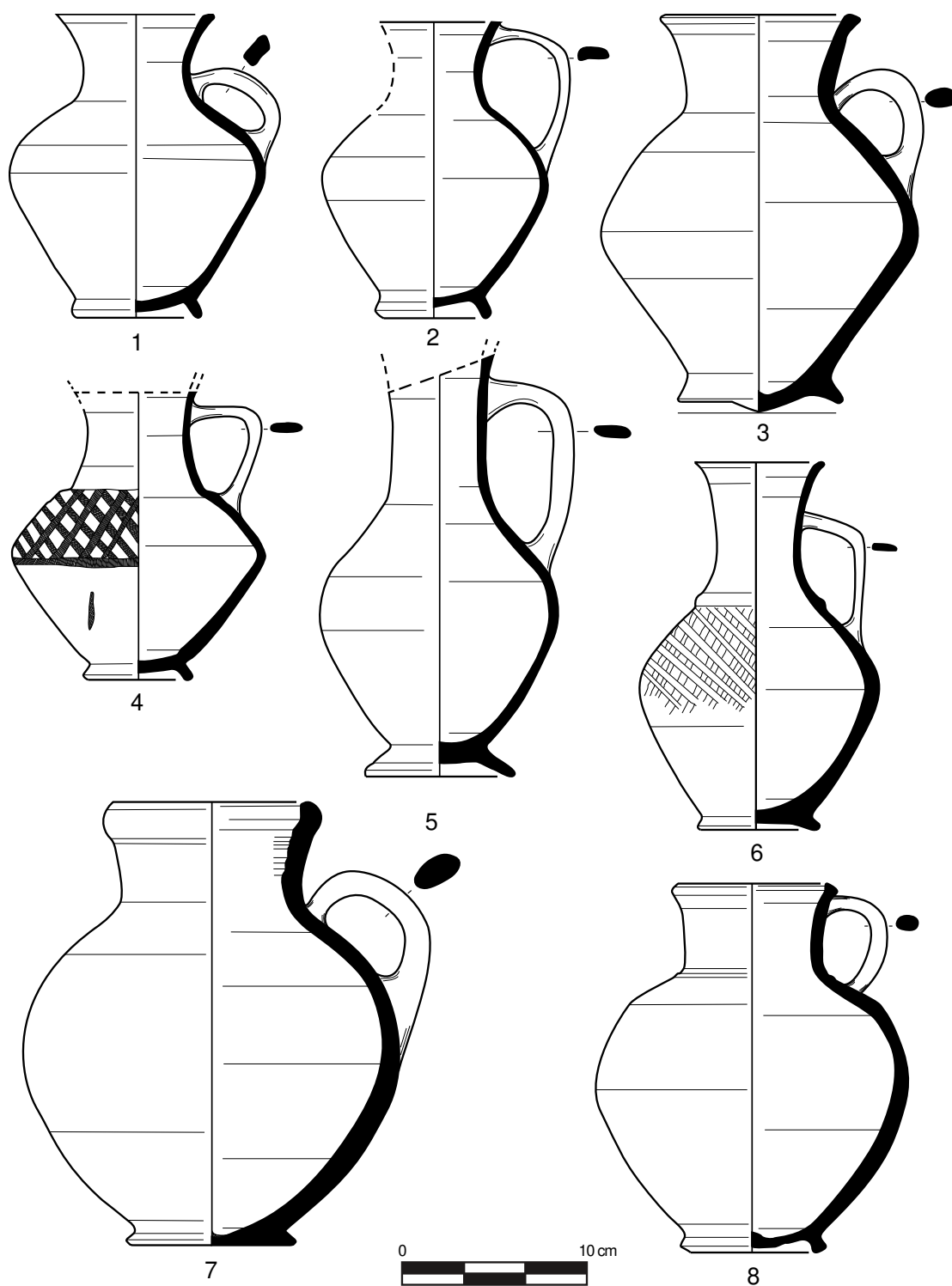


Plate 52

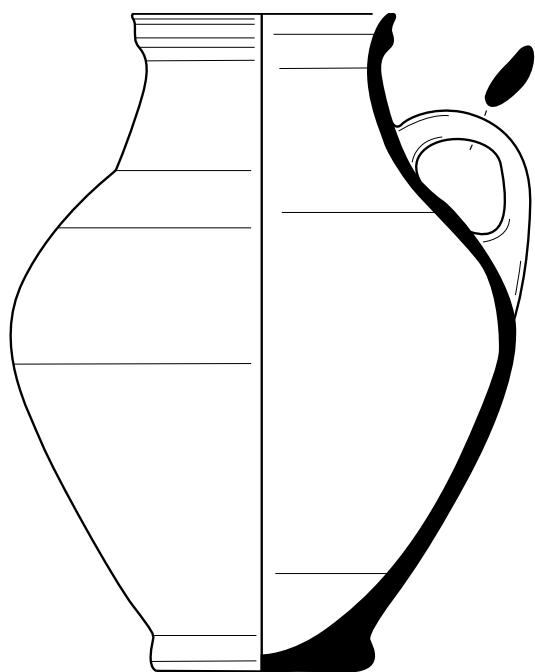


**Plate 53: Jugs of level 5 of tomb 1**

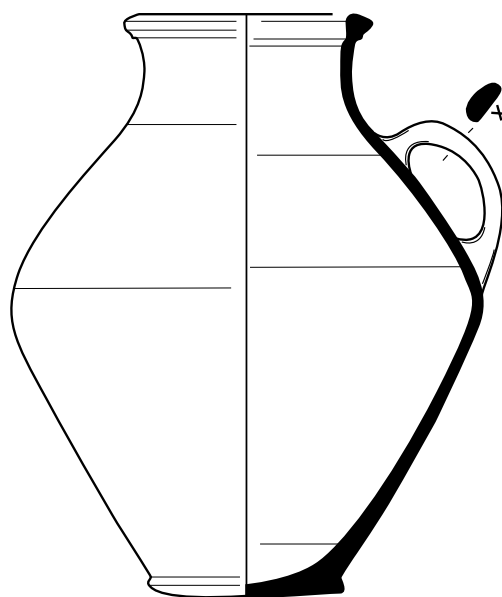
Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 2643	5	Jug	G.1, V.4	Pink 7/4 HUE 7.5 YR
2	T.D 2626	5	Jug	G.1, V.2	Reddish Yellow 7/6 HUE 5 YR
3	T.D 2583	5	Jug	G.1, V.4	Pink 7/4 HUE 5 YR
4	T.D 2671	5	Jug	G.1, V.3	Light Reddish Brown 6/4 HUE 5 YR

**Plate 54: Jugs of levels 5, and 4 of tomb 1**

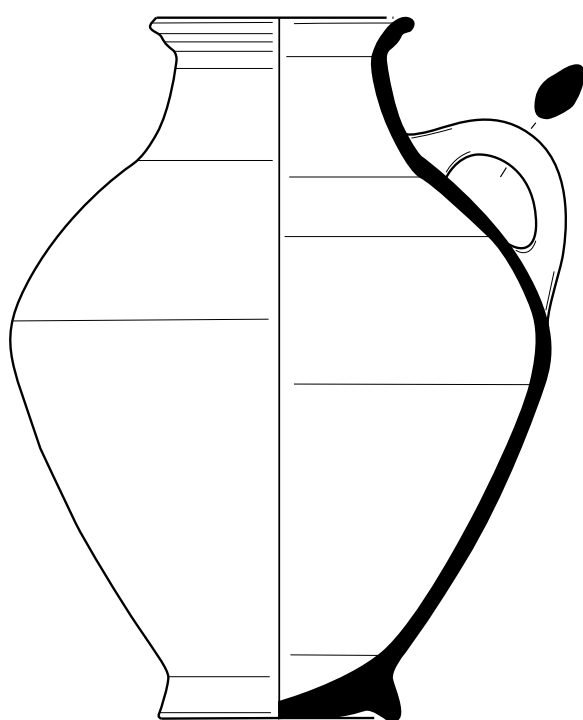
Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 2610	5	Jug	G.1, V.7	Reddish Yellow 7/6 HUE 5 YR
2	T.D 2410	4	Jug	G.1, V.1	Pinkish Gray 7/2 HUE 7.5 YR
3	T.D 2422	4	Jug	G.1, V.2	Pink 7/4 HUE 5 YR
4	T.D 2337	4	Jug	G.1, V.1	Light Brownish Gray 6/2 HUE 10 YR
5	T.D 2437	4	Jug	G.1, V.2	Pink 7/4 HUE 5 YR



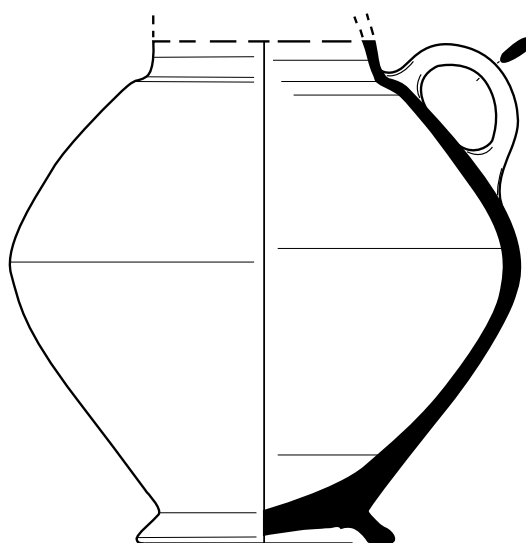
1



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Plate 53

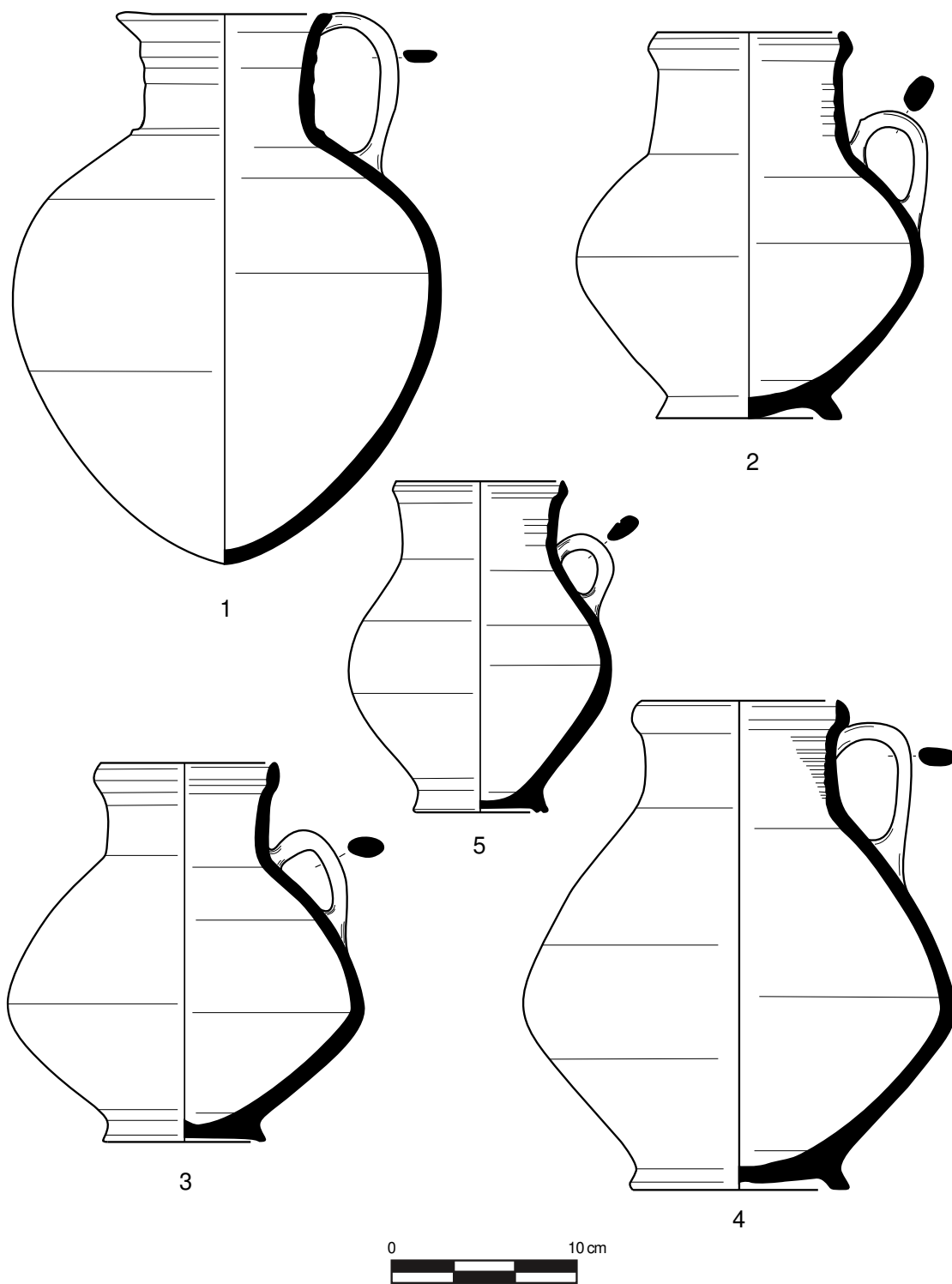


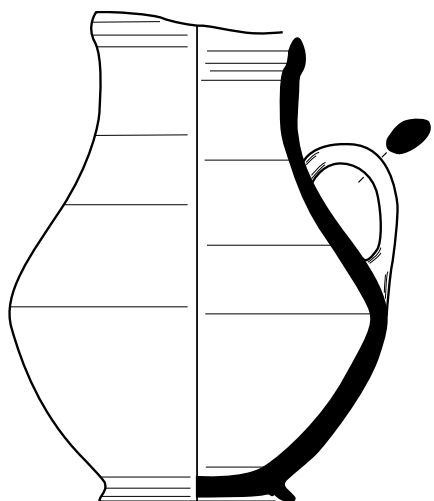
Plate 54

**Plate 55: Jugs of level 4 of tomb 1**

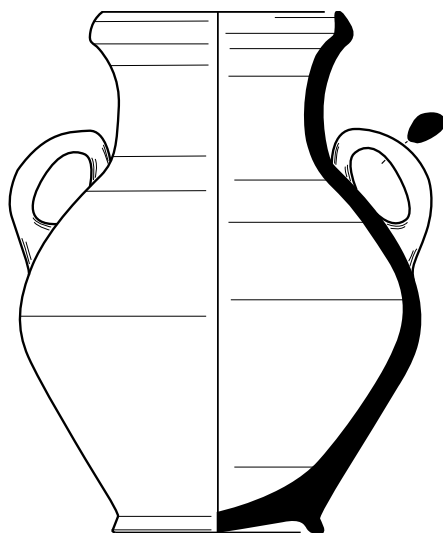
Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 2478	4	Jug	G.1, V.1	White 8/2 HUE 10 YR
2	T.D 2424	4	Jug	G.1, V.1	Pink 7/4 HUE 7.5 YR
3	T.D 2351	4	Jug	G.1, V.3	Red 5/6 HUE 2.5 YR
4	T.D 895	4	Jug	G.1, V.5	Reddish Yellow 6/6 HUE 5 YR
5	T.D 894	4	Jug	G.1, V.1	Pink 7/4 HUE 7.5 YR

**Plate 56: Jugs of level 3 of tomb 1**

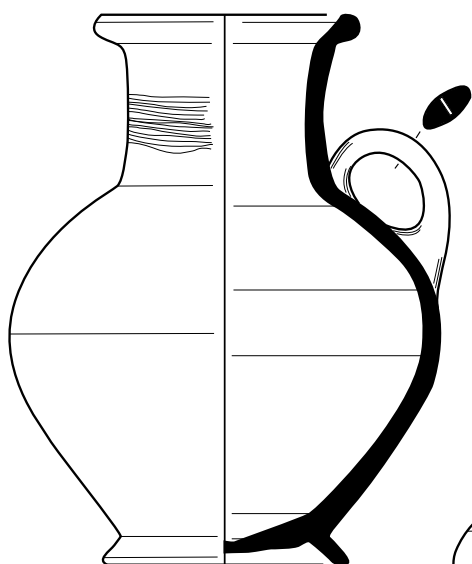
Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 2168	3	Jug	G.1, V.2	White 8/2 HUE 10 YR
2	T.D 2209	3	Jug	G.1, V.1	Light Reddish Brown 6/4 HUE 5 YR
3	T.D 2233	3	Jug	G.1, V.2	Pink 7/4 HUE 7.5 YR
4	T.D 2141	3	Jug	G.1, V.2	Pinkish Gray 6/2 HUE 5 YR
5	T.D 2131	3	Jug	G.1, V.1	White 8/2 HUE 10 YR



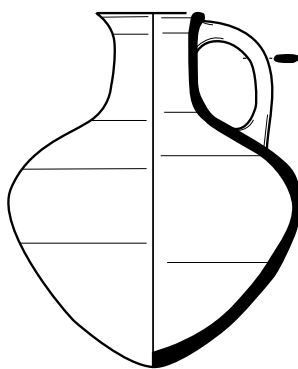
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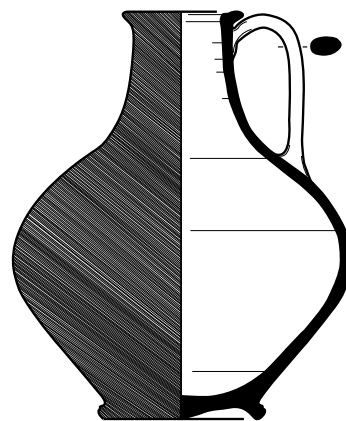
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Plate 55

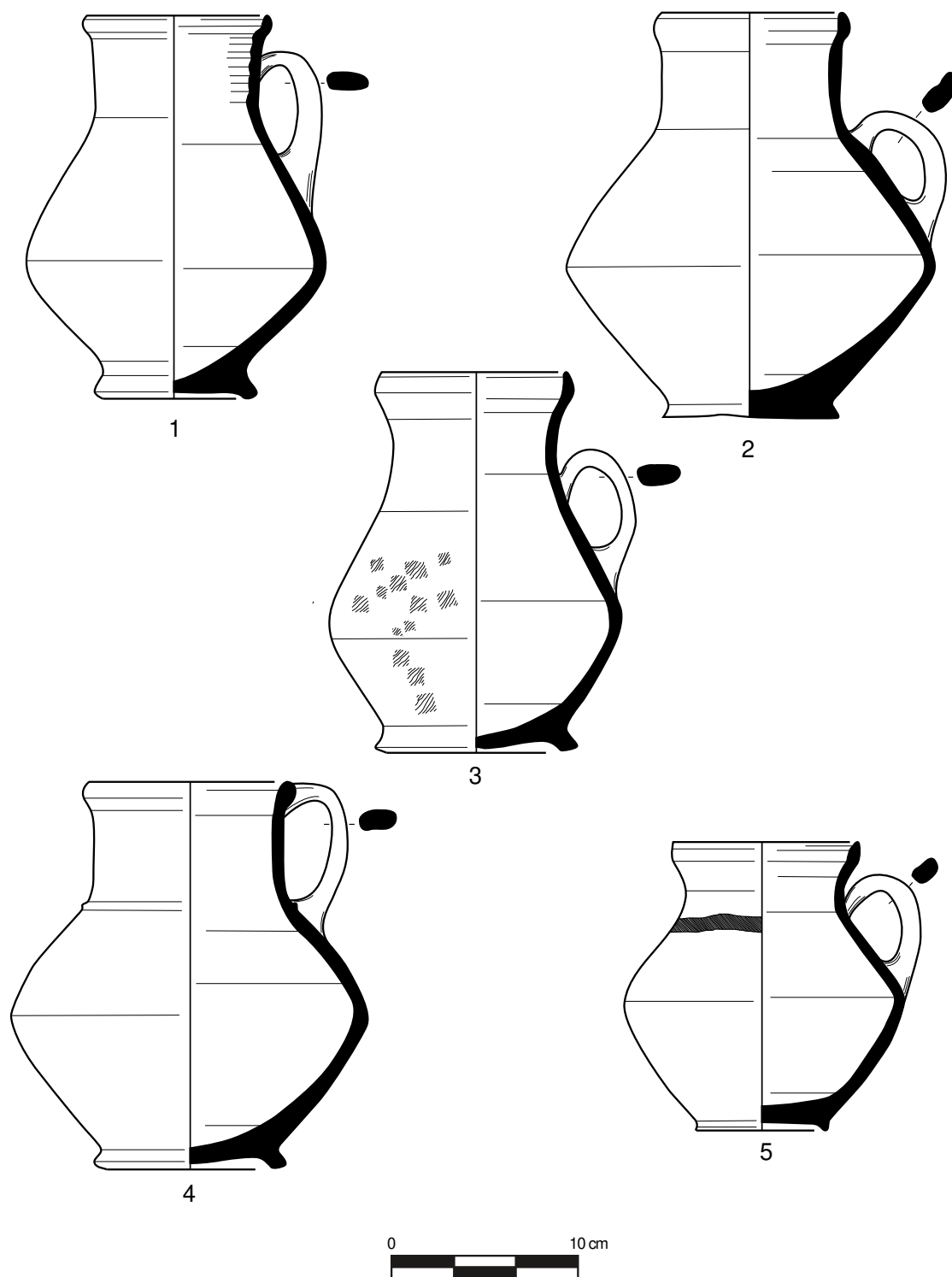


Plate 56

**Plate 57: jugs of level 3 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 647	3	Jug	G.1, V.1	White 8/2 HUE 10 YR
2	T.D 2172	3	Jug	G.1, V.2	Reddish Yellow 6/6 HUE 5 YR
3	T.D 554	3	Jug	G.1, V.2	White 8/2 HUE 10 YR
4	T.D 2107	3	Jug	G.1, V.1	Light Reddish Brown 4/6 HUE 5 YR
5	T.D 2207	3	Jug	G.1, V.1	Pink 7/4 HUE 5 YR

**Plate 58: Jugs of level 2 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 250	2	Jug	G.1, V.2	Pink 7/4 HUE 7.5 YR
2	T.D 1681	2	Jug	G.1, V.4	Very Pale Brown 7/3 HUE 10 YR
3	T.D 1890	2	Jug	G.1, V.2	Pink 7/4 HUE 5 YR
4	T.D 292	2	Jug	G.1, V.2	Reddish Brown 6/6 HUE 5 YR
5	T.D 1679	2	Jug	G.1, V.1	White 8/2 HUE 10 YR

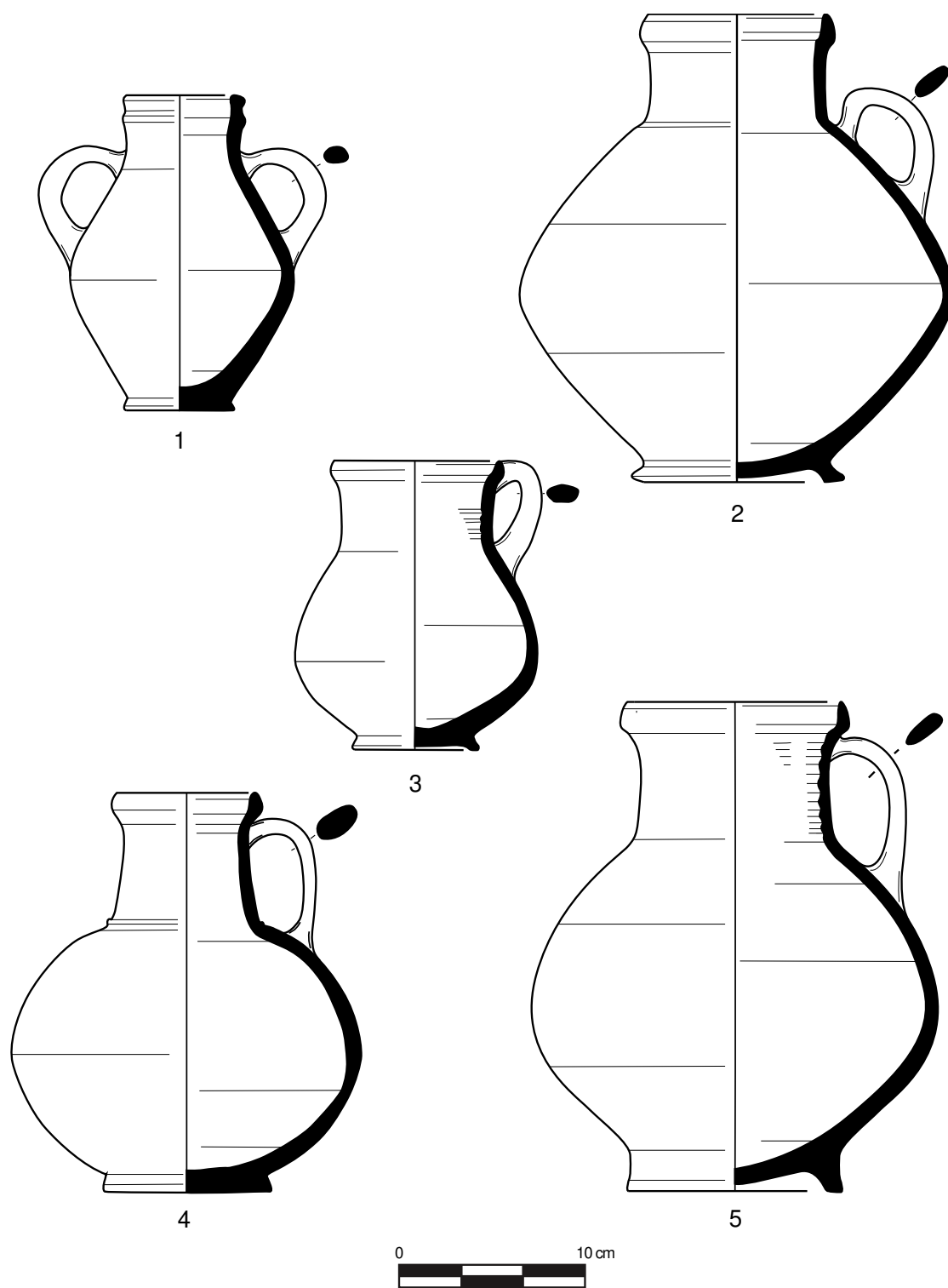


Plate 57



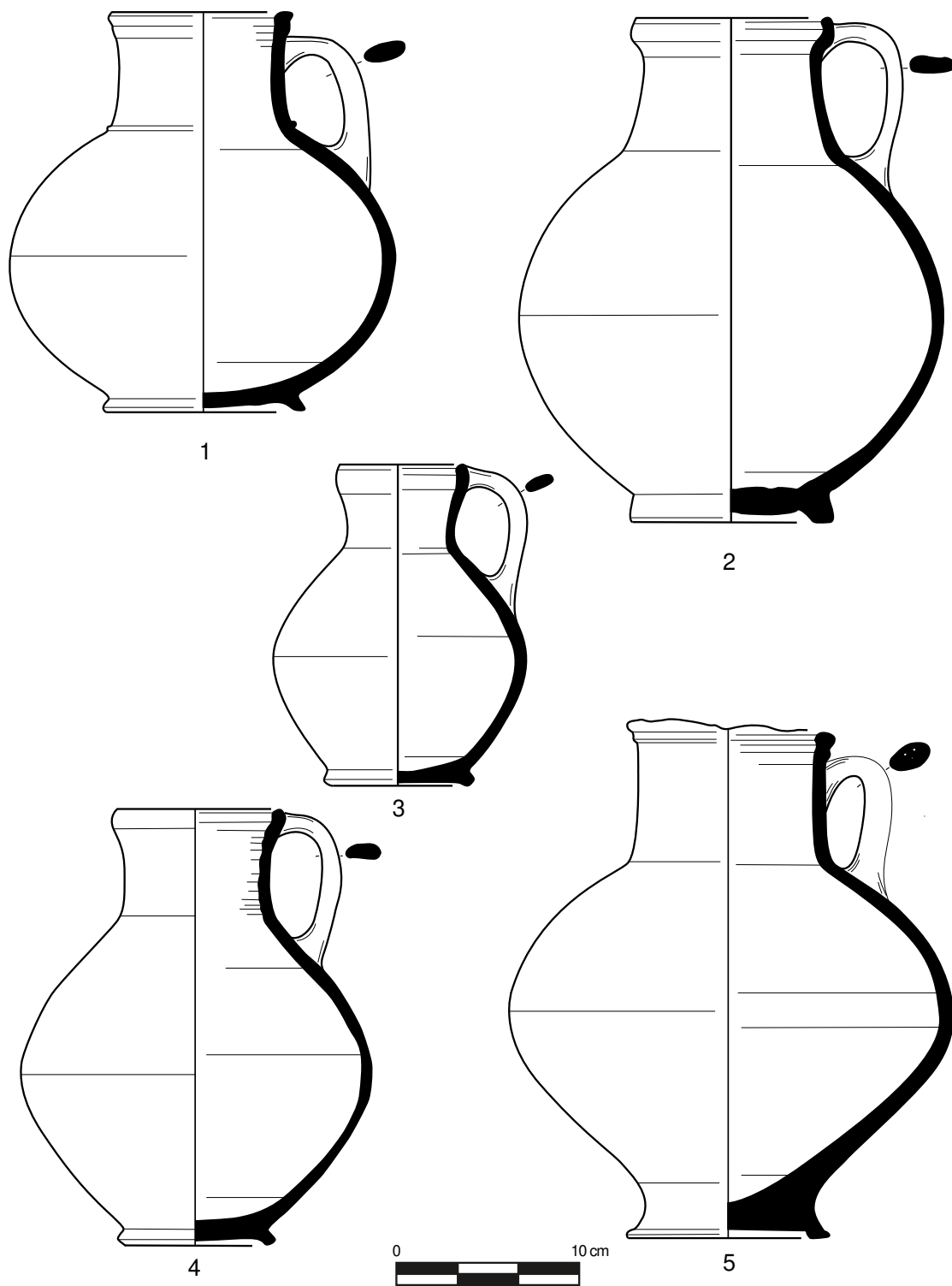


Plate 58

**Plate 59: Jugs of level 2 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 1551	2	Jug	G.1, V.1	White 8/2 HUE 10 YR
2	T.D 343	2	Jug	G.1, V.2	Pink 7/4 HUE 5 YR
3	T.D 397	2	Jug	G.1, V.3	Pink 7/3 HUE 5 YR
4	T.D 1549	2	Jug	G.1, V.1	Pink 8/4 HUE 7.5 YR
5	T.D 1782	2	Jug	G.1, V.1	Light Brown 6/4 HUE 7.5 YR

**Plate 60: Jugs of levels 2 and 1 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 1396	2	Jug	G.1, V.1	White 8/2 HUE 10 YR
2	T.D 1754	2	Jug	G.1, V.2	White 8/2 HUE 10 Y
3	T.D 1500	2	Jug	G.1, V.1	White 8/2 HUE 10 YR
4	T.D 1277	1	Jug	G.1, V.2	White 8/2 HUE 10 YR
5	T.D 1324	1	Jug	G.1, V.2	Reddish Yellow 7/6 HUE 5 YR
6	T.D 996	1	Jug	G.1, V.2	Pink 7/4 HUE 5 YR
7	T.D 978	1	Jug	G.1, V.2	White 8/2 HUE 10 YR



Plate 59

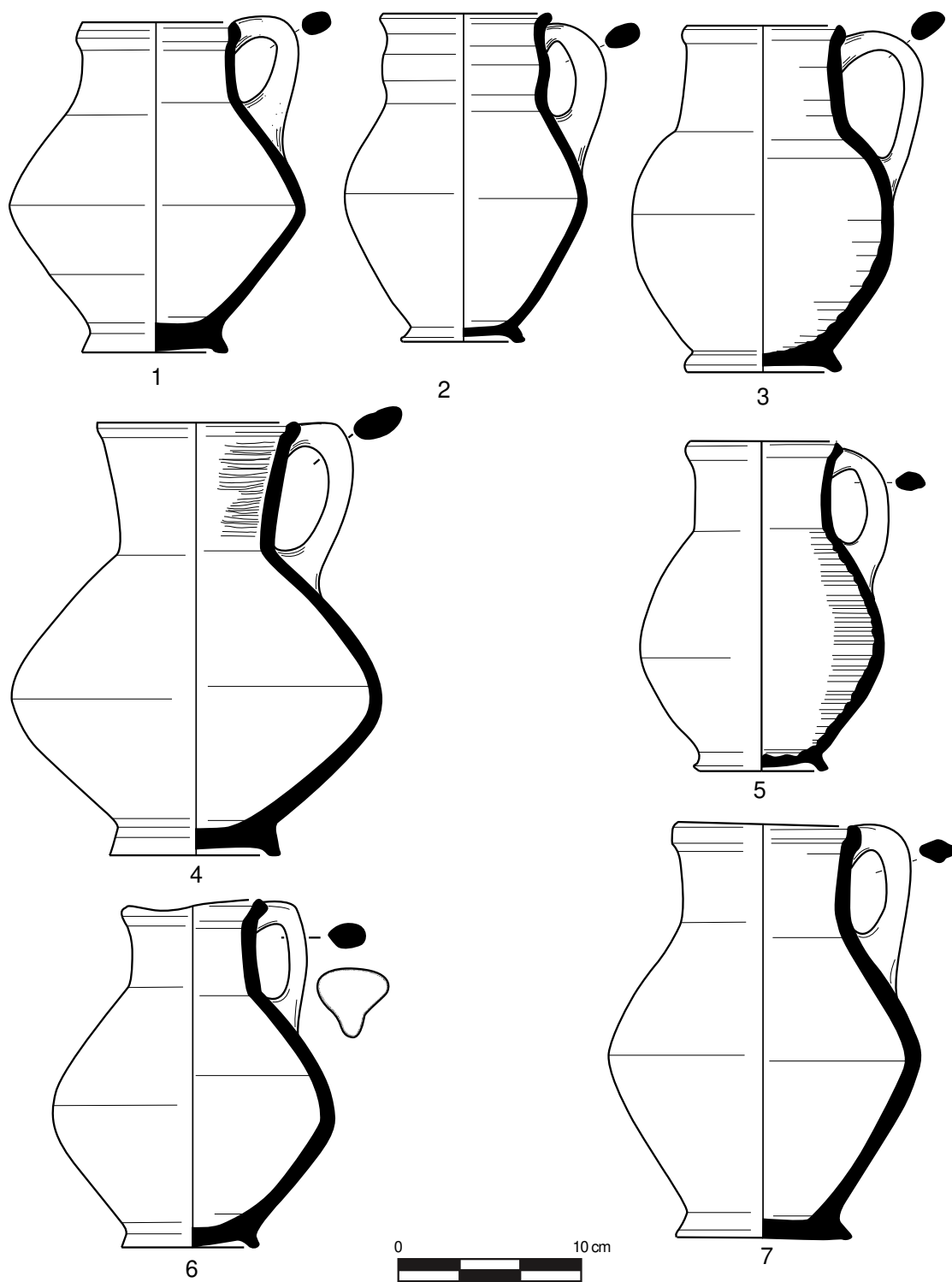


Plate 60

**Plate 61: Jugs of level 1 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 1188	1	Jug	G.1, V.2	White 8/1 HUE 5 YR
2	T.D 1310	1	Jug	G.1, V.4	Very Pale Brown 8/4 HUE 10 YR
3	T.D 1160	1	Jug	G.1, V.2	Very Pale Brown 8/4 HUE 10 YR
4	T.D 1070	1	Jug	G.1, V.1	White 8/2 HUE 10 YR

**Plate 62: Dipper Juglets of levels 5, 4, 3, and 2 of tomb one**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 2711	5	D. Juglet	G.1, V.2	Pink 7/4 HUE 5 YR
2	T.D 852	4	D. Juglet	G.1, V.7	White 8/2 HUE 2.5 Y
3	T.D 2063	3	D. Juglet	G.1, V.3	Reddish Brown 5/4 HUE 205 YR
4	T.D 1595	2	D. Juglet	G.1, V.3	Pink 7/4 HUE 5 YR
5	T.D 1813	2	D. Juglet	G.1, V.2	White 8/2 HUE 2.5 Y
6	T.D 345	2	D. Juglet	G.1, V.5	Reddish Yellow 7/6 HUE 7.5 YR
7	T.D 1884	2	D. Juglet	G.1, V.2	Pink 7/4 HUE 5 YR

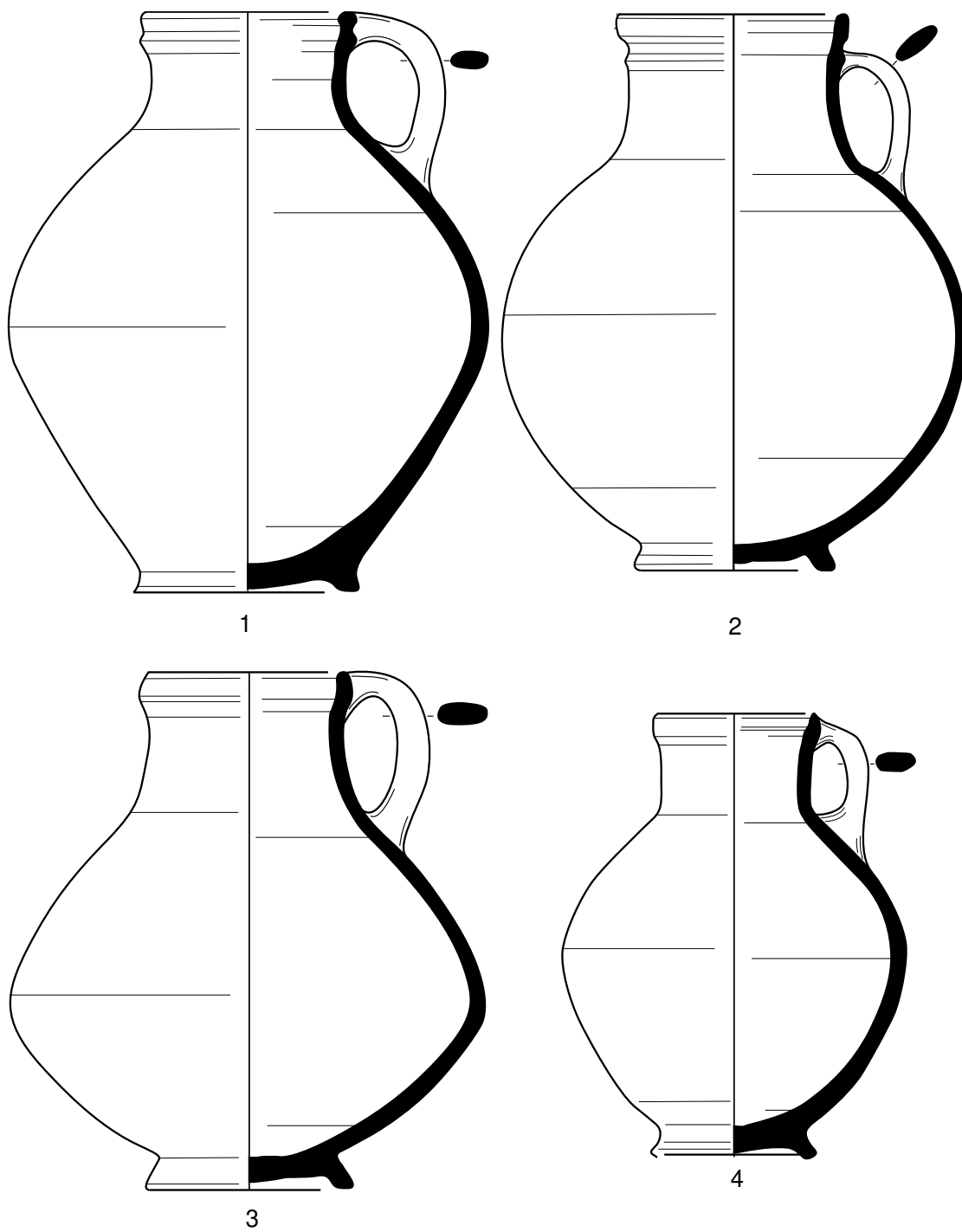


Plate 61

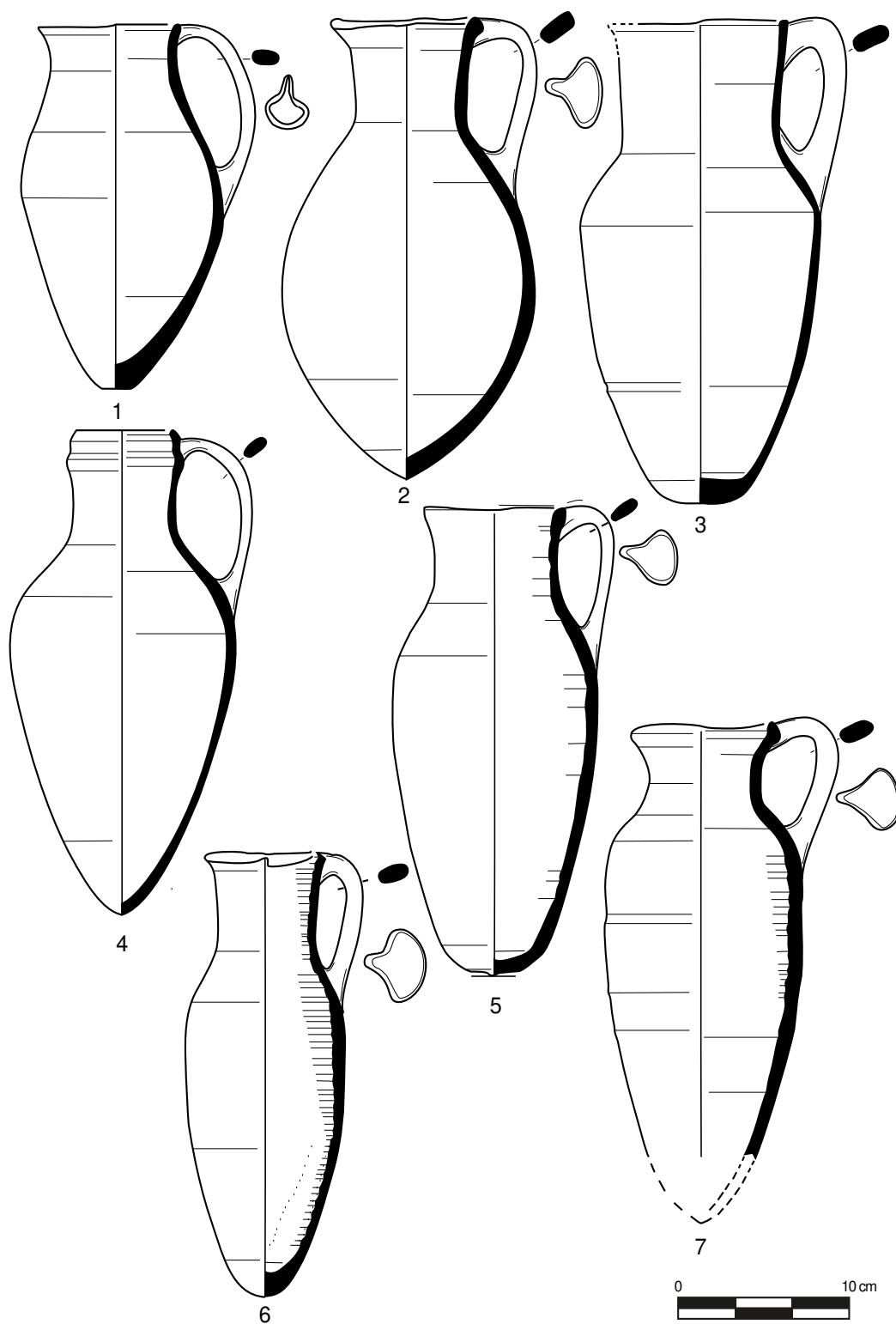


Plate 62

**Plate 63: Juglets of levels 5, 3, and 1 of tomb 1**

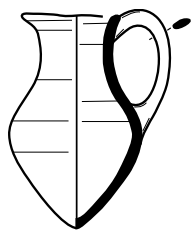
Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 2755	5	Juglet	G.1, V.2	Pink 7/4 HUE 7.5 YR
2	T.D 2691	5	Juglet	G.1, V.1	Pink 7/4 HUE 5 YR
3	T.D 2561	5	Juglet	G.1, V.5	Very Pale Brown 7/4 HUE 10 YR
4	T.D 2763	5	Juglet	G.1, V.1	Pink 7/4 HUE 5 YR
5	T.D 2225	3	Juglet	G.1, V.1	White 8/2 HUE 10 YR
6	T.D 2113	3	Juglet	G.1, V.5	Reddish Yellow 6/6 HUE 7.5 YR
7	T.D 101	1	Juglet	G.1, V.5	Light Red 6/6 HUE 2.5 YR
8	T.D 116	1	Juglet	G.1, V.2	Pink 7/4 HUE 5 YR
9	T.D 1302	1	Juglet	G.1, V.2	Very Pale Brown 7/4 HUE 10 YR

**Plate 64: Pyxides of level 5 of tomb 1**

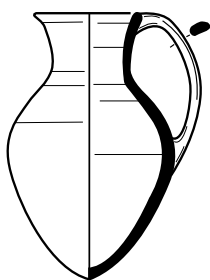
Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 2629	5	Pyxis	G.1, V.5	Very Pale Brown 7/4 HUE 10 YR
2	T.D 2691	5	Pyxis	G.1, V.2	Pink 7/4 HUE 5 YR
3	T.D 2690	5	Pyxis	G.3	Red 5/8 HUE 2.5 YR
4	T.D 2696	5	Pyxis	G.1, V.7	Pink 7/4 HUE 5 YR
5	T.D 2565	5	Pyxis	G.3	Gray 5/1 HUE 10 YR
6	T.D 2550	5	Pyxis	G.1, V.7	Reddish Yellow 7/6 HUE 5 YR
7 +	T.D 2564	5	Pyxis	G.1, V.2	Pink 7/4 HUE 7.5 YR
8	T.D 2559	5	Pyxis	G.1, V.5	Reddish Yellow 6/6 HUE 5 YR

+ 2564: Drawn and published by Cooley and Pratico 1995, fig. 35.3, Pp. 190.

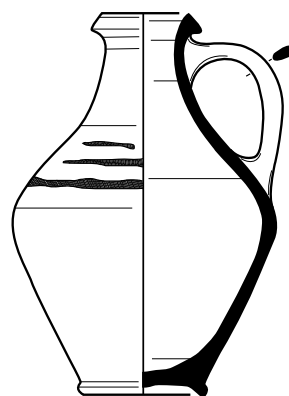




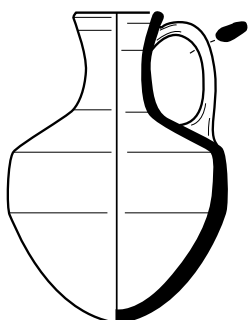
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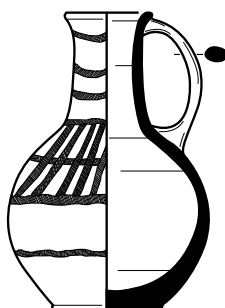
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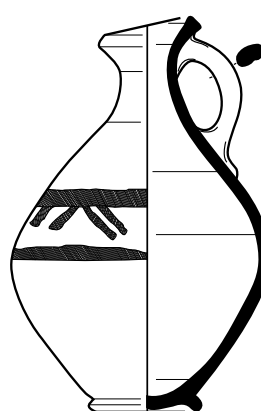
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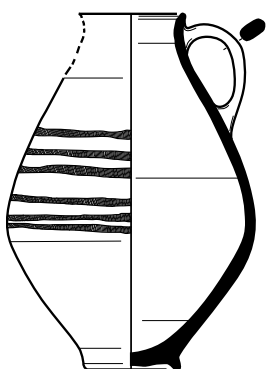
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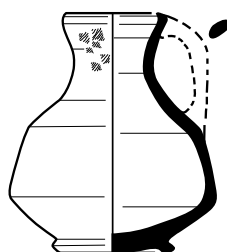
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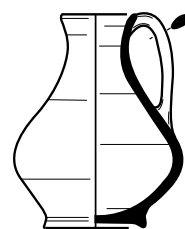
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7



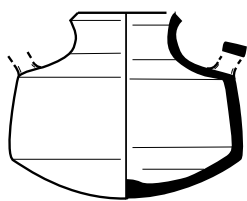
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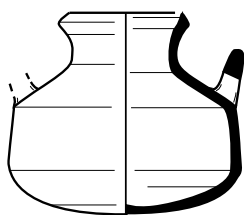
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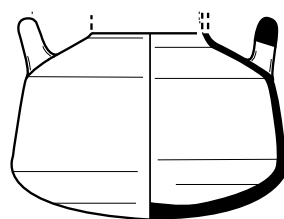
Plate 63



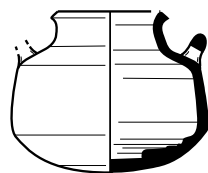
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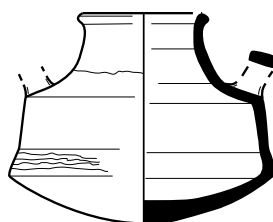
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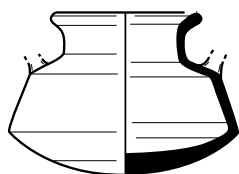
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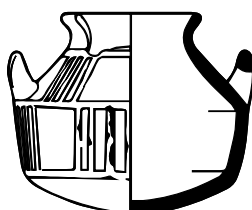
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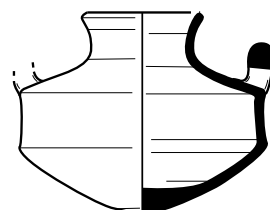
5



6



7



8



Plate 64

**Plate 65: Pyxides of level 4 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1 +	T.D 2296	4	Pyxis	G.1, V.2	White 8/2 HUE 10 YR
2 +	T.D 2393	4	Pyxis	G.1, V.1	Very Pale Brown 8/3 HUE 10 YR
3	T.D 2530	4	Pyxis	G.1, V.1	Reddish Yellow 7/6 HUE 7.5 YR
4	T.D 2534	4	Pyxis	G.1, V.7	Pink 8/4 HUE 5 YR
5 +	T.D 2328	4	Pyxis	G.1, V.2	White 8/2 HUE 2.5 YR
6	T.D 2299	4	Pyxis	G.1, V.1	Light Gray 7/2 HUE 5 Y
7	T.D 2283	4	Pyxis	G.1, V.5	Very Pale Brown 8/4 HUE 10 YR
8 +	T.D 2372	4	Pyxis	G.1, V.5	Pink 7/4 HUE 7.5 YR
9	T.D 2407	4	Pyxis	G.1, V.3	Red 5/8 HUE 10 YR
10	T.D 2484	4	Pyxis	G.1, V.3	Dark Gray 4/0 HUE 7.5 YR
11 +	T.D 2392	4	Pyxis	G.1, V.1	Pink 7/4 HUE 5 YR

+ 2296: Drawn and published by Cooley and Pratico 1995, fig. 32.1, Pp. 187.

+ 2393: Drawn and published by Cooley and Pratico 1995, fig. 32.3, Pp. 187.

+ 2328: Drawn and published by Cooley and Pratico 1995, fig. 32.6, Pp. 187.

+ 2372: Drawn and published by Cooley and Pratico 1995, fig. 32.5, Pp. 187.

+ 2392: Drawn and published by Cooley and Pratico 1995, fig. 32.2, Pp. 187.

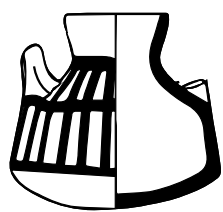
**Plate 66: Pyxides of level 3 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 2277	3	Pyxis	G.1, V.2	Very Pale Brown 7/4 HUE 10 YR
2	T.D 2214	3	Pyxis	G.1, V.1	Reddish Yellow 7/6 HUE %YR
3 +	T.D 2134	3	Pyxis	G.1, V.1	Very Pale Brown 8/3 HUE 10 YR
4 +	T.D 2274	3	Pyxis	G.1, V.1	Pink 7/4 HUE 5 YR
5	T.D 2019	3	Pyxis	G.1, V.1	Very Pale Brown 8/4 HUE 10 YR
6	T.D 2177	3	Pyxis	G.1, V.1	Pink 7/4 HUE 7.5 YR
7	T.D 2278	3	Pyxis	G.3	Pink 7/4 HUE 7.5 YR
8	T.D 668	3	Pyxis	G.1, V.2	Very Pale Brown 8/4 HUE 10 YR
9	T.D 681	3	Pyxis	G.1, V.1	Reddish Yellow 6/6 HUE 5 YR
10	T.D 718	3	Pyxis	G.1, V.7	Reddish Brown 7/6 HUE 5 YR
11	T.D 2215	3	Pyxis	G.1, V.1	Reddish Yellow 6/6 HUE 7.5 YR
12	T.D 2011	3	Pyxis	G.1, V.1	Reddish Yellow 7/6 HUE 6.5 YR
13	T.D 619	3	Pyxis	G.1, V.2	Pink 7/4 HUE 5 YR
14	T.D 615	3	Pyxis	G.1, V.1	Reddish Yellow 6/6 HUE 5 YR
15	T.D 584	3	Pyxis	G.1, V.1	Reddish Yellow 6/6 HUE 5 YR
16	T.D 2089	3	Pyxis	G.1, V.1	Pinkish White 8/2 HUE 7.5 YR
17	T.D 2187	3	Pyxis	G.1, V.2	Light Reddish Brown 6/4 HUE 5 YR
18 +	T.D 2184	3	Pyxis	G.1, V.1	Pink 7/4 HUE 5 YR
19	T.D 2039	3	Pyxis	G.1, V.2	Very Pale Brown 7/3 HUE 10 YR

+ 2134: Drawn and published by Cooley and Pratico 1995, fig. 28.10, Pp. 183.

+ 2274: Drawn and published by Cooley and Pratico 1995, fig. 28.8, Pp. 183.

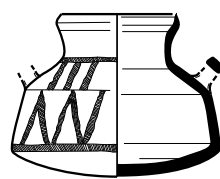
+ 2184: Drawn and published by Cooley and Pratico 1995, fig. 28.3, Pp. 183.



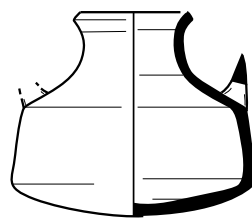
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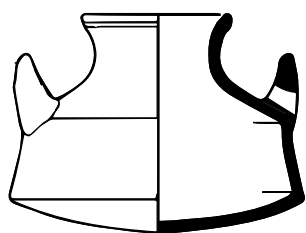
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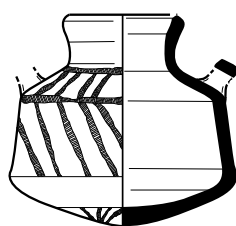
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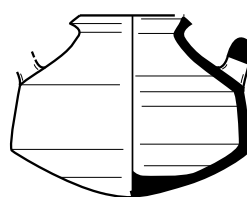
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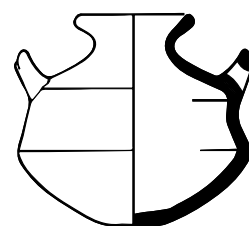
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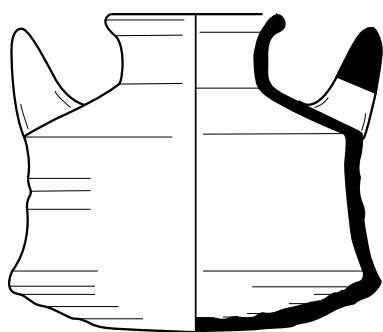
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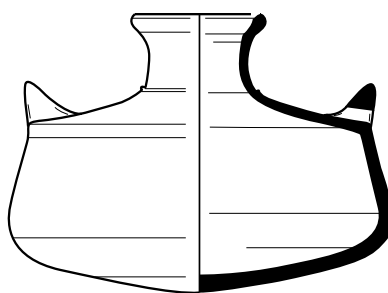
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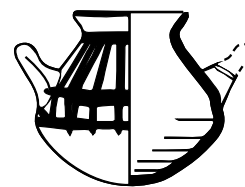
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Plate 65

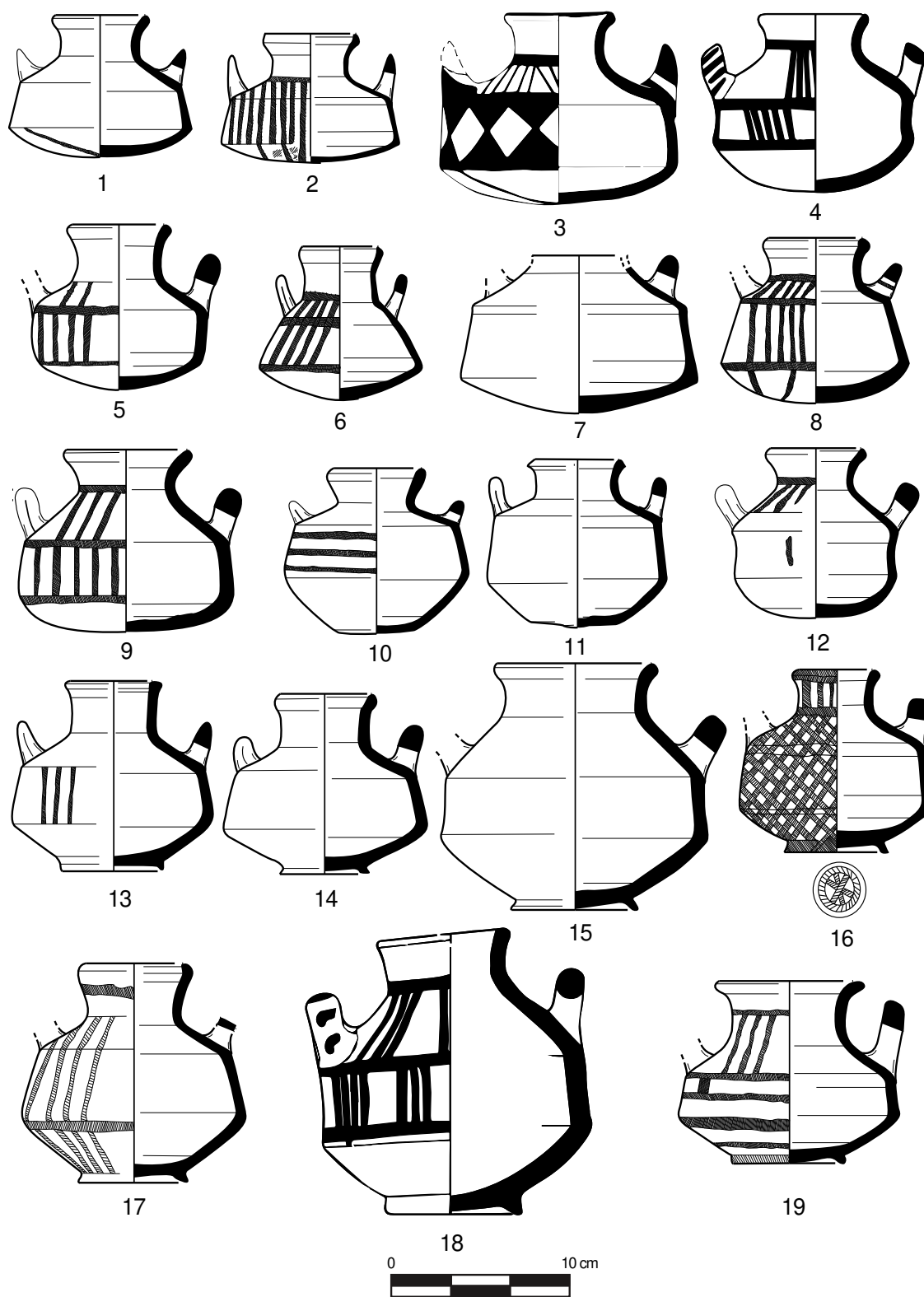


Plate 66

**Plate 67: Pyxides of level 3 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1 +	T.D 2052	3	Pyxis	G.1, V.2	White 8/2 HUE 10 YR
2	T.D 2067	3	Pyxis	G.1, V.1	Reddish Yellow 7/6 HUE 7.5 YR
3 +	T.D 2084	3	Pyxis	G.1, V.1	Pink 7/4 HUE 5 YR
4	T.D 2145	3	Pyxis	G.1, V.2	Very Pale Brown 7/3 HUE 10 YR
5	T.D 576	3	Pyxis	G.1, V.1	White 8/2 HUE 2.5 Y

+ 2052: Drawn and published by Cooley and Pratico 1995, fig. 28.7, Pp. 183.

+ 2084: Drawn and published by Cooley and Pratico 1995, fig. 28.1, Pp. 183.

**Plate 68: Pyxides of level 2 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1 +	T.D 1703	2	Pyxis	G.1, V.1	Light Red 6/4 HUE 2.5 YR
2	T.D 1426	2	Pyxis	G.1, V.1	Light Reddish Brown 6/6 HUE 5 YR
3	T.D 1788	2	Pyxis	G.1, V.1	White 8/1 HUE 10 YR
4	T.D 1495	2	Pyxis	G.1, V.2	Reddish Yellow 7/6 HUE 5 YR
5 +	T.D 1431	2	Pyxis	G.1, V.1	Reddish Yellow 7/6 HUE 5 YR
6	T.D 1516	2	Pyxis	G.1, V.7	Reddish Yellow 7/6 HUE 5 YR
7	T.D 1351	2	Pyxis	G.1, V.7	Pink 7/4 HUE 5 YR
8	T.D 457	2	Pyxis	G.1, V.3	Red HUE 10 R
9	T.D 1882	2	Pyxis	G.1, V.1	Reddish Yellow 6/6 HUE 5 YR
10	T.D 1544	2	Pyxis	G.1, V.1	Very Pale Brown 8/3 HUE 10 YR

+ 1703: Drawn and published by Cooley and Pratico 1995, fig. 24.2, Pp. 179.

+ 1431: Drawn and published by Cooley and Pratico 1995, fig. 24.1, Pp. 179.

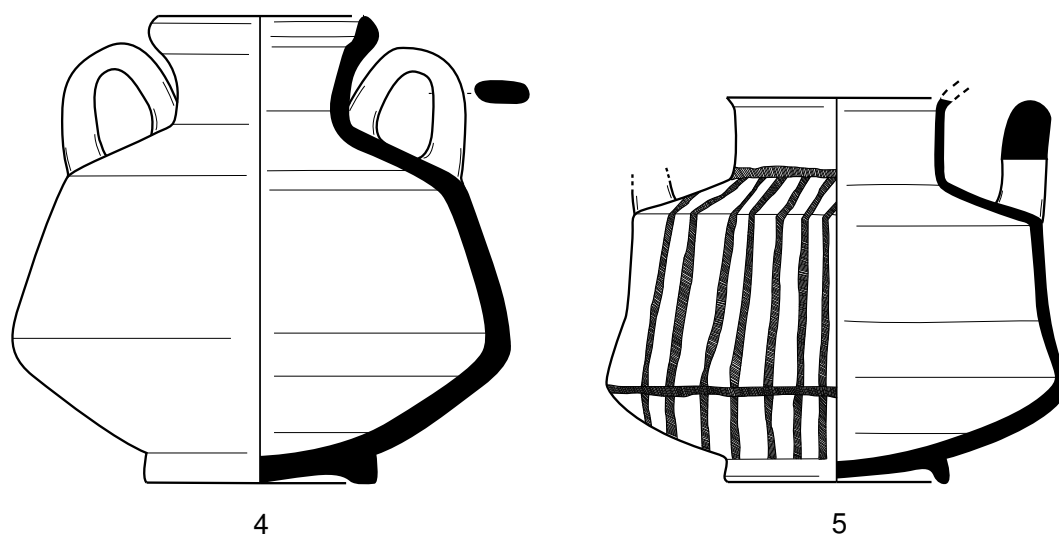
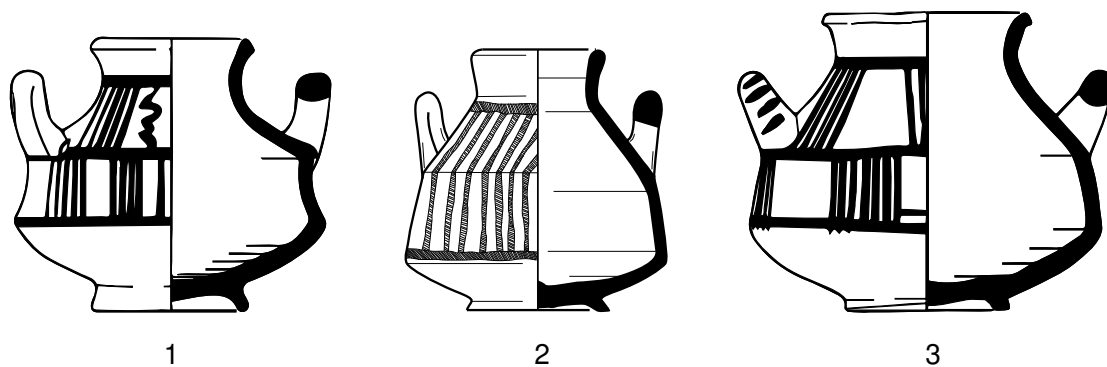
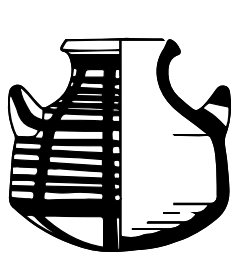
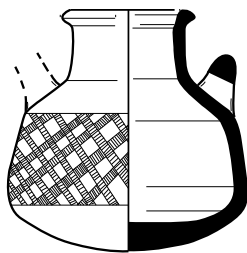


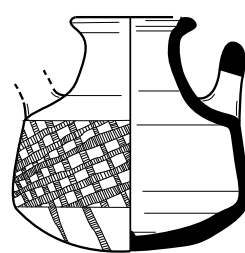
Plate 67



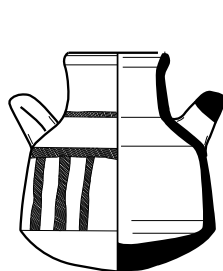
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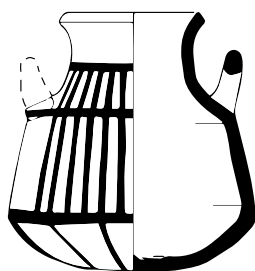
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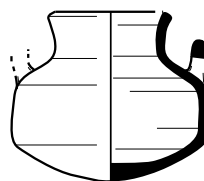
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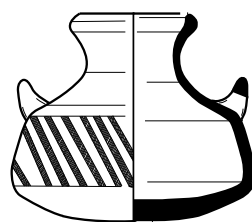
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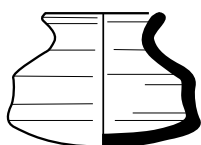
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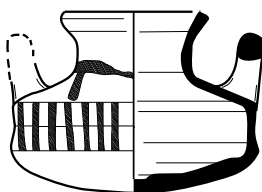
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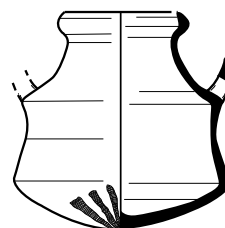
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Plate 68



**Plate 69: Pyxides of level 2 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1 +	T.D 1356	2	Pyxis	G.1, V.2	Pink 7/4 HUE 7.5 YR
2	T.D 1706	2	Pyxis	G.1, V.1	Reddish Yellow 7/6 HUE 7.5 YR
3 +	T.D 1672	2	Pyxis	G.1, V.1	Pink 7/4 HUE 7.5 YR
4	T.D 1453	2	Pyxis	G.1, V.1	Pinkish White 8/2 HUE 7.5 YR
5	T.D 1687	2	Pyxis	G.1, V.1	Very Pale Brown 7/4 HUE 10 YR
6 +	T.D 1647	2	Pyxis	G.1, V.1	Pink 7/4 HUE 7.5 YR
7	T.D 1484	2	Pyxis	G.1, V.2	Reddish Yellow 7/6 HUE 5 YR
8 +	T.D 1432	2	Pyxis	G.1, V.1	Reddish Yellow 7/6 HUE 5 YR
9	T.D 1573	2	Pyxis	G.1, V.1	Reddish Yellow 7/6 HUE 7.5 YR
10	T.D 1673	2	Pyxis	G.1, V.2	Reddish Yellow 6/6 HUE 5 YR
11 +	T.D 505	2	Pyxis	G.1, V.1	Very Pale Brown: 7/4 HUE 10 YR
12	T.D 1639	2	Pyxis	G.1, V.1	Very Pale Brown 8/4 HUE 10 YR

- + 1356: Drawn and published by Cooley and Pratico 1995, fig. 24.5, Pp. 179.
- + 1672: Drawn and published by Cooley and Pratico 1995, fig. 24.6, Pp. 179.
- + 1647: Drawn and published by Cooley and Pratico 1995, fig. 24.4, Pp. 179.
- + 1432: Drawn and published by Cooley and Pratico 1995, fig. 24.9, Pp. 179.
- + 505: Drawn and published by Cooley and Pratico 1995, fig. 24. 11, Pp. 179.

**Plate 70: Pyxides of level 1 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 1136	1	Pyxis	G.1, V.2	Yellow 8/4 HUE 7.5 YR
2	T.D 1128	1	Pyxis	G.1, V.1	Light Brown HUE 7.5 YR
3	T.D 1091	1	Pyxis	G.1, V.1	Yellow 8/6 HUE 10 YR
4	T.D 1045	1	Pyxis	G.1, V.2	Very Pale Brown 8/3 UHE 10 YR
5	T.D 1096	1	Pyxis	G.1, V.1	Very Pale Brown 8/3 UHE 10 YR
6	T.D 936	1	Pyxis	G.1, V.1	Reddish Yellow 6/6 HUE 5 YR
7	T.D 145	1	Pyxis	G.1, V.2	Light Brown 8/3 HUE 10 YR
8 +	T.D 1097	1	Pyxis	G.1, V.1	Pink 7/4 HUE 7.5 YR
9 +	T.D 1334	1	Pyxis	G.1, V.2	Pink 7/4 HUE 5 YR
10 +	T.D 1004	1	Pyxis	G.1, V.1	Pink 7/4 HUE 7.5 YR

- + 1097: Drawn and published by Cooley and Pratico 1995, fig. 19.12, Pp. 174.
- + 1334: Drawn and published by Cooley and Pratico 1995, fig. 19.8, Pp. 174.
- + 1004: Drawn and published by Cooley and Pratico 1995, fig. 19.4, Pp. 174.

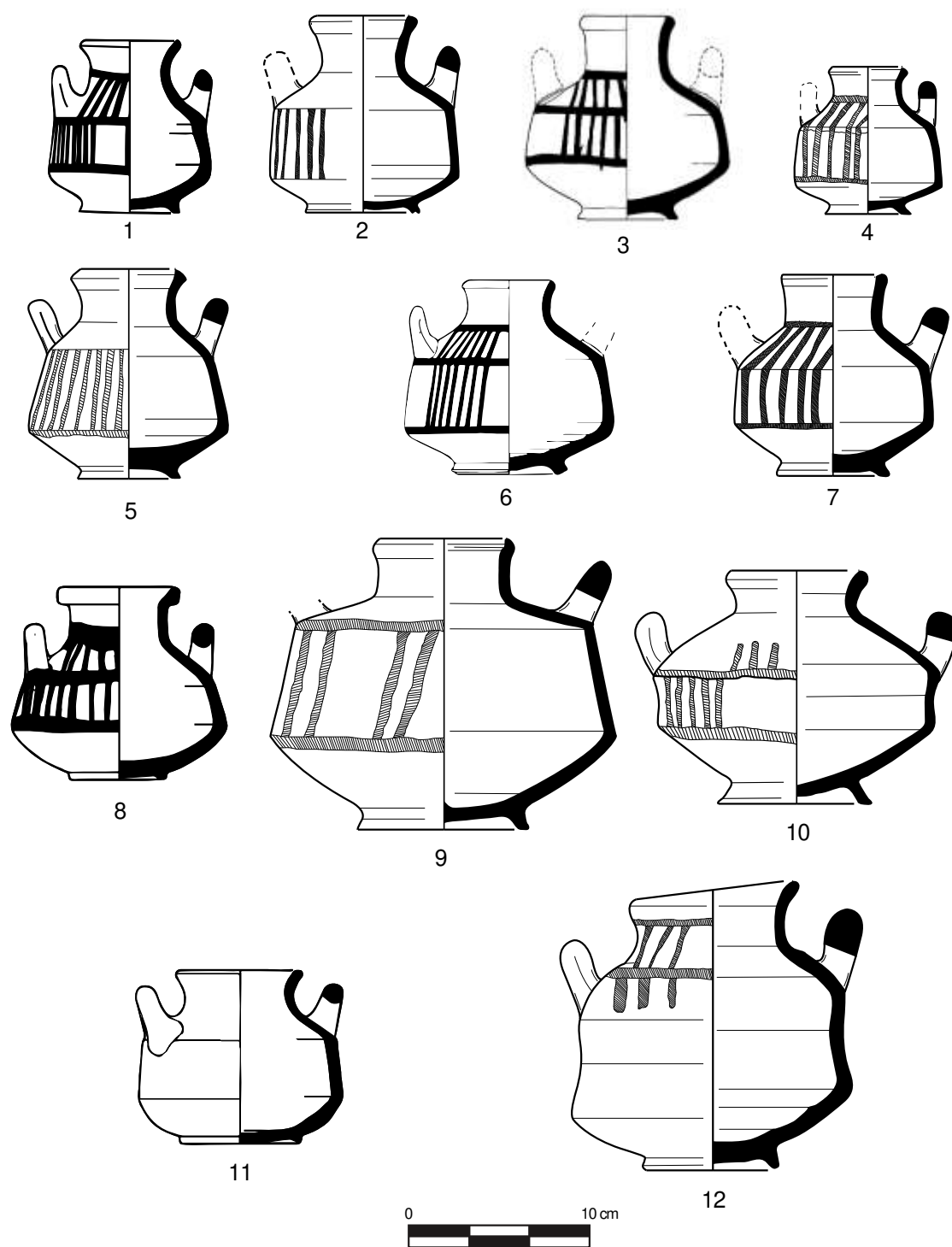


Plate 69

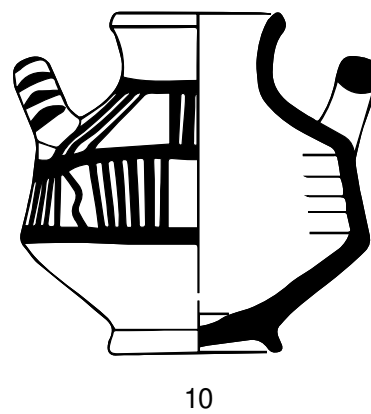
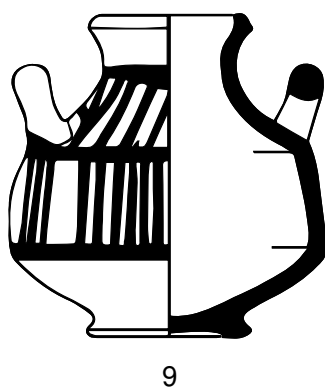
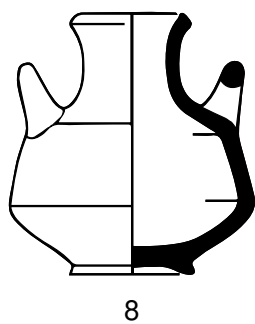
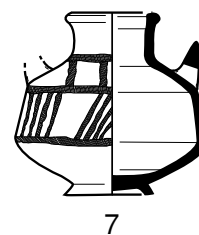
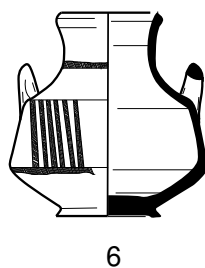
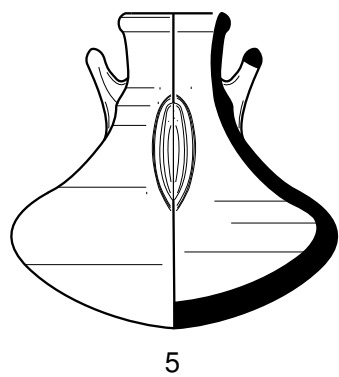
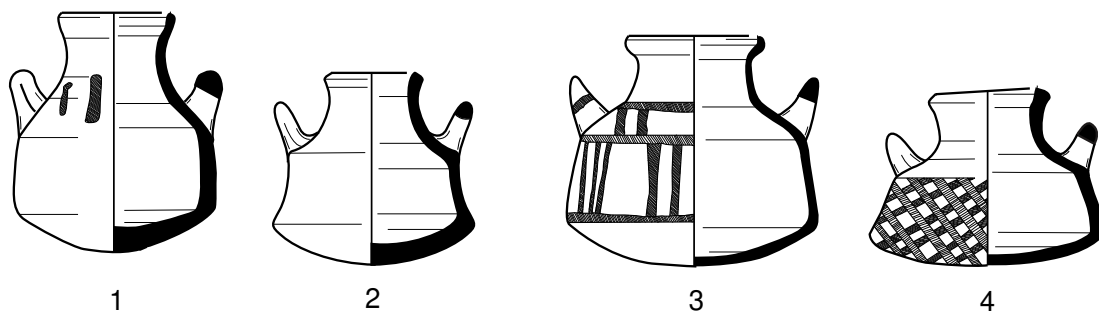


Plate 70

**Plate 71: Pyxides of level 1 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1 +	T.D 1129	1	Pyxis	G.1, V.2	Pink 7/3 HUE 5 YR
2	T.D 1176	1	Pyxis	G.1, V.5	Light Reddish Brown 6/4 HUE 5 YR
3	T.D 1025	1	Pyxis	G.1, V.1	Reddish Yellow 7/6 HUE 5 YR
4	T.D 1293	1	Pyxis	G.1, V.2	White 8/2 HUE 10 YR
5	T.D 1257	1	Pyxis	G.1, V.1	Pink 7/4 HUE 5 YR
6 +	T.D 948	1	Pyxis	G.1, V.1	Pink 7/4 HUE 7.5 YR
7 +	T.D 1034	1	Pyxis	G.1, V.2	Pink 7/4 HUE 7.5 YR
8	T.D 1303	1	Pyxis	G.1, V.1	Very Pale Brown 8/3 HUE 10 YR
9	T.D 1327	1	Pyxis	G.1, V.7	Reddish Yellow 7/6 HUE 7.5 YR
10	T.D 1000	1	Pyxis	G.1, V.1	White 8/2 HUE 10 YR

+ 1129: Drawn and published by Cooley and Pratico 1995, fig. 19.3, Pp. 174.

+ 948: Drawn and published by Cooley and Pratico 1995, fig. 19.11, Pp. 174.

+ 1034: Drawn and published by Cooley and Pratico 1995, fig. 19.10, Pp. 174.

**Plate 72: Stirrup Jars of level 4, 3, and 2 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1 +	T.D 2522	4	Stirrup Jar	G.4	Very Pale Brown HUE 10 YR
2	T.D 2536	3	Stirrup Jar	G.4	Pink 7/4 HUE 7.5 YR
3 +	T.D 2218	3	Stirrup Jar	G.4	Pink 7/4 HUE 5 YR
4 +	T.D 2044	3	Stirrup Jar	G.4	Very Pale Brown HUE 10 YR
5	T.D 1975	3	Stirrup Jar	G.4	Reddish Yellow 7/6 HUE 5 YR
6	T.D 2217	3	Stirrup Jar	G.4	Pink 7/4 HUE 7.5 YR
7	T.D 2127	3	Stirrup Jar	G.4	Reddish Yellow 7/6 HUE 7.5 YR
8	T.D 2031	3	Stirrup Jar	G.4	Light Brown 6/4 HUE 7.5 YR
9	T.D 1892	2	Stirrup Jar	G.4	Reddish Yellow 7/6 HUE 5 YR
10	T.D 1852	2	Stirrup Jar	G.4	Very Pale Brown 7/3 HUE 10 YR

+ 2522: Drawn and published by Cooley and Pratico 1995, fig. 34.4, Pp. 189.

+ 2218: Drawn and published by Cooley and Pratico 1995, fig. 30.7, Pp. 185.

+ 2044: Drawn and published by Cooley and Pratico 1995, fig. 30.9, Pp. 185.

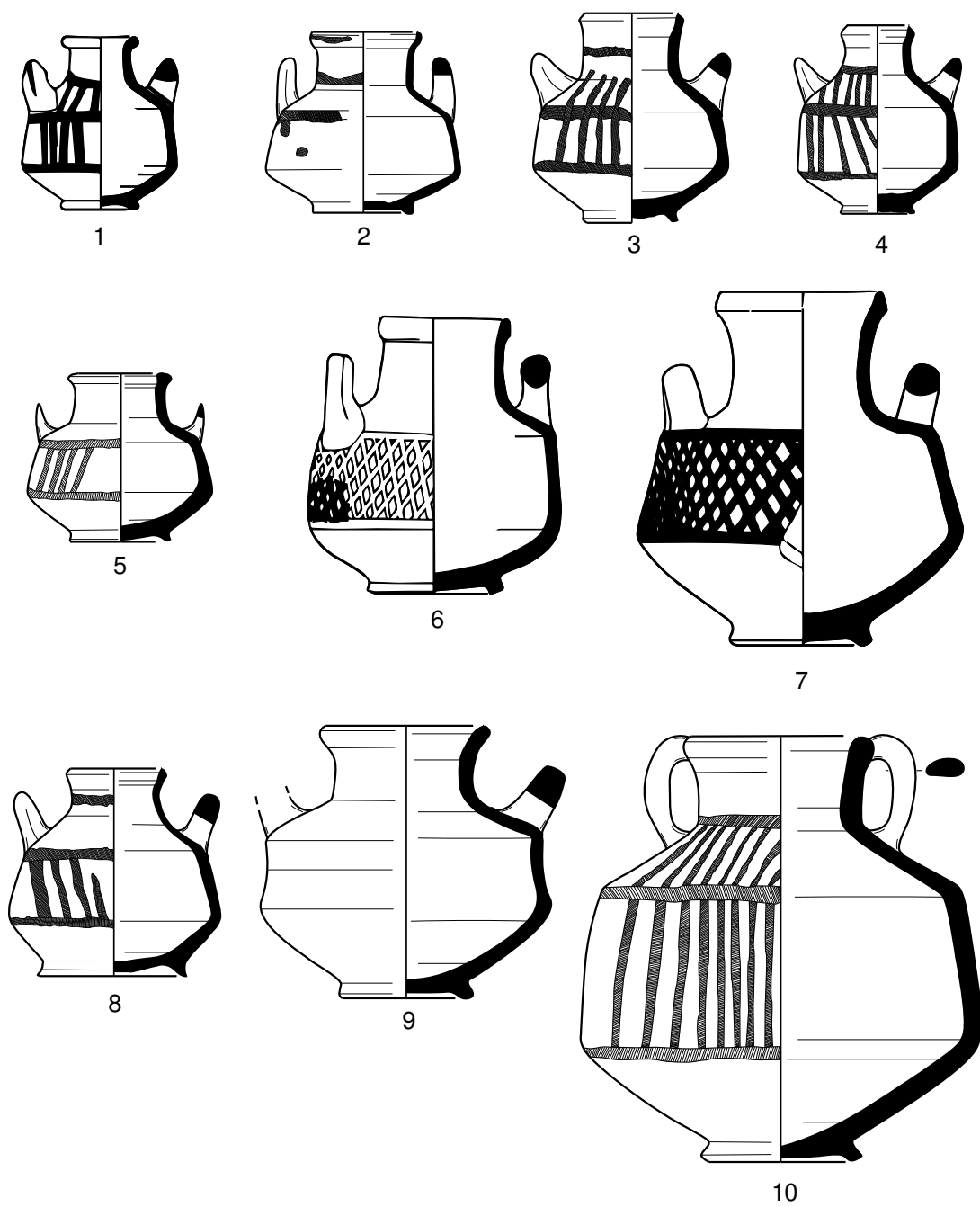


Plate 71

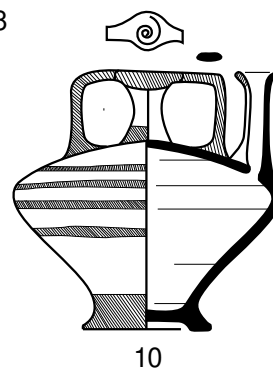
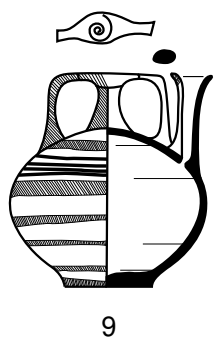
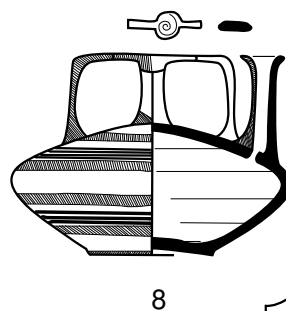
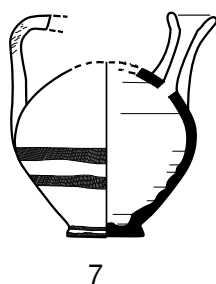
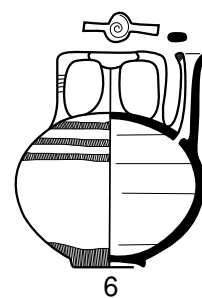
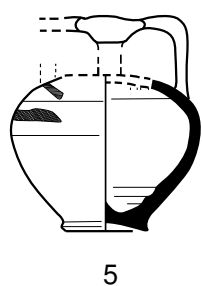
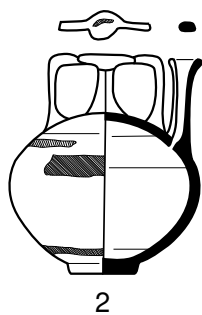


Plate 72

**Plate 73: Flaks of level 5 and 4 of tomb 1 (scale 1:4).**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 2742	5	Flask	G.1, V.2	Light Red 6/8 HUE 2.5 YR
2	T.D 2641	5	Flask	G.1, V.3	Reddish Gray 5/1 HUE 10 R
3	T.D 2706	5	Flask	G.1, V.6	White 8/2 HUE 10 YR
4	T.D 2363	4	Flask	G.5	Red 5/6 HUE 2.5 YR

**Plate 74: Flasks of level 3 of tomb 1 (scale: 1:4)**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 2116	3	Flask	G.1, V.3	Light Reddish Brown 6/4 HUE 5 YR
2	T.D 1928	3	Flask	G.1, V.2	Pink 7/4 HUE 7.5 YR

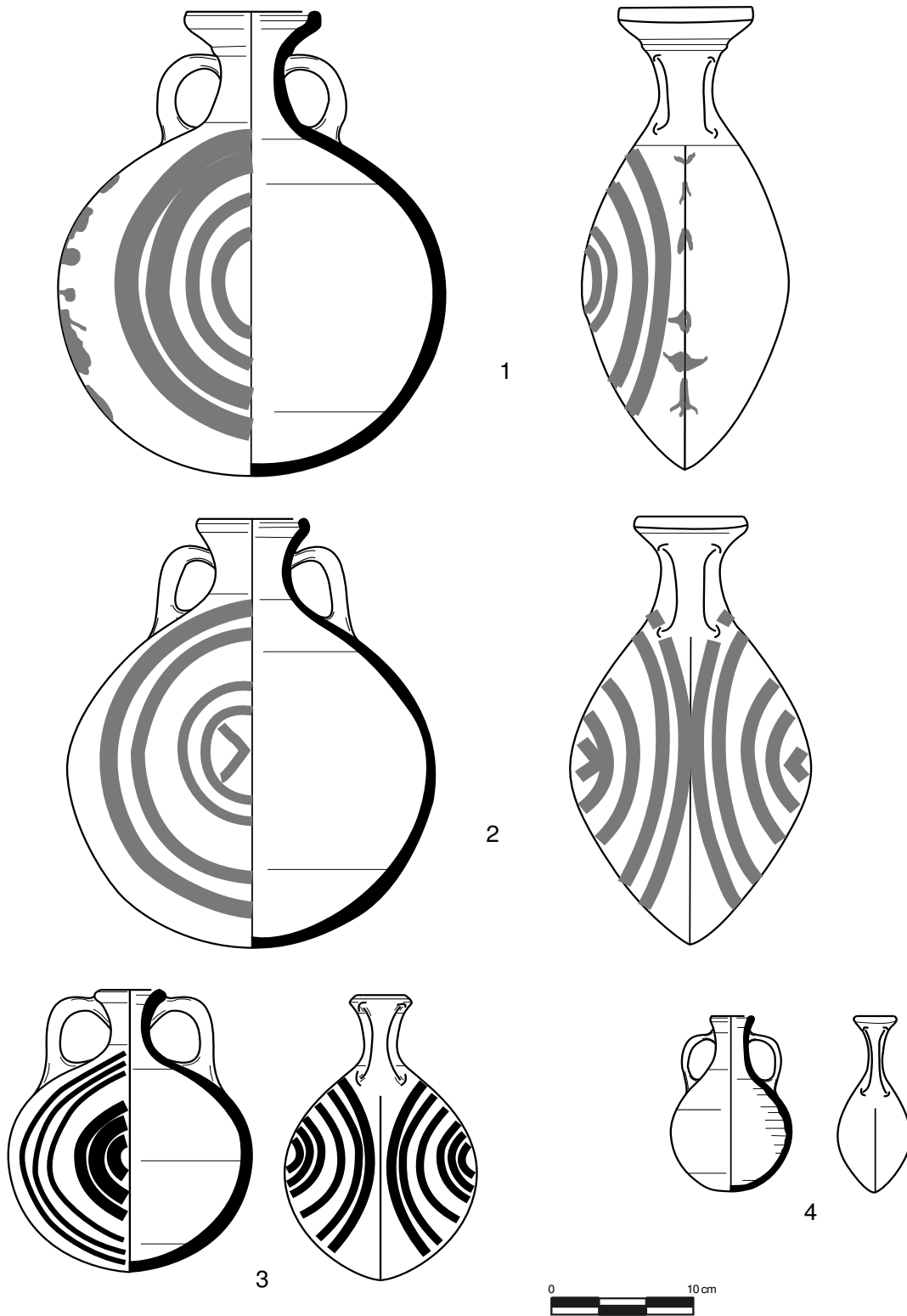
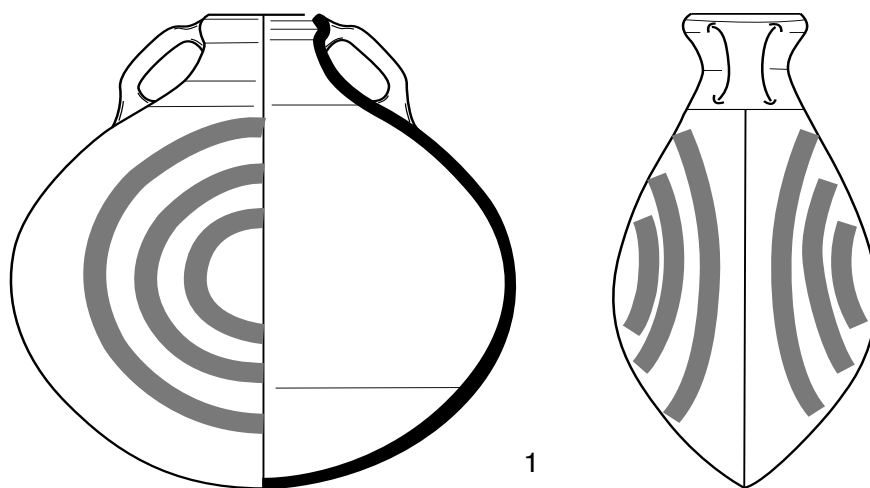
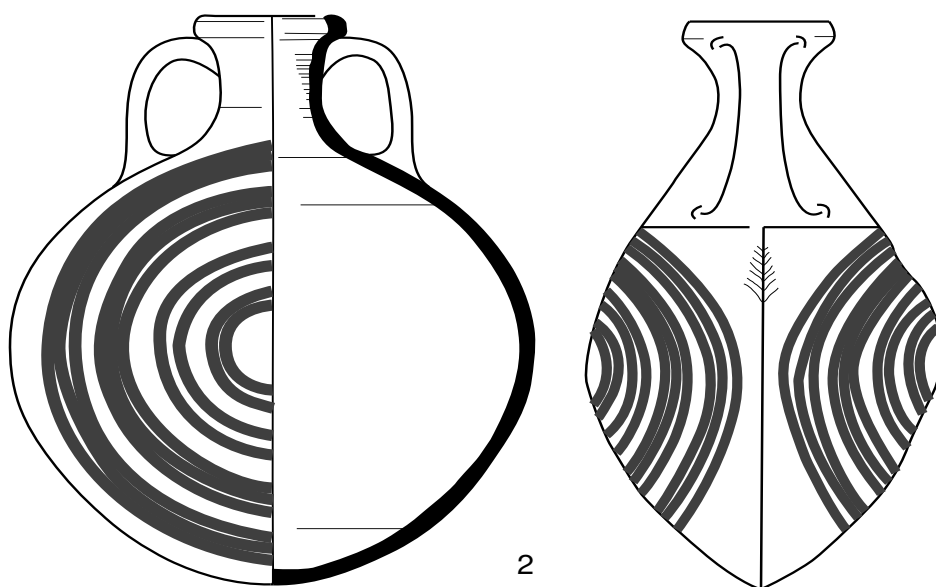


Plate 73





1



2



Plate 74

**Plate 75: Flasks of level 3 of tomb 1 (scale 1:4)**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 2083	3	Flask	G.1, V.3	Pinkish Gray 7/2 HUE 7.5 YR

**Plate 76: Flask of level 2 of tomb 1 (scale 1:4)**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 1714	2	Flask	G.1, V.3	Very Pale Brown 7/3 HUE 10 YR
2	T.D 1794	2	Flask	G.1, V.2	White 8/2 HUE 2.5 Y
3	T.D 1405	2	Flask	G.1, V.1	Very Pale Brown 7/4 HUE 10 YR
4	T.D 1757	2	Flask	G.1, V.3	Very Pale Brown 7/4 HUE 10 YR
5	T.D 1862	2	Flask	G.1, V.3	Light Reddish Brown 6/3 HUE 5 YR

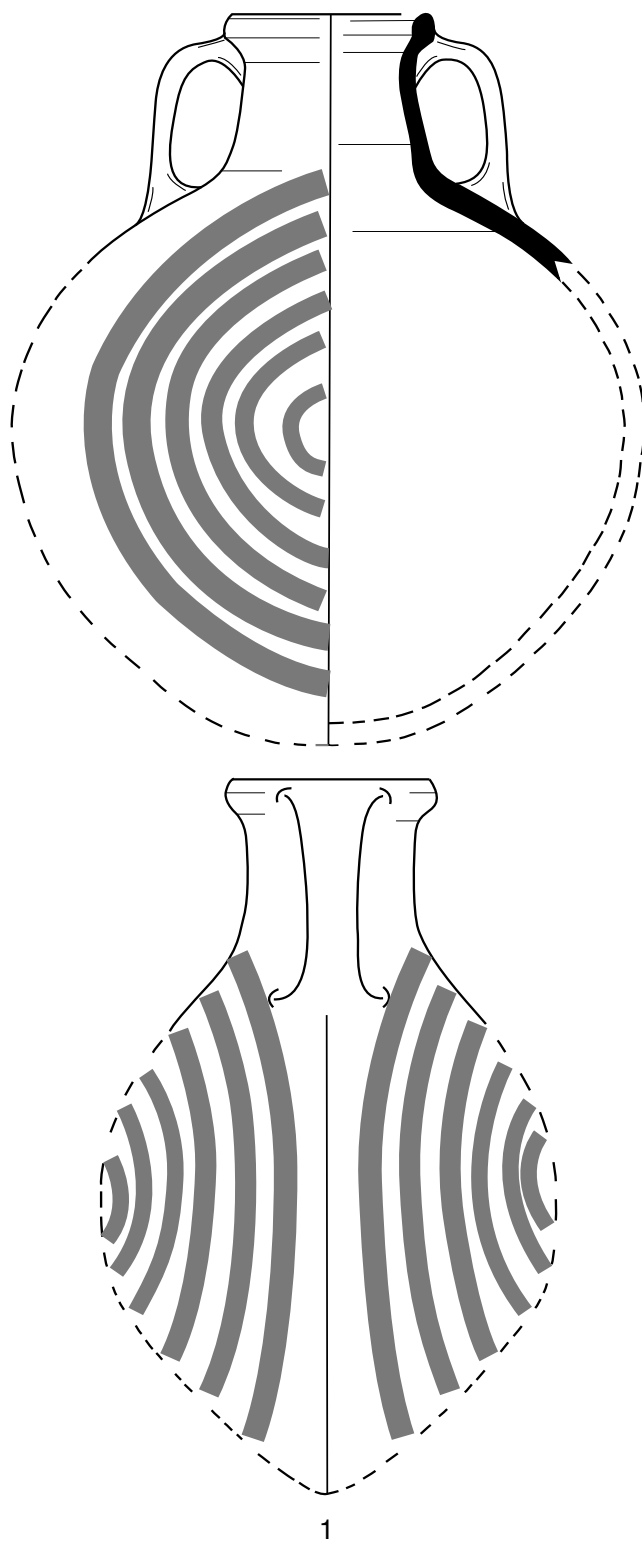


Plate 75

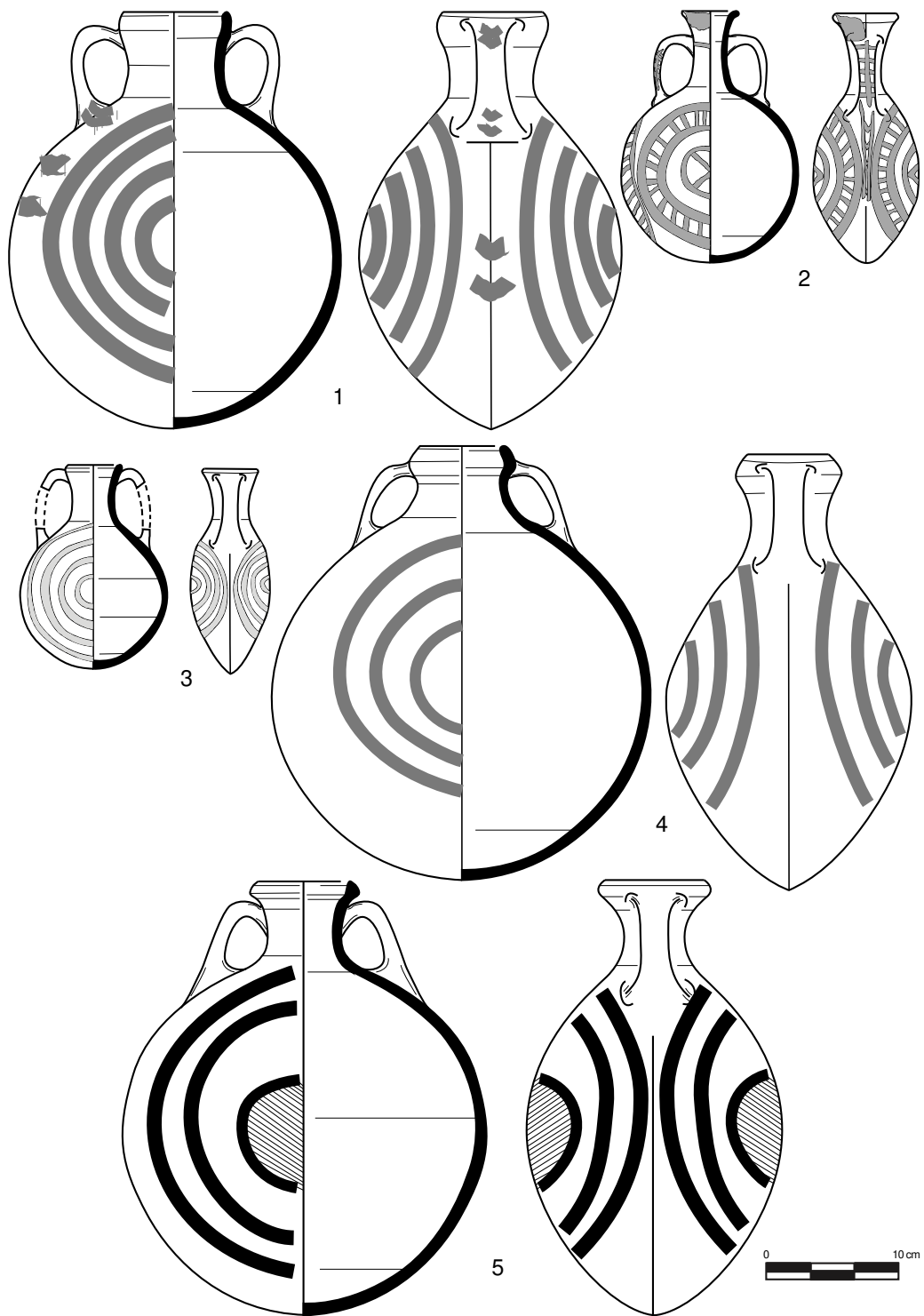


Plate 76

**Plate 77: Flasks of level 1 of tomb 1 (scale 1:4)**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 1225	1	Flask	G.1, V.1	White: 8/1 HUE 10 YR
2	T.D 1206	1	Flask	G.1, V.3	Weak Red 5/3 HUE 10 R
3	T.D 1268	1	Flask	G.1, V.1	White 8/1 HUE 10 YR
4	T.D 1131	1	Flask	G.1, V.7	Reddish Yellow 7/6 HUE 5 YR

**Plate 78: Chalices of levels 5 and 4 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 2584	5	Chalice	G.1, V.6	Very Pale Brown 7/3 HUE 10 YR
2	T.D 2670	5	Chalice	G.1, V.1	Pink 7/4 HUE 5 YR
3 +	T.D 2580	5	Chalice	G.1, V.2	Pink 7/4 HUE 7.5 YR
4	T.D 2636	5	Chalice	G.1, V.1	Pink 7/4 HUE 5 YR
5	T.D 2439	4	Chalice	G.1, V.1	Light Gray 7/2 HUE 10 YR
6	T.D 2321	4	Chalice	G.1, V.2	Light Gray 7/2 HUE 10 YR
7 +	T.D 2316	4	Chalice	G.1, V.1	Pink 7/4 HUE 7.5 YR
8	T.D 2285	4	Chalice	G.1, V.1	Pink 7/3 HUE 5 YR

+ 2580: Drawn and published by Cooley and Pratico 1995, fig: 35.7, Pp. 190.

+ 2316: Drawn and published by Cooley and Pratico 1995, fig: 33.3, Pp. 188.

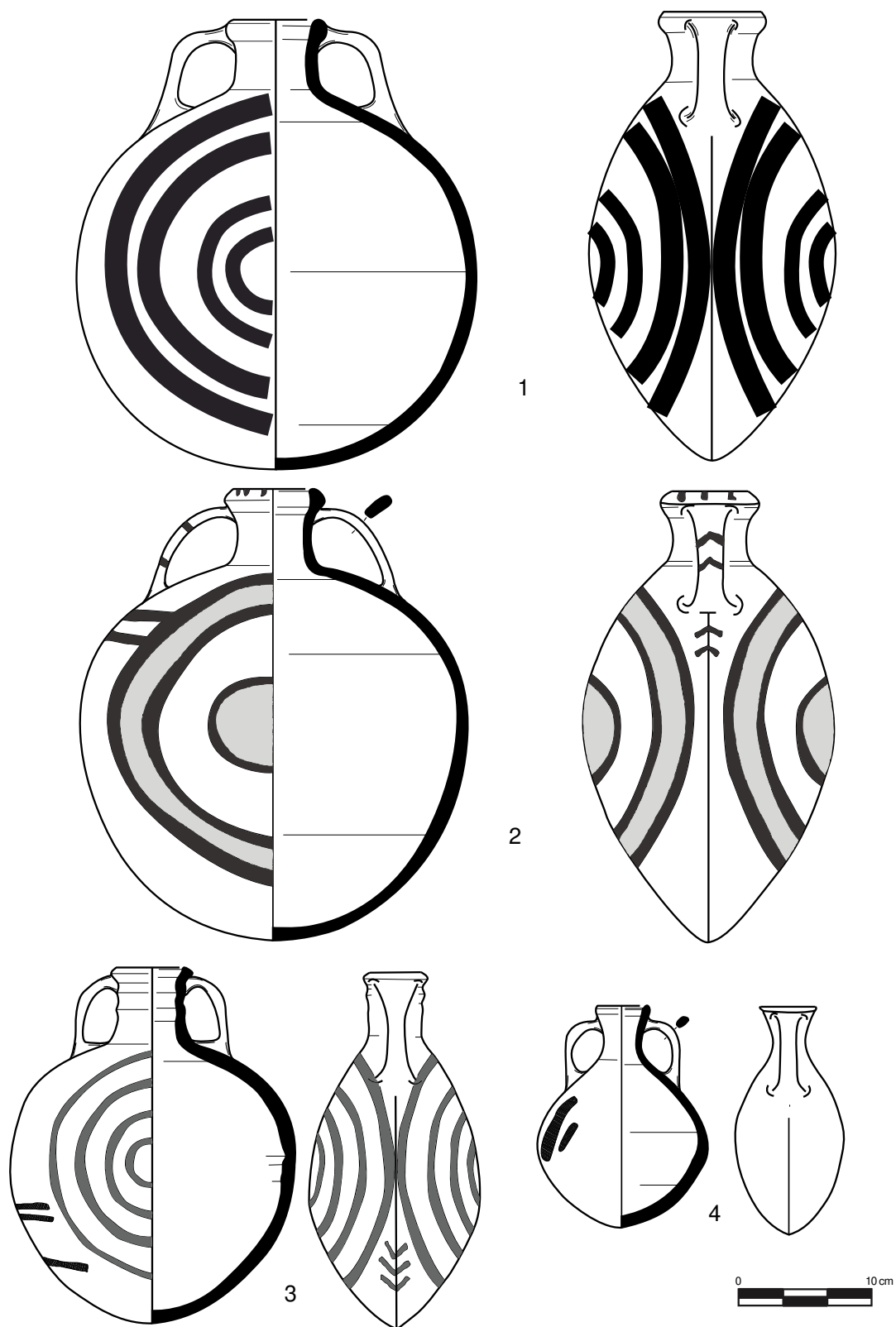


Plate 77

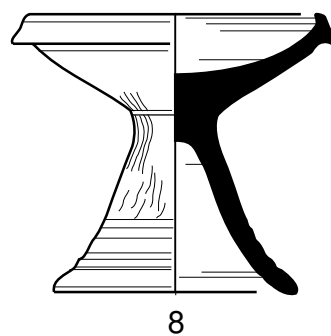
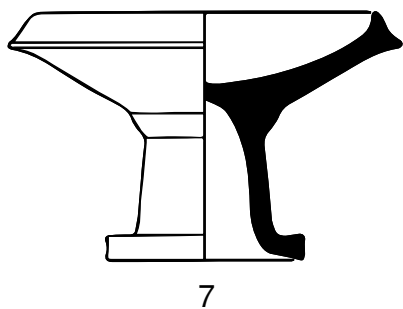
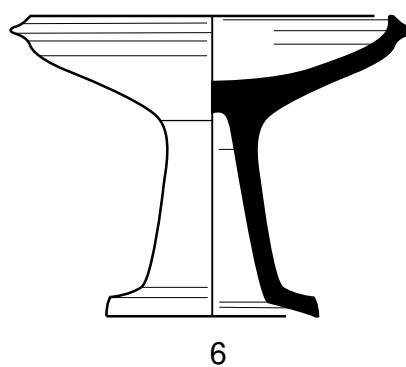
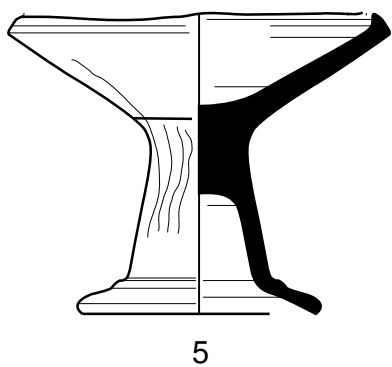
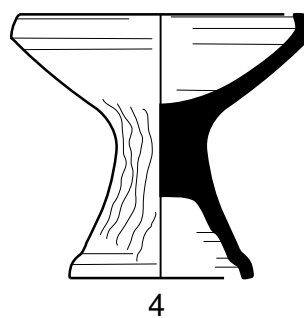
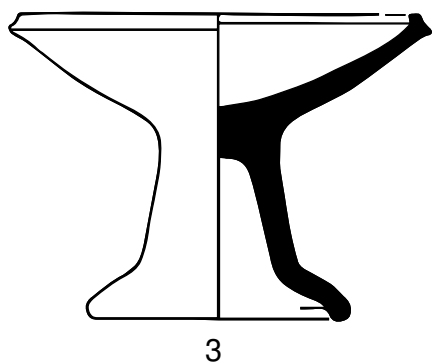
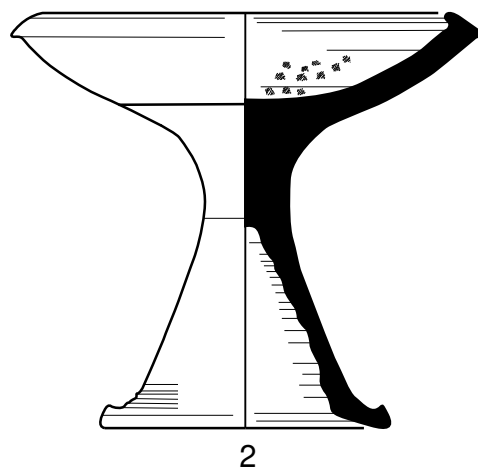
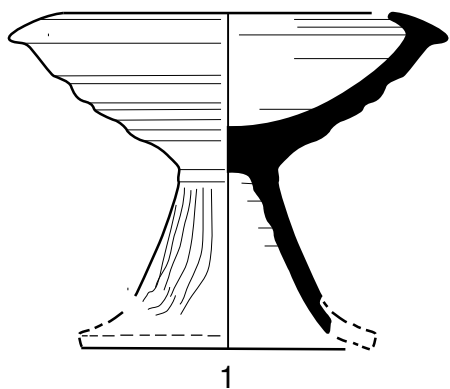


Plate 78

**Plate 79: Chalices of level 3 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 2020	3	Chalice	G.1, V.1	Pink 7/4 HUE 7.5 YR
2	T.D 2022	3	Chalice	G.1, V.1	Very Pale Brown 7/3 HUE 10 YR
3 +	T.D 2155	3	Chalice	G.1, V.2	Pink 7/4 HUE 5 YR
4 +	T.D 2000	3	Chalice	G.1, V.1	Pink 7/4 HUE 5 YR
5	T.D 1924	3	Chalice	G.1, V.4	Pink 7/4 HUE 5 YR
6	T.D 1925	3	Chalice	G.1, V.1	Pink 7/4 HUE 5 YR
7 +	T.D 2018	3	Chalice	G.1, V.1	Reddish Yellow 7/6 HUE 7.5 YR
8	T.D 673	3	Chalice	G.1, V.1	Pink 7/4 HUE 5 YR
9	T.D 2157	3	Chalice	G.1, V.1	Very Pale Brown HUE 10 YR
10 +	T.D 2097	3	Chalice	G.1, V.1	Pink 7/4 HUE 5 YR
11	T.D 1997	3	Chalice	G.1, V.2	Pink 7/4 HUE 5 YR

+ 2155: Drawn and published by Cooley and Pratico 1995, fig: 30.1, Pp. 185.

+ 2000: Drawn and published by Cooley and Pratico 1995, fig: 30.2, Pp. 185.

+ 2018: Drawn and published by Cooley and Pratico 1995, fig: 30.3, Pp. 185.

+ 2097: Drawn and published by Cooley and Pratico 1995, fig: 30.5, Pp. 185.

**Plate 80: Chalices of levels 2 and 1 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 1440	2	Chalice	G.1, V.2	Pink 7/4 HUE 5 YR
2 +	T.D 1461	2	Chalice	G.1, V.1	Pink 7/4 HUE 5 YR
3	T.D 285	2	Chalice	G.1, V.2	Pink 7/4 HUE 5 YR
4 +	T.D 1480	2	Chalice	G.1, V.1	White 8/2 HUE 10 YR
5	T.D 1816	2	Chalice	G.1, V.1	Reddish Yellow 7/6 HUE 7.5 YR
6	T.D 1220	1	Chalice	G.1, V.1	Very Pale Brown HUE 10 YR
7	T.D 1337	1	Chalice	G.1, V.6	Very Pale Brown HUE 10 YR
8	T.D 926	1	Chalice	G.1, V.7	Pink 7/4 HUE 5 YR
9	T.D 1255	1	Chalice	G.1, V.7	Pink 7/4 HUE 5 YR
10	T.D 934	1	Chalice	G.1, V.7	Pink 7/4 HUE 7.5 YR

+ 1461: Drawn and published by Cooley and Pratico 1995, fig: 26. 2, Pp. 181.

+ 1480: Drawn and published by Cooley and Pratico 1995, fig: 26. 5, Pp. 181.



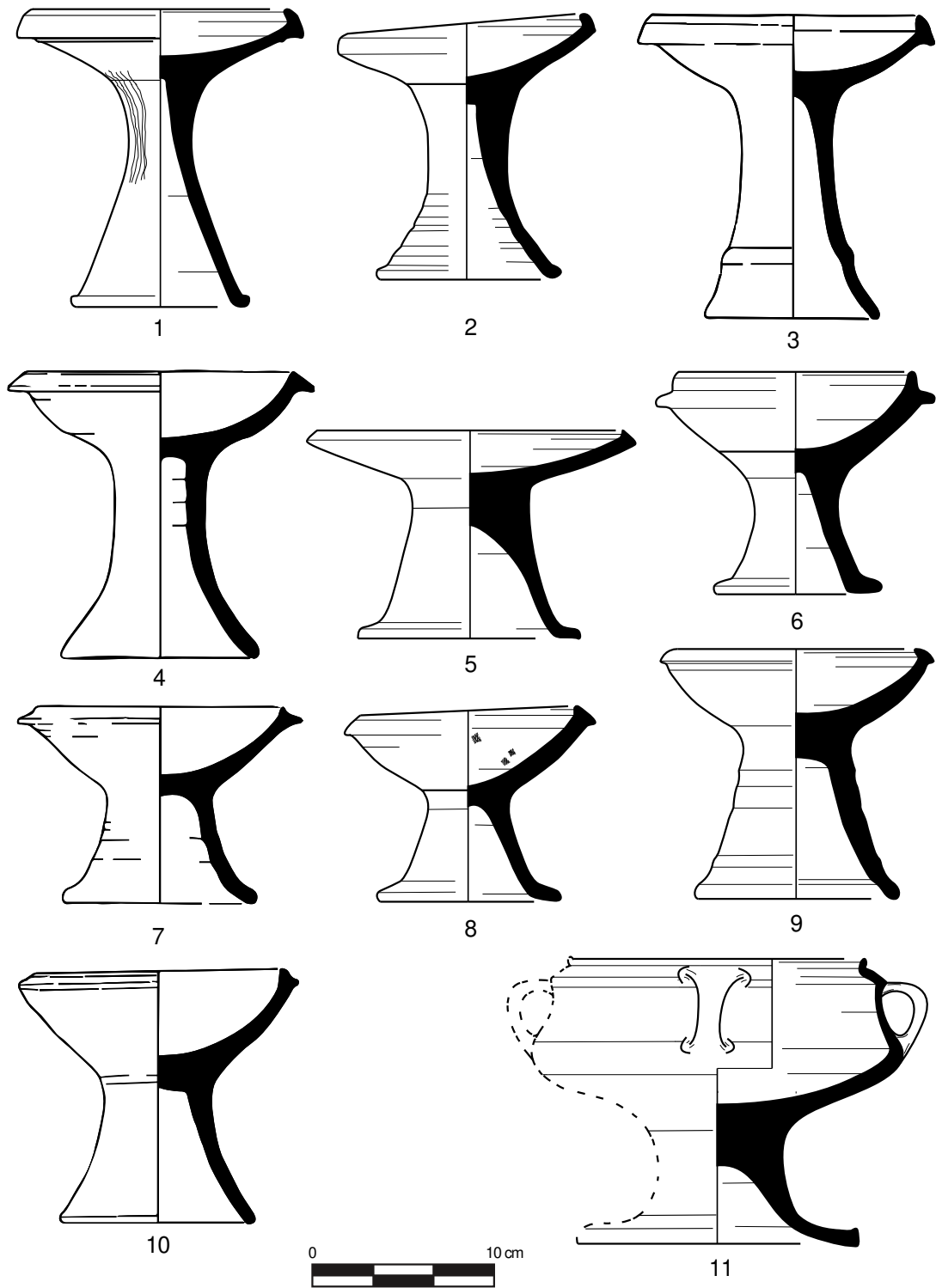


Plate 79

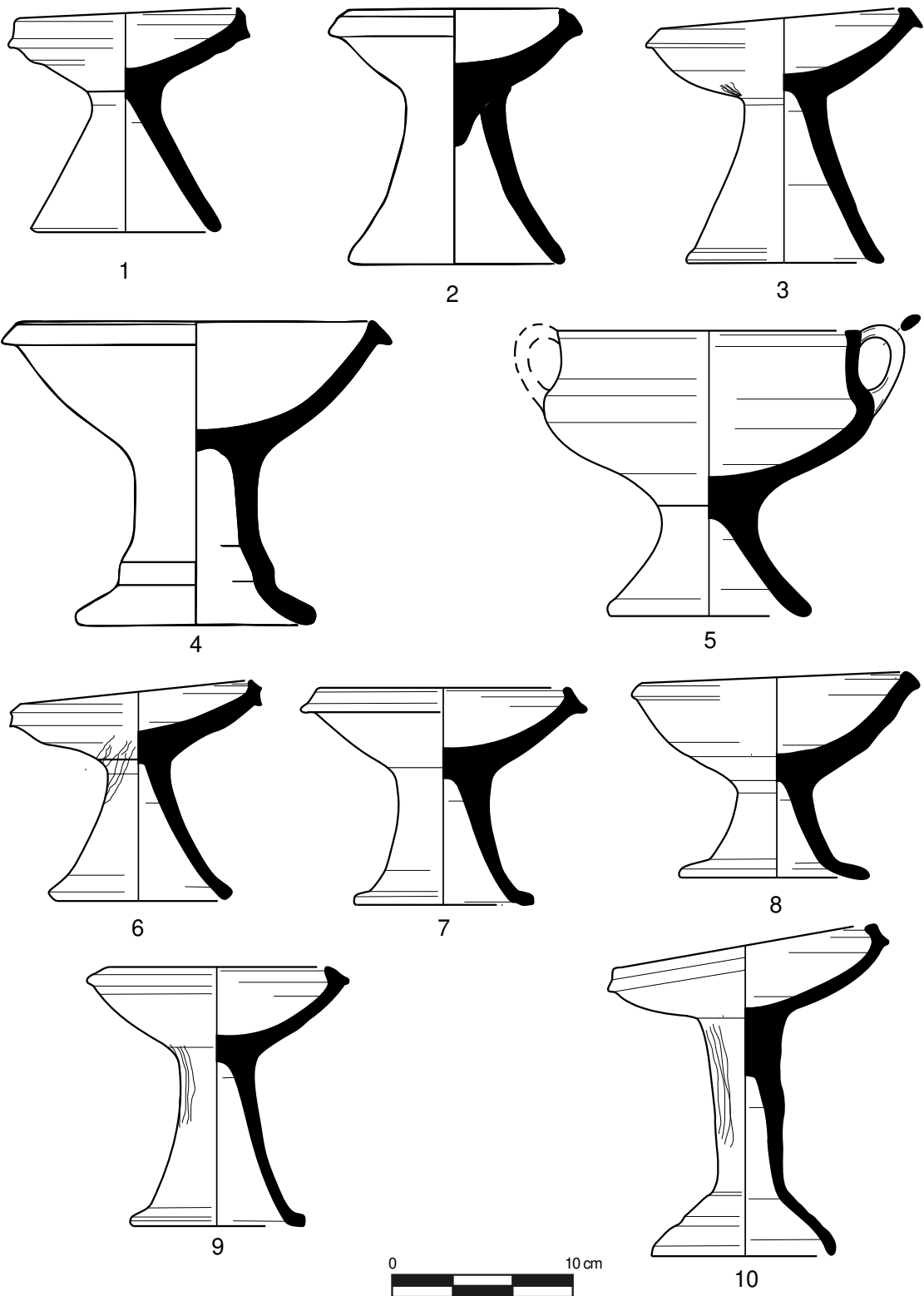


Plate 80

**Plate 81: Oil Lamps of level 5 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 2717	5	Oil Lamp	G.1, V.1	Reddish Brown 5/4 HUE 2.5 YR
2	T.D 2757	5	Oil Lamp	G.1, V.7	Pink 7/4 HUE 5 YR
3	T.D 2683	5	Oil Lamp	G.1, V.4	Pink 7/4 HUE 5 YR
4	T.D 2675	5	Oil Lamp	G.1, V.3	Reddish Brown 5/4 HUE 2.5 YR

**Plate 82: Oil Lamps of level 5 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 2612	5	Oil Lamp	G.1, V.1	White 8/2 HUE 2.5 Y
2	T.D 2591	5	Oil Lamp	G.1, V.6	Dark Gray 4/1 HUE 5 YR
3	T.D 2598	5	Oil Lamp	G.1, V.2	Pink 7/4 HUE 5 YR
4	T.D 2654	5	Oil Lamp	G.1, V.3	Light Reddish Brown 6/4 HUE 5 YR

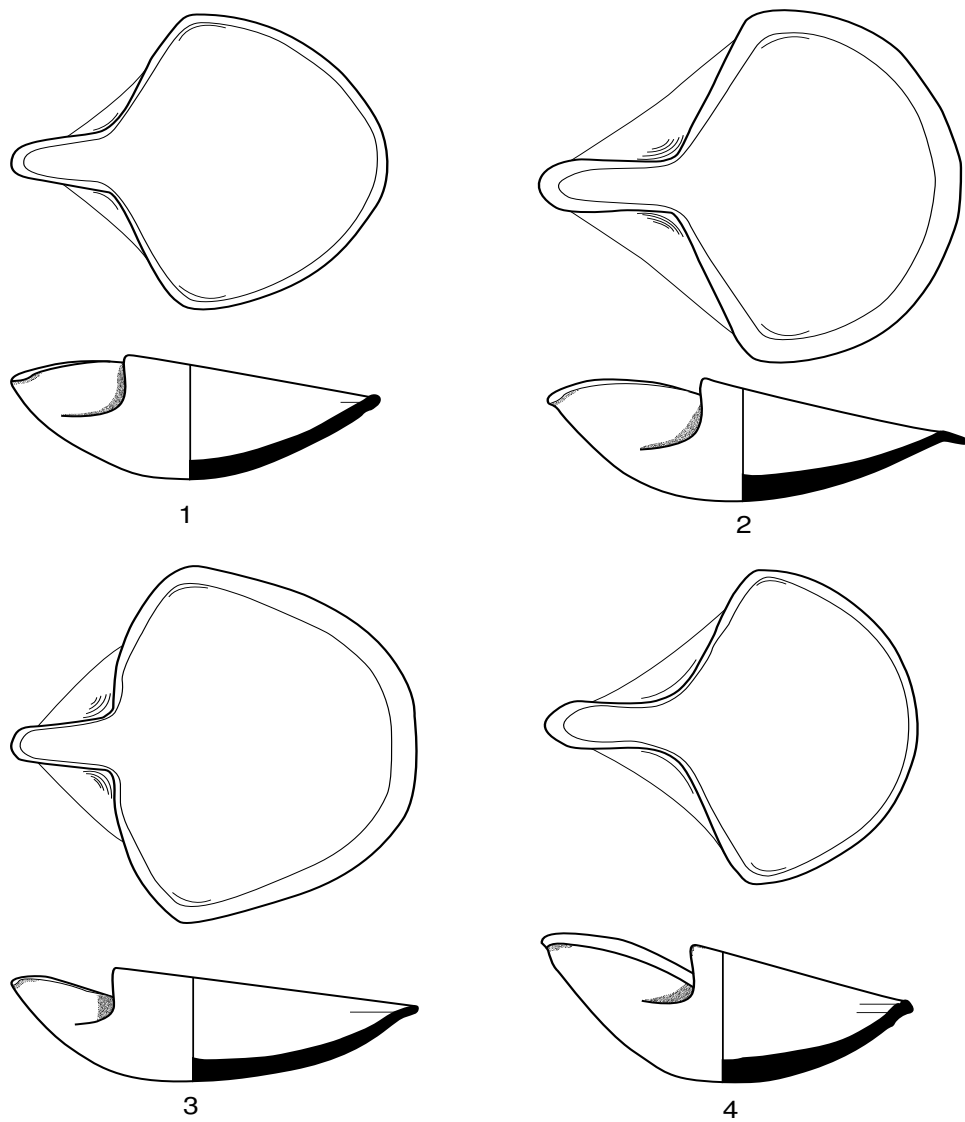
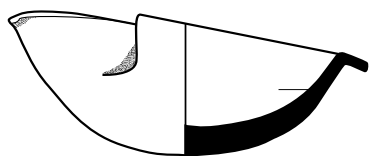
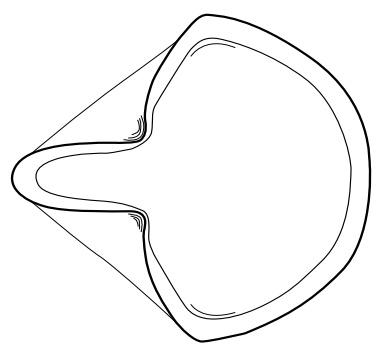
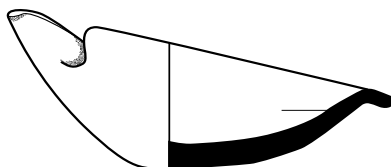
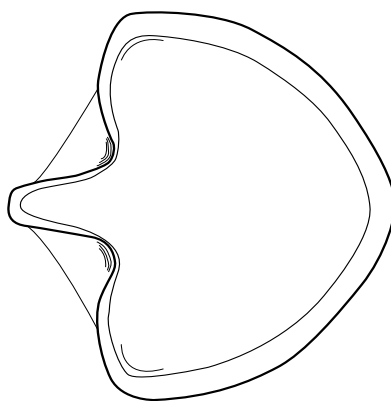


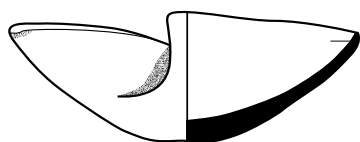
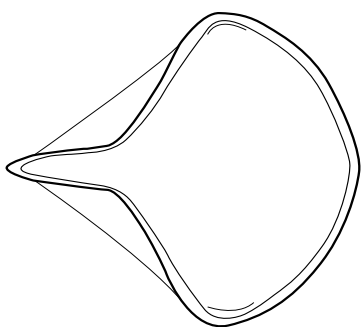
Plate 81



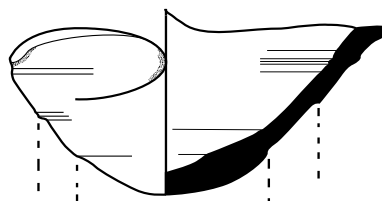
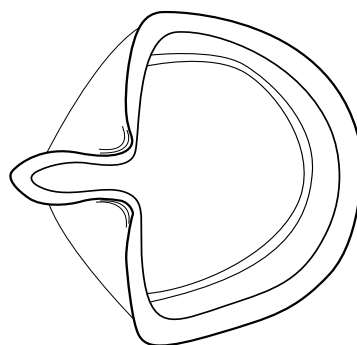
1



2



3



4



Plate 82

**Plate 83: Oil Lamps of level 4 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 870	4	Oil Lamp	G.1, V.1	Very Pale Brown 8/4 HUE 10 YR
2	T.D 761	4	Oil Lamp	G.1, V.2	Pink 7/4 HUE 7.5 YR
3	T.D 2500	4	Oil Lamp	G.1, V.1	Reddish Yellow 7/6 HUE 5 YR
4	T.D 2418	4	Oil Lamp	G.1, V.4	Reddish Yellow 7/6 HUE 5 YR
5	T.D 2284	4	Oil Lamp	G.1, V.2	Very Pale Brown 8/4 HUE 10 YR
6	T.D 2472	4	Oil Lamp	G.1, V.2	Pink 7/4 HUE 5 YR

**Plate 84: Oil Lamps of level 4 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 2370	4	Oil Lamp	G.1, V.1	Pink 7/4 HUE 5 YR
2	T.D 2336	4	Oil Lamp	G.1, V.2	Very Pale Brown 7/3 HUE 10 YR
3	T.D 2504	4	Oil Lamp	G.1, V.2	Pink 7/4 HUE 5 YR
4	T.D 2485	4	Oil Lamp	G.1, V.4	Pink 7/4 HUE 5 YR
5	T.D 2332	4	Oil Lamp	G.1, V.1	White 8/2 HUE 2.5 Y
6	T.D 2528	4	Oil Lamp	G.1, V.4	Pink 7/4 HUE 5 YR
7	T.D 872	4	Oil Lamp	G.1, V.2	Very Pale Brown 7/3 HUE 10 YR

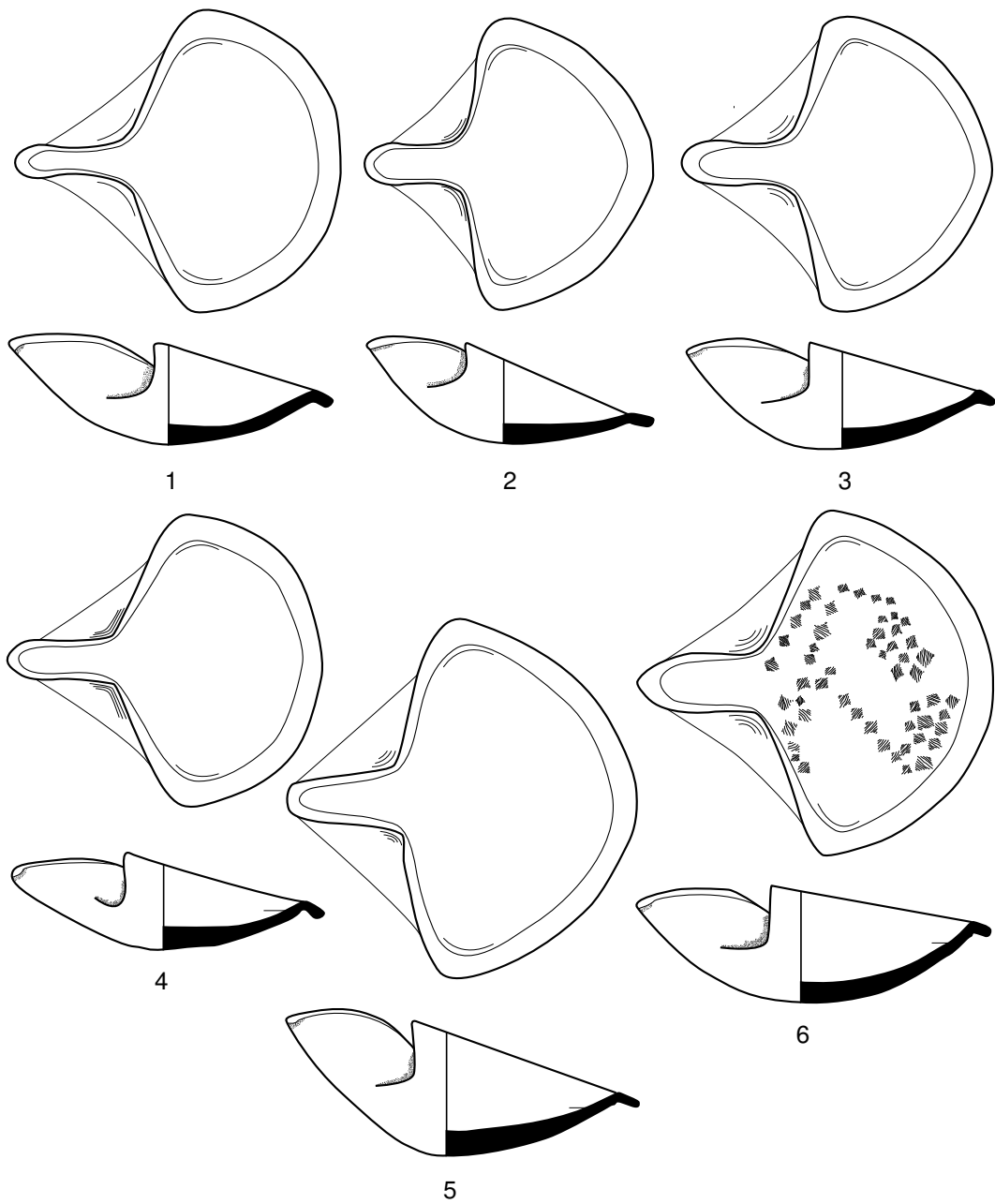


Plate 83

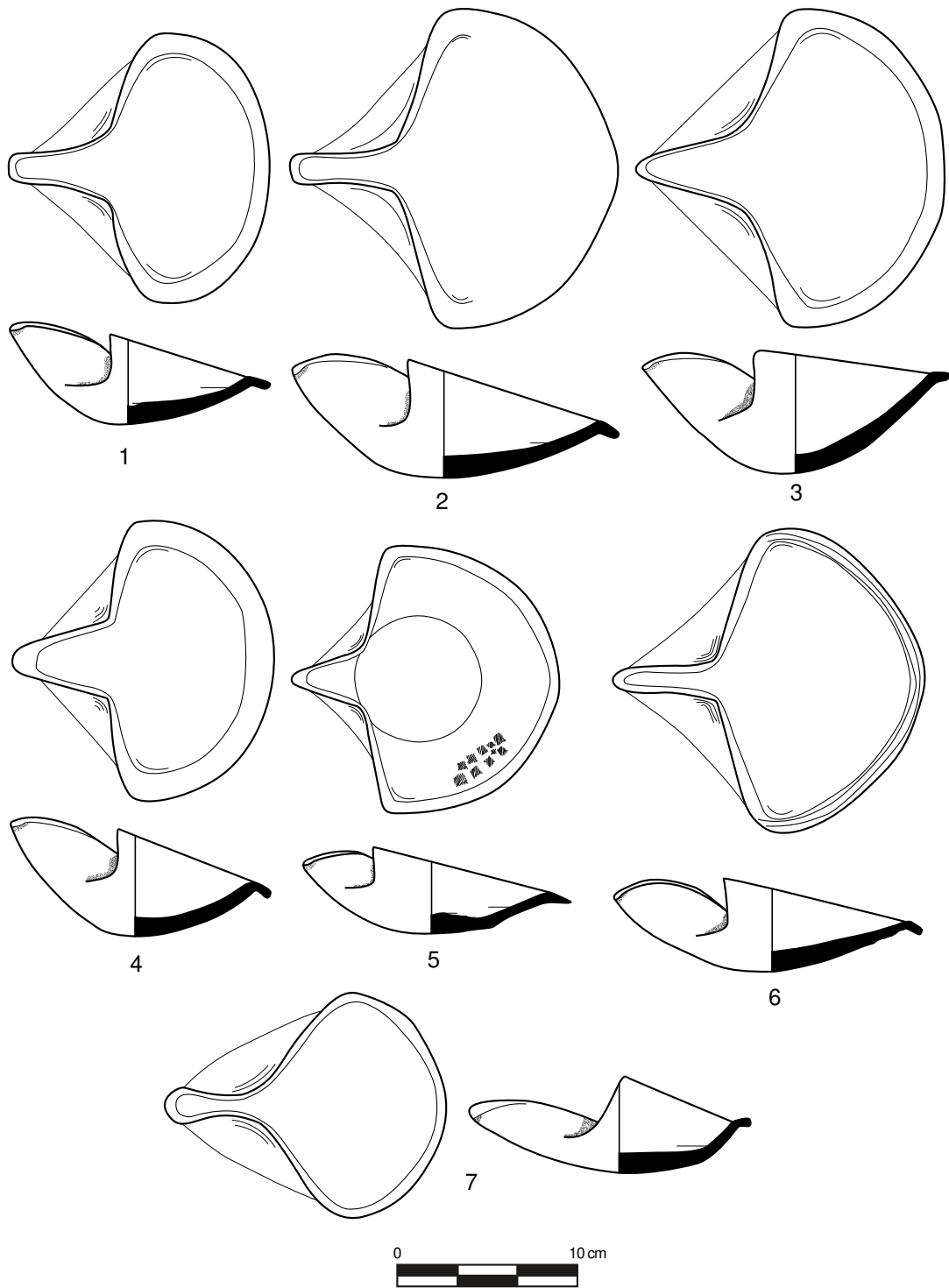


Plate 84



**Plate 85: Oil Lamps of level 3 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 677	3	Oil Lamp	G.1, V.2	Reddish Yellow 7/6 HUE 5 YR
2	T.D 2271	3	Oil Lamp	G.1, V.1	Reddish Yellow 6/6 HUE 5 YR
3	T.D 2270	3	Oil Lamp	G.1, V.1	Pink 7/4 HUE 5 YR
4	T.D 642	3	Oil Lamp	G.1, V.1	Reddish Yellow 6/6 HUE 5 YR
5	T.D 2132	3	Oil Lamp	G.1, V.1	Light Reddish Brown 6/4 HUE 5 YR
6	T.D 2222	3	Oil Lamp	G.1, V.2	Reddish Yellow 6/6 HUE 5 YR
7	T.D 2158	3	Oil Lamp	G.1, V.1	White 8/2 HUE 10 YR
8	T.D 2110	3	Oil Lamp	G.1, V.1	Pink 8/4 HUE 5 YR

**Plate 86: Oil Lamps of levels 3 and 2 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 2045	3	Oil Lamp	G.1, V.1	Reddish Yellow 6/6 HUE 5YR
2	T.D 2095	3	Oil Lamp	G.1, V.1	Reddish Yellow 7/6 HUE 5YR
3	T.D 1954	3	Oil Lamp	G.1, V.2	Pink 7/4 HUE 7.5 YR
4	T.D 1827	2	Oil Lamp	G.1, V.4	White 8/2 HUE 2.5 Y
5	T.D 1620	2	Oil Lamp	G.1, V.1	Light Reddish Brown 6/4 HUE 5 YR
6	T.D 1614	2	Oil Lamp	G.1, V.2	Reddish Yellow 6/6 HUE 5 YR
7	T.D 1642	2	Oil Lamp	G.1, V.1	Reddish Yellow 7/6 HUE 5 YR

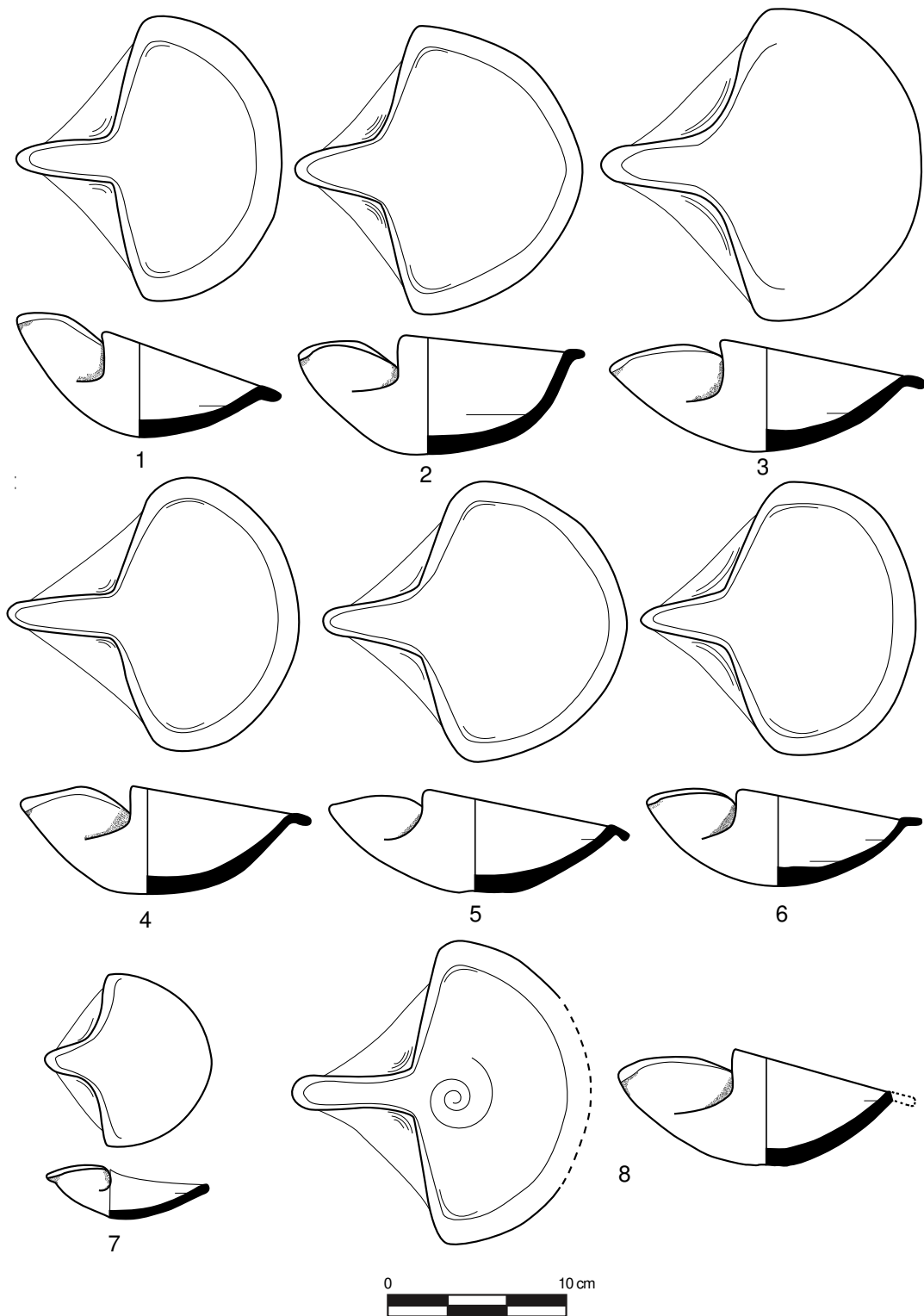


Plate 85

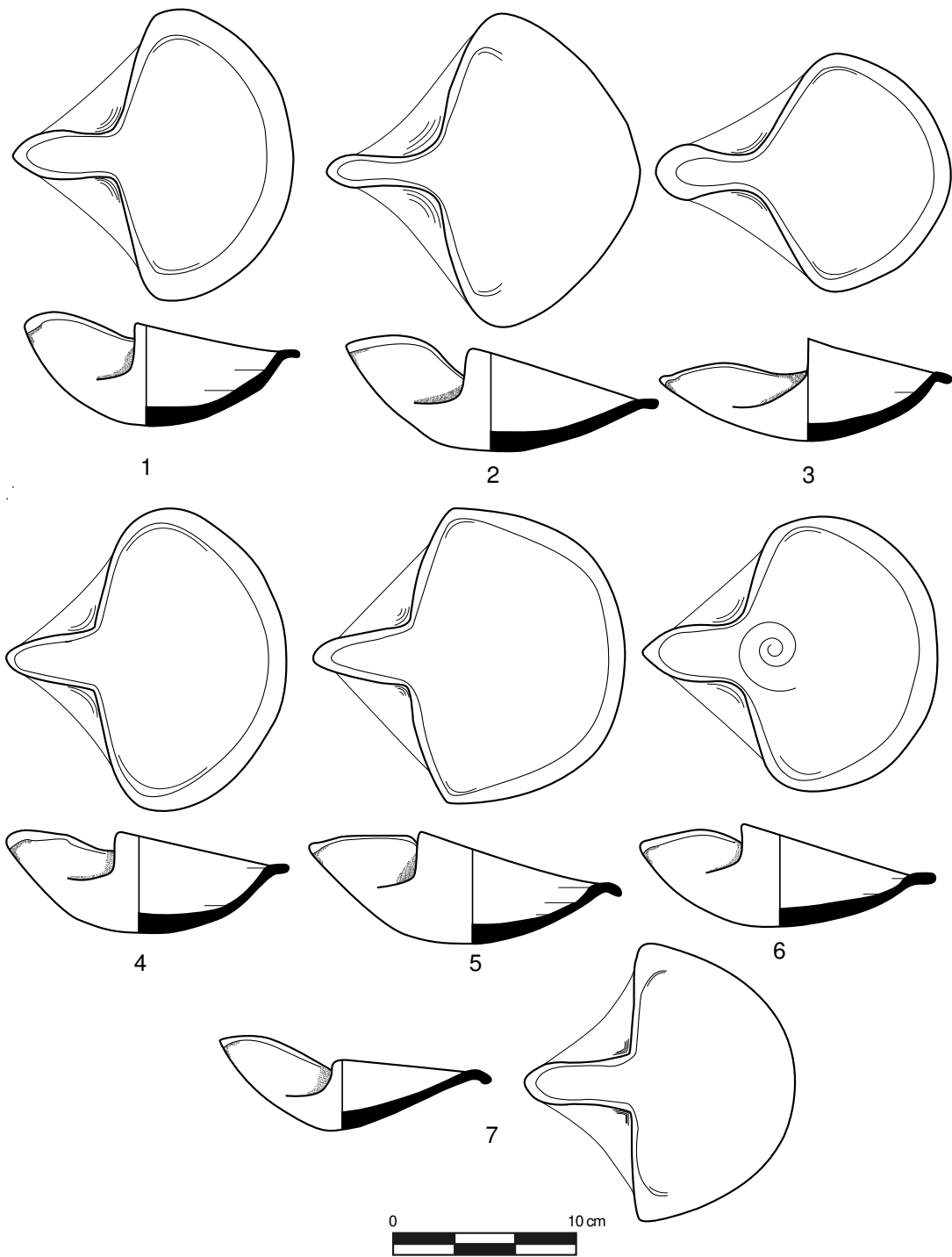


Plate 86

**Plate 87: Oil Lamps of level 2 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 407	2	Oil Lamp	G.1, V.1	Very Pale Brown 7/4 HUE 10 YR
2	T.D 1603	2	Oil Lamp	G.1, V.1	Reddish Yellow 7/6 HUE 5 YR
3	T.D 1409	2	Oil Lamp	G.1, V.1	Reddish Yellow 6/6 HUE 5 YR
4	T.D 299	2	Oil Lamp	G.1, V.2	Very Pale Brown 7/4 HUE 10 YR
5	T.D 1575	2	Oil Lamp	G.1, V.4	Reddish Yellow 7/6 HUE 5 YR
6	T.D 1611	2	Oil Lamp	G.1, V.1	Pink 7/4 HUE 7.5 YR
7	T.D 428	2	Oil Lamp	G.1, V.1	White 8/2 HUE 2.5 Y

**Plate 88: Oil Lamps of level 1 of tomb 1**

Number in the plate	Excavation number	Level	Type	Fabric Group	Color
1	T.D 1329	1	Oil Lamp	G.1, V.3	Weak Red 5/4 HUE 10 R
2	T.D 1088	1	Oil Lamp	G.1, V.1	White 8/2 HUE 2.5 Y
3	T.D 1200	1	Oil Lamp	G.1, V.3	Red 5/6 HUE 10 R
4	T.D 1172	1	Oil Lamp	V.1, V.1	Reddish Yellow 7/6 HUE 5YR
5	T.D 196	1	Oil Lamp	G.1, V.1	White 8/2 HUE 2.5 Y
6	T.D 168	1	Oil Lamp	G.1, V.2	Pink 7/4 HUE 7.5 YR
7	T.D 968	1	Oil Lamp	G.1, V.1	Pink 7/4 HUE 7.5 YR
8	T.D 121	1	Oil Lamp	G.1, V.1	White 8/2 HUE 10 Y
9	T.D 57	1	Oil Lamp	G.1, V.1	Reddish Yellow 7/6 HUE 7.5 YR

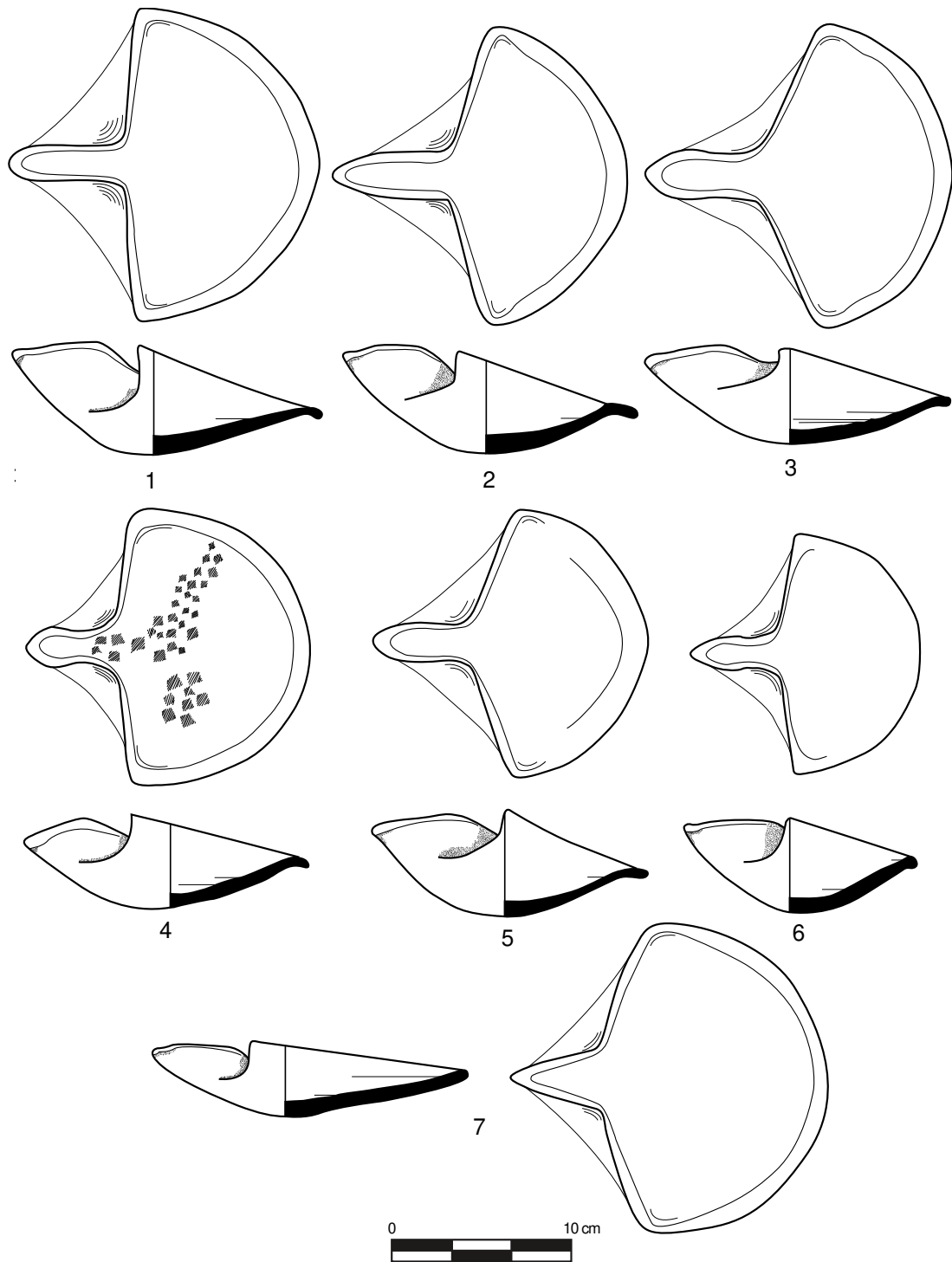


Plate 87

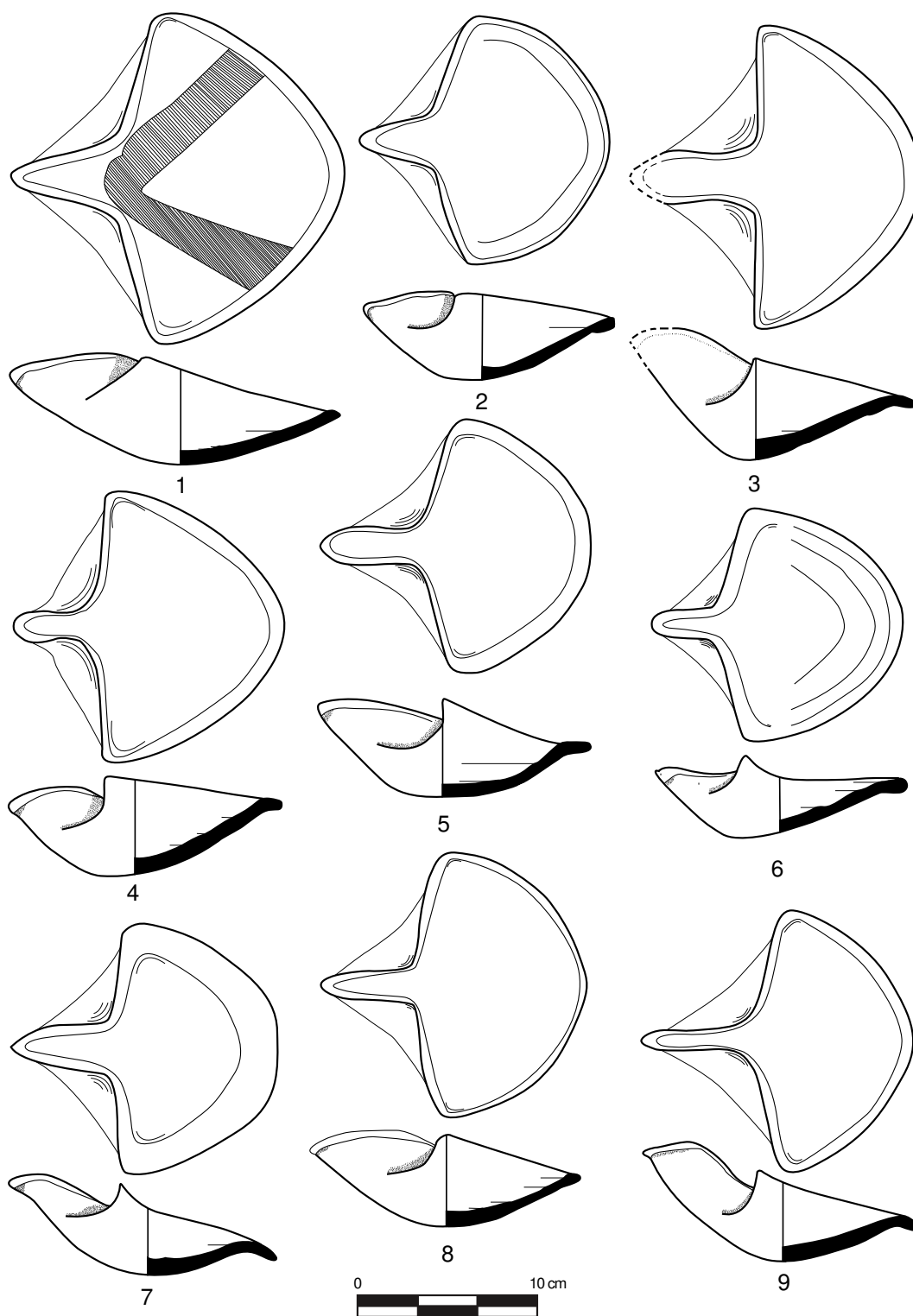


Plate 88