An unguent container as an Egyptian royal gift

The function and value of calcite-alabaster drop jars during the Late Bronze Age in Egypt, the Levant, and Cyprus

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Foreword

This master’s thesis is the first extensive comparative study of all the calcite-alabaster drop jars discovered in Egypt, the Levant, and Cyprus. The drop jars in other materials, such as faience, pottery, and bronze are also shortly discussed. Through the analysis of the different find contexts, associated finds, iconographical and textual sources, and results of the residue analyses conducted on the preserved contents inside of several drop jars, the function and value of the drop jar, and its role in the international exchanges during the Late Bronze Age in the Eastern Mediterranean is proposed. The inspiration for this master’s thesis was the discovery of a calcite-alabaster drop jar at the Cypriot site of Pyla-Kokkinokremos during the 2019 archaeological mission of Ghent University under the direction of Prof. Dr. Joachim Bretschneider. This discovery sparked questions on the origin, acquisition, function, value, and role of this type of vase, which are all matters addressed in this study.

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1. Introduction

The Late Bronze Age presents a peak in the cultural interactions between the different empires of the Eastern Mediterranean. With the overthrow of the Hyksos by Ahmose at the start of the New Kingdom, Egypt regained and strengthened its position as a prosperous and influential power in the Eastern Mediterranean in the following centuries. Numerous military campaigns to the northeast in the Levant and to the south in Nubia led to major expansions of Egyptian territory and control, especially starting from Thutmose III’s reign. At the highest point of expansion, Egypt controlled a considerable part of the Levant, bordering in the south of Syria with the Mitanni kingdom. This territory was substantially reduced through the gradual conquering of the northern Levantine city-states previously under control of the Egyptian kingdom by the emergent Hittite empire at the end of the Eighteenth Dynasty. Between these different regions and other Eastern Mediterranean powers, a great amount of bulk goods as well as smaller quantities of luxury products were exchanged between the kings and/or elite. These luxury products, made of a variety of precious materials, such as ivory, bone, fine stones, metal, and faience, became internationally symbols of power and markers of local authority. One of these luxury goods is the decorated drop jar discovered in a variety of contexts throughout the Eastern Mediterranean.

This master’s thesis undertakes a detailed comparative study of all the decorated calcite-alabaster drop jars discovered in Egypt, the Levant, and Cyprus in order to shed more light on the function, value, and role of the calcite-alabaster drop jar throughout the Eastern Mediterranean during the Late Bronze Age. The research question for this master’s thesis is: ‘What was the function and value of the calcite-alabaster drop jar in Egypt and the Eastern Mediterranean during the Late Bronze Age and what was its role in international exchanges?’ This research question will be answered in the course of this master’s thesis through the detailed description of the shapes, the decorations, find contexts, and associated finds of all the calcite-alabaster drop jars discovered in Egypt, the Levant, and Cyprus. Furthermore, we will take a closer look at the faience and bronze drop jars, the iconographical representations, textual sources, and results of the residue analyses of the preserved remains inside of several drop jars.

Previous scholars typologically and chronologically classified, described, and published different types of stone vessels in concise museum catalogues and handbooks. The stone vessels discovered in Egypt and stored in the Egyptian Museum in Cairo were published by Friedrich Wilhelm von Bissing (1904; 1907), while those stored in the Petrie Museum were published by Flinders Petrie (1937). It is only in 1994 that the first extensive overview of all the known shapes of Egyptian stone vessels were published, in chronological order, by Barbara Aston. This was also done for the Egyptian stone vessels discovered in Cyprus by Inga Jacobsson (1994), and the Levant by Rachael Sparks (2007). Additionally, stone vessels were often included in broader studies on the exchange of luxury items during the Late Bronze Age in the

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3 Other regions, such as Crete and Anatolia, in which numerous amounts of Egyptian stone vessels have been discovered will not be included in this study, because no calcite-alabaster drop jars were discovered so far in these regions (Warren 1969; Bevan 2007; Sparks 2007; Phillips 2008).
Eastern Mediterranean\textsuperscript{5}. What was often problematic in these studies is that the differences in the diverse types of stone vessels were less pronounced. This resulted in little to no attention given to the individual function and value of the different types of stone vessels, because they were primarily defining all of these as luxury items. As noted by Christine Lilyquist, there is a lack of detailed studies on individual types of Egyptian stone vessels, especially those discovered outside of Egypt\textsuperscript{6}. Therefore, this master’s thesis will be the first extensive comparative study focusing on one specific type of stone vessel, the Egyptian calcite-alabaster drop jar. The drop jar has been recognized as an individual type of stone vessel in previous publications\textsuperscript{7}. However, it did not receive any further detailed attention. Only brief proposals on the function of the drop jar have been made by various scholars in these studies\textsuperscript{8}, by the excavators upon their discovery\textsuperscript{9}, and by the curators of the museums in which they are currently stored\textsuperscript{10}. These different theories, often proposed from analyzing only the object itself, has led to an incoherent and ambiguous vision on the function of the drop jar. Therefore, a study gathering archaeological, textual, and iconographical information on the drop jars was necessary to lessen this ambiguity in order to answer new questions about the drop jar, such as its value and role in Egypt and the Eastern Mediterranean during the Late Bronze Age. Additionally, this study includes an unpublished calcite-alabaster drop jar discovered in 2019 at the Cypriot site of Pyla-Kokkinokremos. This is the first calcite-alabaster drop jar discovered on Cyprus, which renounces the theory of the calcite-alabaster drop jar having its distribution outside of Egypt restricted to the Levant\textsuperscript{11}.

After this introduction, in Chapter 2, the terminology of calcite-alabaster, the quarrying of the stone, and stone vessel production in ancient Egypt will be given. This will be followed by a section on the drop jars discovered in Egypt. This part will provide a definition of the ‘drop jar’, a detailed description of the eight calcite-alabaster drop jars, and a concise description of the faience and bronze drop jars. In the last section of the second chapter, the function of the drop jar in Egypt will be proposed through an examination of the find contexts, the iconographical evidence, and the results of analyses of the remains inside of several drop jars. In Chapter 3, the calcite-alabaster drop jars discovered in the Levant and Cyprus will be highlighted. The exchange in Egyptian stone vessels in the Eastern Mediterranean during the Late Bronze Age and the dubious Egyptian origin of the stone vessels will be addressed. A general introduction on the politico-economic situation of the Levant and Cyprus followed by a description of the calcite-alabaster and faience drop jars discovered in both regions will be given. In Chapter 4, the function, value, and role of the calcite-alabaster drop jar in the Levant and Cyprus will be proposed through an analyses of the discussed find contexts in Chapter 3 and a comparison to the function and value of calcite-alabaster drop jars in ancient Egypt discussed in Chapter 2.

\textsuperscript{5} For example: Sherratt, Sherratt 1991; Bevan 2007.
\textsuperscript{6} Lilyquist 1996, 134-143.
\textsuperscript{7} Aston 1994, 156; Sparks 2007, 55.
\textsuperscript{8} Sparks 2007, 55.
\textsuperscript{9} Carter, Mace 1933, 110; Iskander, Shaheen 1964, 206-207.
\textsuperscript{10} Ward 1993-1994, 211; Charrié-Duhaut et al. 2007, 962-964.
\textsuperscript{11} Sparks 2007, 55-57.
After this discussion chapter follows a brief conclusion. The annex contains a map of Egypt and the Eastern Mediterranean with an indication of the find location of the calcite-alabaster and faience drop jars, an overview of the diverse periodization of the Bronze Age in the Eastern Mediterranean, and several other figures linked with the individual drop jars. This is followed by a bibliography and a list of complete references of the online sources used as figures throughout this master’s thesis.
2. The Egyptian drop jars

2.1 Introduction: calcite-alabaster vessels

Scarabs, figurines, statues, offering tables, vessels, sarcophagi, furniture, pavement, and entire shrines were made of calcite-alabaster in Egypt starting from the late fourth millennium B.C. to the end of the Roman conquest. Calcite-alabaster was a favorable stone for producing luxury objects and monuments due to its attractive sun-bleached white-yellow color, its translucent character, and its easy workability due to its softness. The lightly colored stone varied in structure from cloudy homogeneous to coarser crystalline with light lined inclusions (see fig. 1 for these variations).

During the pharaonic period, calcite-alabaster was most frequently referred to in the inscriptions as: šḥw. A name change occurred under the Ptolemaic rule, when it was named after its mining region, Alabastrites, in Egypt, located between Minya and Assiut. Later during the Roman period, the same name was adopted for the soft powdery stone mined in the region of modern Volterra, currently also known as gypsum. To avoid confusion between the soft stone and the gypsum in publications, an unambiguous term replacing the outdated ‘alabaster’ was sought. Different authors proposed different terms to refer to the soft rock, such as travertine, flowstone, calcite, calcite-alabaster, and Egyptian alabaster. This led to an incoherent use of these different terms in publications. The main discussion is between the use of ‘travertine’ by James Harrell and the use of ‘calcite-alabaster’ or ‘Egyptian alabaster’ by Dietrich and Rosemarie Klemm.

Fig. 1: Artifacts made in three different types of calcite-alabaster – Rijksmuseum van Oudheden Leiden (AAL 39a; L.VIII.6; L.VIII.43). (@ National Museum of Antiquities in Leiden)

13 Harrell et al. 2007, 421.
14 This is number three on Mohs scale (Frumkin et al. 2014, 750).
15 Karlshausen, de Putter 1992, 43; Harrell 1990, 39; Aston 1994, 42.
16 Karlshausen, de Putter 1992, 43; Aston 1994, 44.
18 Harrell 1990, 40; Klemm, Klemm 1993, 147.
20 Frumkin et al. 2014.
21 Sparks 2007.
22 Klemm, Klemm 1979; Klemm, Klemm 1991; Klemm, Klemm 1993; Barbieri e
Harrell, following Lucas and Harris\textsuperscript{23}, classified the soft stone as a calcareous sinter or onyx marble, part of the travertine class\textsuperscript{24}. This was criticized by Klemm and Klemm, who noted the distinct differences in formation conditions and chemical components between the Egyptian alabaster and travertine. They proposed to not classify the soft stone with these distinct travertine types, but to independently refer to it as ‘calcite-alabaster’ or by clearly indicating its provenance as ‘Egyptian alabaster’\textsuperscript{25}. However, this was also criticized by Barbara Aston, who stated that calcite and alabaster separately refer to distinct rock types and combining them would not be geologically correct\textsuperscript{26}. Although incorrect, the term ‘calcite-alabaster’ appears to be the clearest unambiguous reference and as such it will be employed for this study.

During the late Oligocene, calcite-alabaster (CaCO\textsubscript{3}) was formed by a dissolution of limestone into the cracks and depressions of limestone caves due to volcanic processes\textsuperscript{27}. These formations of calcitic flowstone\textsuperscript{28} are present in a total of eight recorded quarries in the Eastern desert of Upper Egypt with a concentration of six quarries between Minya and Assiut exploited during the Pharaonic period\textsuperscript{29} (see Annex 4 for the location of these quarries). Through finds, inscriptions, and tool marks, it can be stated that in the second half of the second millennium B.C., the quarries of el-Qawatir, Bosra (Wadi Assiuti), Hatnub, and possibly also Wadi Bershawi were in use\textsuperscript{30}. The expeditions to these quarries consisted of large-scale mining expeditions under the supervision of the royal court and small-scale missions by private individuals. The royal expeditions were primarily to quarry immense amounts of the stone, while the private expeditions, not requiring as much manpower and resources, would collect smaller blocks to produce small objects. Assembling calcite-alabaster pieces was therefore either done by quarrying, by collecting smaller pieces from the remains of earlier quarrying expeditions and workshop waste, or by recycling out-of-use objects\textsuperscript{31}. At the quarry, the extraction of calcite-alabaster blocks, due to the softness of the limestone and the calcite-alabaster, was done with copper/bronze pickaxes, chisels, and toothless saws. These blocks were either left untouched or roughed out at the quarry or at a masonry workshop\textsuperscript{32}. They were then transported to the workshops to be further fashioned in detail or exported as a raw material outside of Egypt\textsuperscript{33}. The transportation was either done by land: with animals or workmen carrying the pieces; or by dragging them on wooden sledges on land roads/moistened sand; or by river transportation on large vessels on the Nile\textsuperscript{34}.

\textsuperscript{23} Lucas, Harris 1962, 59.
\textsuperscript{24} Harrell 1990, 37-41.
\textsuperscript{25} Klemm, Klemm 1991, 63-69; Klemm, Klemm 1993, 147.
\textsuperscript{26} Aston 1994, 43.
\textsuperscript{27} Klemm, Klemm 1979, 107; Klemm, Klemm 1993, 147.
\textsuperscript{28} It is important to note that calcite-alabaster formations do not only occur in Egypt, but also in other regions in the Eastern Mediterranean, which will be further discussed in the following chapter.
\textsuperscript{29} Harrell, Storemyr 2009, 16.
\textsuperscript{30} Klemm, Klemm 1993, 152-164.
\textsuperscript{31} Sparks 2007, 153-154.
\textsuperscript{32} Aston et al. 2000, 7; Bevan 2007, 43-44; Sparks 2007, 194-195; Harrell, Storemyr 2009, 29.
\textsuperscript{33} Peter Warren, Andrew Bevan, and Rachael Sparks believe that raw calcite-alabaster blocks or roughed out pieces were also directly exported from the Egyptian quarries to the broader Mediterranean, as to Crete and the Levant (Warren 1991, 297; Bevan 2003, 67; Sparks 2007, 154). This statement sparked a line of discussions, which will be further elucidated in the following chapter.
\textsuperscript{34} Aston et al. 2000, 17-19; Bevan 2007, 53; Sparks 2007, 153-154; Harrell, Storemyr 2009, 30-32.
Due to the lack of certain identified archaeological remains of calcite-alabaster workshops, information on the production process of calcite-alabaster objects is derived from the iconography (as for example fig. 2), the calcite-alabaster artifacts themselves, the preserved tools, experimental archaeology, and ethnographical studies on modern calcite-alabaster workshops in the Luxor area. At the workshops, a rich variety of objects could be made of calcite-alabaster. One of the most common types of objects produced in these workshops were vessels.

Hundreds of thousands of these calcite-alabaster vessels were produced in Egypt with an impressive amount produced at the start of the Old Kingdom. By the time of the New Kingdom, calcite-alabaster was the dominant medium for making stone vessels in a high variety of shapes. Information about workshops is generally restricted, but Sparks states the existence of state as well as private workshops using a similar production technique. After the vessels were roughed out at the quarry or in the workshop, the inside was to be removed by drills, most likely using an abrasive powder. When the interior was removed, the outer shape was refined, and additional decorations or inscriptions were either incised with fine tools or painted on. As a final and time-consuming activity, the vessel was polished and possibly waxed and gilded.

In these produced vessels, two main groups of vessels can be distinguished, each divided in subgroups by their different shapes. The first main group are the rough vessels commonly used in domestic contexts, such as mortars and bowls, used for processing food or producing goods. These rough vessels were, due to their size and weight, not easily transported and mainly restricted to the domestic context. The second group are the finer more valuable vessels made of precious stones. These vary considerably in size and are decorated with a unique combination of motifs and patterns. This type of vessel is mainly discovered in funerary and ritual contexts not only in Egypt, but also in other regions in the Eastern Mediterranean, to which these finer vessels were commonly exported. One of these finer and larger vessels is the calcite-alabaster drop jar.

36 Lucas, Harris 1962, 421-422.
37 For an overview of the different types of stone vessels see Aston (1994) for Egypt and Sparks (2007) for the Levant.
38 Sparks 2007, 178.
40 Sparks 2007, 174-175.
2.2 An overview of the drop jars discovered in Egypt

Sparks defines drop jars as “large vessels with a broad, open mouth, upright neck, and bulbous or drop-shaped lower body”\(^{41}\). In some publications, drop jars are referred to as ‘situla’\(^{42}\), ‘round-bottomed beakers’\(^{43}\) or classified in the larger group of ‘tubular forms’\(^{44}\) or ‘ovoid jars’\(^{45}\). In all these classifications, different drop-shaped vessels are included, such as drop-shaped vessels with a pointed base (Aston’s type 193\(^{46}\)), undecorated drop-shaped vessels\(^{47}\), and small drop-shaped vessels shorter than 20 by 10 centimeters\(^{48}\). Including these small, pointed based, and undecorated drop-shaped vessels would make the definition of the drop jar too broad. Therefore, this master’s thesis will propose a new more confined definition of the drop jar that can be correlated with the decorated or inscribed type 192 in Aston’s publication\(^{49}\) (fig. 3). The drop jar in this master’s thesis is defined as: ‘a large decorated and/or inscribed vessel with an open mouth, upright neck, and drop-shaped bottom measuring between 20 and 35 centimeters in height and between 10 and 20 centimeters in width occurring in a variety of materials’.

In Egypt, the first appearances of globular and drop-shaped pottery vases are dated to the First Intermediate period\(^{50}\). Starting from the New Kingdom, large ceramic drop-shaped jars\(^{51}\) were produced and commonly used as a container to store provisions. These large drop-shaped jars were either undecorated or decorated with light colored bands, floral motifs, and/or elaborate scenes\(^{52}\) (fig. 4). These were starting from the New Kingdom produced in a smaller size and in more precious materials, such as calcite-alabaster, bronze, and faience\(^{53}\). Compared to the ceramic vases, the drop jars in precious materials are much rarer\(^{54}\). Only eight calcite-alabaster, five bronze, and fourteen faience drop jars were found in different archaeological contexts in Egypt. They all bear unique decorations consisting of floral and geometric motifs and even a few drop jars bear decorations combined with or replaced by cartouches.

Fig. 3: A drawing of the Beirut drop jar (28.5 x 15.5 cm). (Sparks 2007, 56)

Fig. 4: A blue-painted ceramic drop jar (29.6 x 16 cm) – Brooklyn Museum (59.2). (@Brooklyn Museum)

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41 Sparks 2007, 55.
43 Higginbotham 2000, 196.
46 Aston 1994, 156.
47 Aston 1994, 156; Schneider et al. 1996, 43; Sparks 2007, 55-57.
48 Petrie 1937, 12-13
49 Aston 1994, 156.
50 Wodzinska 2010a, 151.
51 These are in Wodzinska’s publication: New Kingdom 56, 61, 62, 64, 65 and 66 (Wodzinska 2010b, 93-98).
52 Wodzinska 2010b, 97-98.
53 Radwan 1983, 126-129; Schneider 1995, 47.
54 Sparks 2007, 56.
The following chapter will give an overview of all the calcite-alabaster drop jars found in Egypt with a detailed description of the shape, decoration, find context, associated finds, and evidence for the possible use of each drop jar. In total, the corpus consists of eight drop jars, which will be referred to by the context in which they were found (see annex 1 for a map with indications of the different finds spots of the calcite-alabaster drop jars) or, when this is not known, by the name of the individual who discovered them. After the description of the eight calcite-alabaster drop jars, a brief introduction of the drop jars made of faience and bronze will be given. In the concluding section of the chapter, the function and value of the drop jar will be proposed through an examination of the find contexts, additional iconographic evidence, and the results of the residue analyses conducted on several drop jars.

The Anastasi drop jar

This drop jar is a complete and undamaged vase currently exhibited at the Rijksmuseum van Oudheden (RMO) in Leiden with inventory number AAL 71. The drop jar has a slight visible curve from the narrow neck evolving in an accentuated round bottom ending in a rounded base (fig. 5). A hanging floral garland is incised on the front of the drop jar from the neck to the light curve at the lower part. This floral garland consists from top to bottom of two rows of a rectangular checkerboard pattern, one thin band, a row of lotus petals, and a second thin band. The exact same motif is repeated around the entire neck giving the impression of a floral garland tightly attached around the neck, leaving a small blank space for the rim. Remains of dark blue paint on the background of the lotus petals of the floral garland, especially on the reverse of the vase, are the only remains of paint left indicating that this drop jar was painted after being incised.

The Anastasi drop jar has been shortly mentioned in several catalogues of Egyptian antiquities: in the category of the ‘domestic utensils’ in Leemans (1840), among the ‘stone vessels’ in Boeser (1907), the ‘vases of alabaster’ in Schneider (1995; 1997), and in Giovetti and Picchi (2015). All these publications, except for the 1995 publication by Hans Schneider, give a concise and general description of the drop jar and do not mention any specific provenance other than ‘Egypt’. The provenance of the drop jar currently exhibited in the RMO is uncertain, but by examining its acquisition history some clues on a more specified provenance can be found. On 28 April 1828, the first collection of Egyptian antiquities of the renowned merchant Giovanni Anastasi (1780-1860) was purchased by the Dutch Kingdom. This collection included 5600 Egyptian artifacts, among them the calcite-alabaster drop jar, collected in a span of sixteen years by Anastasi during his office as consul-general of Sweden and Norway in Egypt. Anastasi collected this impressive amount of Egyptian antiquities through trade with

56 Boeser 1907, 188; Schneider 1995, 47; Schneider 1997, n° 177.
57 Leemans 1840, 90.
58 Boeser 1907, 188.
60 Schneider et al. 1997, 177.
61 Giovetti, Picchi 2015, VI. 33.
62 Bierbrier 2012, 19.
63 Schneider 1985, 19.
local diggers and other antiquity merchants, and through small-scale excavations at Saqqara (1823-1825), Abydos, and Thebes\(^6^4\). These finds were then shipped from Egypt to the brothers Tossizza trading establishment in Livorno, where two employees of Anastasi: Barthow and Castiglione, bargained for more than one year with the Dutch military engineer and agent Jean Emile Humbert to sell Anastasi’s collection. The collection was eventually bought for 260 000 Francs by King Wilhelm I of the Netherlands\(^6^5\).

A large part of the former collection of Anastasi is currently stored in Leiden, while the remaining objects were spread around to other museums in the Netherlands\(^6^6\). Due to the lack of inscriptions on the vase, the obscure excavation history, and the dispersal of the objects throughout the different museums in the Netherlands, and even around the world, it is almost impossible to trace the drop jar back to a more precise provenance. It furthermore becomes especially difficult to reconstruct the finds with which the drop jar was buried. However, Schneider notes the similarities of the Anastasi drop jar with the two decorated drop jars found in the tombs of Horemheb and Maya and Meryt at Saqqara, discussed below. Therefore, he proposes to trace back the drop jar to one of these tombs or to a nearby burial\(^6^7\). The Anastasi drop jar does show some similarities in shape and in decorations with the Saqqara drop jars, but also with the other drop jars discussed in this chapter, especially with the Gurob drop jar. Therefore, the exact provenance of the Anastasi drop jar cannot be traced back with certainty.

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\(^6^4\) Schneider 1991, 400.
\(^6^5\) Schneider 1985, 17-19; Schneider 1991, 392-400.
\(^6^6\) Schneider 1991, 397.
\(^6^7\) Schneider 1995, 47.
The Gurob drop jar

This decorated drop jar was discovered at Gurob, located in the Fayum region (see Annex 1). Upon its discovery, it was brought to the Petrie Museum in London, where it was registered under number UC 3008468. The drop jar is almost entirely complete, only the lower part of the base and a small part of the rim were unintentionally broken off (fig. 6). The decorated drop jar has a long straight neck and shoulder with a slight bulbous curve towards the rounded base. Its decoration consists on the obverse69 of one sizable blossoming blue lotus flower engraved on the center of the body flanked on both sides by a smaller blue lotus bud and a papyrus leaf. From the neck, leaving a thin blank band for the rim, a floral garland surrounds these flowers. This floral garland consists of one row of a rectangular checkerboard pattern, one thin blank band, a row of lotus petals, and a second thin blank band. According to the description in the Online Catalogue of the Petrie Museum remains of dark blue paint are, such as the Anastasi drop jar, still visible on the flowers and the garland70.

The calcite-alabaster drop jar was discovered at Gurob during an archaeological mission from 1888 until 1890 under the direction of Flinders Petrie and W.O. Hughes-Hughes. Due to the contemporaneous excavation of Petrie at Kahun, the excavations at Gurob were carried out by Hughes-Hughes, and resulted, due to a complicated relation between the two scholars and a disappearance of Hughes-Hughes and his notes, in the publication of a very brief and general excavation report by Petrie71. This led to a great loss and ambiguity on the excavated contexts and the discovered artifacts, including the calcite-alabaster drop jar. In the catalogue of the Petrie Museum, number 615 is noted in the description of the drop jar72. This number might possibly refer to an unpublished tomb 61573, but this cannot be said with any certainty due to the lack of more precise records. Unfortunately, no additional information about the precise context and the associated finds of the calcite-alabaster drop jar are known that could be valuable for this study.

69 Due to a lack of any photos or drawings of the different sides of the drop jar, it is uncertain if there are any decorations on the back of the drop jar.
71 Petrie 1891, 15-21; Thomas 1981, 1-2; Gasperini 2018, 1-5.
72 Thomas 1981, 88.
73 Wilson 2020, pers. comm.
The Saqqara drop jars

Two drop jars were discovered at the New Kingdom necropolis at Saqqara, one in the tomb of the Overseer of the Treasury of pharaoh Tutankhamun and Horemheb, Maya, and his wife Meryt\(^\text{74}\), and one in the original tomb of Horemheb. The drop jar discovered in the tomb of Maya and Meryt was reassembled from fourteen pieces dispersed in the different chambers of the tomb. The Maya drop jar has completely been reassembled, only the bottom is still lacking (fig. 8). It has a rim lightly curved towards the outside and a slightly bulbous body. The decoration consists of a tight floral garland surrounding the entire neck and on the front of the drop jar, underneath the garland, a blossoming blue lotus is shallowly incised. The garland, leaving a blank space for the rim, consists of a row of a rectangular checkerboard pattern, a thin band, a row of lotus petals, and a second thin band. As discussed by Raven et al., a few remains of dark blue paint are preserved on the background of this garland\(^\text{75}\). It is interesting to note that this garland pattern is identical to the garland incised on the Gurob drop jar. Possibly, indicating the production of these two drop jars in the same workshop.

\(^{74}\text{Raven et al. 2001, XXIII.}\)
\(^{75}\text{Raven et al. 2001, 26.}\)
The drop jar was discovered during the excavations from 1986 until 1991 of the Egypt Exploration Society and the Rijksmuseum van Oudheden\textsuperscript{76}, scattered in corridor J, chamber K, and annex M in the tomb of Maya and Meryt. These three spaces were part of the subterranean structure of the tomb (fig. 7). According to Raven et al., chamber K can possibly, due to its decorations, be identified with the burial chamber of Maya. While its adjacent annex M would have served as a storage space for provisions. The chambers to the east of these spaces were possibly the burial chamber (O) and the annex (P) of Meryt, the wife of Maya\textsuperscript{77}. Due to the activities of robbers, the re-use of the tomb in a later period, and poor preservation conditions, it is difficult to reconstruct the original deposition of the drop jar and its associated finds\textsuperscript{78}. It can be proposed that the drop jar was originally deposited in either annex M or annex P and due to the disturbances broken and scattered through time in the different rooms. In general, the objects discovered in the tomb, belonging to the burial of Maya and Meryt and the different later burials, consisted of standard funerary equipment, such as shabtis and canopic vases, remains of furniture, large storage jars, boxes, small vessels, jewelry, amulets, and remains of three other calcite-alabaster storage vessels\textsuperscript{79}.

\textsuperscript{76} Raven et al. 2001, XI.
\textsuperscript{77} Raven et al. 2001, 7-8.
\textsuperscript{78} Raven et al. 2001, 3-4.
\textsuperscript{79} Raven et al. 2001, 3-7.
One of these vessels is similar in decoration to the drop jar (fig. 8). This is an amphora incised with a blossoming blue lotus flanked on both sides by a white lotus bud, a fruit or blue lotus bud, and a second white lotus bud, surrounded by a hanging floral garland with an identical garland motif as the drop jar. In contrary to this drop jar, on the back of the amphora, a knotted string with tassels at its ends is incised.\(^{80}\)

The second drop jar was found dispersed in Shaft-complex 1 in the original tomb of Horemheb. The drop jar has a long neck transitioning into a bulbous bottom with a wide cylindrical protrusion (fig. 10). This is the only drop jar in the corpus with a protrusion at the bottom. This protrusion would have had as function to stabilize the drop jar when it was placed on a stand.\(^ {81}\)

The decoration of the drop jar consists of a tight garland of geometric and floral motifs incised around the entire neck with on the front a blossoming blue lotus flanked on both sides by one lotus bud and one lotus leaf. The tight garland leaves a short blank space for the rim. It consists of two rows of a rectangular checkerboard pattern, one row of lotus petals, one row of mandrakes, and a blank band. Interestingly, the background of the row of lotus petals is not homogenous, but interrupted by two thin bands connecting the lotus petals. The background of the geometric and floral motifs was, as indicated by Schneider et al., originally covered with a dark blue pigment.\(^{82}\)

From 1975 until 1979, a joint mission of the Egypt Exploration Society and the Rijksmuseum van Oudheden was undertaken at the tomb of Horemheb at Saqqara.\(^{83}\) During this mission, the drop jar was discovered dispersed in Shaft 1, space B, and space G in Shaft-complex 1.\(^ {84}\)

In this shaft-complex, a variety of funerary goods were discovered, such as coffins, storage jars filled with provisions, shabtis, furniture, canopic vases, scarabs, jewelry, and eleven other decorated calcite-alabaster vessels. These finds pointed to the use of the shaft complex as a burial place for four or five individuals, who were possibly in service of pharaoh Horemheb.\(^ {85}\) As, the Maya drop jar, the exact find location of the drop jar cannot be reconstructed and could possibly be associated to either one of the officials buried in the tomb or a member of the royal family.

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\(^ {80}\) Raven et al. 2001, 26.
\(^ {81}\) According to Schneider et al., this was possibly the calcite-alabaster stand (catalogue 281) discovered in shaft 1 (Schneider et al. 1996, 45-46).
\(^ {82}\) Schneider et al. 1996, 45.
\(^ {83}\) Schneider et al. 1996, XI.
\(^ {84}\) Schneider et al. 1996, 45.
\(^ {85}\) Schneider et al. 1996, 3.
The Gold Tomb drop jar

The Gold Tomb drop jar is a complete drop jar named after its find spot KV 56, also known as the so-called ‘Gold Tomb’ due to the find of a concentration of gold and silver jewelry. Upon its discovery, the drop jar was found broken into pieces, leaving after its restoration, a fracture at the base and from top to bottom (fig. 12). It has a long straight neck transitioning into a slightly rounded bottom ending in a round base. The decoration deviates from the previous drop jars. The garland of the Gold Tomb drop jar consists of more rows of motifs and gives the impression to be tightly attached around the vessel leaving a larger blank space for the rim. The motif consists of bands with a repeating motif of one blank row, one row of a rectangular checkerboard pattern, and a second blank row, altered with floral motifs. From top to bottom, the floral motifs consist of one row of lotus petals, one row of circles, and a second row of lotus petals. Daressy notes that on the neck on the back of the vase, an imitation of a knotted rope is incised with at its ends two of these flowers: 87. A pair of cartouches, incised underneath the tight garland on the front of the drop jar, provides a terminus post quem of the object. These are two cartouches of Ramses II - his throne name on the left: wṣr-mꜢꜤt-rꜤ stp-n-rꜤ and his birth name on the right: rꜤ-ms-sw mrj-jmn - with above each cartouche a sun disk and underneath a nbw sign.88 Other than this cartouche, the context of the calcite-alabaster drop jar and its associated finds gives us an indication of the date of the use of the drop jar.

86 These are interpreted by Daressy as open lotus flowers (Daressy 1908, 46), but represented most likely, such as on the Horemheb drop jar, a row of mandrakes.
87 Daressy 1908, 46.
88 Daressy 1908, 46.
The drop jar was discovered in January 1908 by Edward Ayrton and Theodore Davis in an undecorated one-roomed tomb in the Valley of the Kings (KV 56)\(^9\). The room has an irregular shape containing no inscriptions or decorations on the tomb walls, which led to a discussion of the possible owner of the tomb or function of the space. After clearing the debris and dried mud in the room, Ayrton discovered a small number of objects covered in a thin dust layer above the original floor, created by an inundation of the space in ancient times (for the exact position of the objects upon their discovery see fig. 11). Some of these objects were incised with cartouches of Seti II and Tausret from the Nineteenth Dynasty. These objects include three large ceramic storage jars, three calcite-alabaster vases (including the drop jar), a calcite-alabaster vase stand, a faience drop jar, a calcite-alabaster shabti, and a concentration of rich finds with gold and silver jewelry, small stone objects, beads, and fragments of gold leaf, faience, and plaster\(^9\). The exact location of the drop jar, as indicated by a red rectangle on fig. 11, was at the west wall of the room located between a large storage jar filled with fragments of faience and calcite-alabaster vases, and a large undecorated calcite-alabaster vase with two handles ornamented with gazelle heads and supported by a calcite-alabaster stand\(^9\).

Opposite the entrance of the room approximately in the center, indicated by a blue rectangle on fig. 11, another decorated and inscribed calcite-alabaster vase with missing handles was discovered (fig. 12). In comparison to the calcite-alabaster drop jar, the vase has a completely different shape with a narrow neck and broad shoulders, although they have similar decorative motifs. The calcite-alabaster vase has one hanging floral garland with on the obverse, as noted by Daressy, a knotted string with floral ends, both identical to the Gold Tomb drop jar. The remaining decorations, namely one cartouche with the throne name of Ramses II and the blossoming lotus flower flanked on both sides by a lotus bud\(^9\), are distinctly different from the decorations of the drop jar found in the same tomb. However, the latter does show a strong similarity to the flowers incised on the Gurob and Saqqara drop jars. Another interesting find was made along the south wall of the tomb, marked by a green rectangle on fig. 11. This was a drop jar made of white faience (fig. 12). Its unique colorful decoration consists of two triple colored bands (light blue – dark blue – light blue) with in between these bands, two cartouches of Seti II. The design of the cartouches is similar to the cartouches of Ramses II on the calcite-

\(^9\) Davis 1908, 3.
\(^9\) Ayrton 1908, 31-33; Reeves 1990, 131-133.
\(^9\) Ayrton 1908, 31-32; Daressy 1908, 46.
\(^9\) Daressy 1908, 45-46.
alabaster drop jar, except that the cartouches on the faience drop jar have an additional crowned cobra on both external sides. At the bottom of the faience drop jar, a corolla of a lotus flower with light and darker blue colored petals were incised, imitating a lotus flower supporting the vase⁹³.

To whom did this ‘tomb’ and more importantly these objects actually belong to? Ayrton, Maspero, and later Gardiner believed the objects must have belonged to Queen Tausret. They believed that before or during the annexation of the tomb of Tausret (KV 14) by Setnakht, her burial goods were moved to KV 56 either by trustees of the queen or collected there by robbers⁹⁴. This theory was rejected by Aldred, who believed that the tomb belonged to a royal child of Seti II and Tausret. His main argument is the size of the jewelry and the concentration interpreted as decayed remains of a coffin, which, due to their small size, could impossibly have belonged to an adult⁹⁵. The tomb was, among the other tombs in the Valley of the Kings, re-examined during the Amarna Royal Tombs Project directed by Nicholas Reeves. This led to another interpretation of the function of the space. After a further analysis of the finds and especially the architecture of the tomb, Reeves came to the opinion that the tomb was finished and showed a lot of similarities with late Eighteenth Dynasty tombs of queens⁹⁶. Therefore, the tomb was possibly the disturbed and badly preserved burial of an Eighteenth Dynasty queen. In general, it can be concluded that the calcite-alabaster drop jar was a burial good and even possibly an heirloom deposited in the tomb of a member of the royal family.

Fig. 12: The calcite-alabaster Gold Tomb drop jar (29 x 15 cm), the calcite-alabaster vase (30 x 18 cm), and the faience Gold Tomb drop jar (22,5 x 12 cm). (Davis 1908, pl. XXI-XXII)

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⁹³ Daressy 1908, 45.
⁹⁴ Ayrton 1908, 32; Maspero 1908, XXVIII; Gardiner 1958, 20.
⁹⁵ Aldred 1963, 176-178.
⁹⁶ Reeves 2003, 72.
The Ard el-Naam drop jar

This complete drop jar was discovered in situ in a burial chamber at Ard el-Naam, located three kilometers southeast of ancient Heliopolis (see Annex 1). The Ard el-Naam drop jar has a rim slightly oriented towards the outside with a bulbous lower body and a rounded base. It has a small break at the rim on the front and a large square missing piece in the middle of the rim on the back of the vase97 (fig. 13). This cavity was filled by a small piece of calcite-alabaster measuring 8,5 by 7 centimeters glued to the drop jar98. The attempt to restore this cavity with this small piece most likely indicates the unintentional character of this cavity and the intention to restore the vase in its complete state before its final disposition. In comparison to the other drop jars, the decoration is rather simple. The decoration consists of a thin colored band around the entire neck and with on the front of the shoulder of the drop jar two cartouches of Ramses II. Each cartouche is preceded by a titulary; nb ḫw (lord of the appearances) followed by his birth name: rꜤ-ms-su mrj-jmn on the left and nb tꜤw (lord of the two lands) followed by his throne name: wꜤr-mꜤfꜤl-rꜤ stp-n-rꜤ on the right.

The calcite-alabaster drop jar was discovered by the archaeo logical mission at the necropolis of Ard el-Naam in 1959 of the Egyptian Department of Antiquities under the direction of Hishmat Messiha. During these excavations, remains of mainly Greco-Roman burials as well as one communal burial dated to the New Kingdom were unearthed. One of the areas excavated was Area D (see Annex 5.1 for its location) containing three individual burials dated to the Greco-Roman period, one associated offering pit, and two communal burials (for an overview of Area D see Annex 5.2). The eastern communal tomb consisted of a destroyed shaft leading 6,5 meters below to the entrance of a burial chamber. In this burial chamber, remains of three individuals were found of which only the most southern skeleton was in a good state of preservation. The individual laying on his back was buried on a half-a-meter-high elevation inside of a now-decayed wooden coffin. In a niche on the north of the south wall, approximately 30 centimeters from the individual’s feet, the calcite-alabaster drop jar was found together with a large ceramic vessel, a calcite-alabaster vase with two handles also inscribed with the cartouches of Ramses II, and a limestone slab99 (see Annex 5.3 for a photograph of the in situ objects).

All these vases were sealed at their mouth by a rounded flat disc and contained organic remains. These remains were sampled and analyzed by Zaky Iskander and Abd el Moeiz Shaheen a year after the discovery. The results of this study pointed to the use of the drop jar and the two other vessels in this tomb as storage jars for mummification material. The dark brown concentration at the bottom of the vessels were identified as remains of linen bags soaked in resin. During the mummification process, the linen bags were placed inside of the emptied-out body of the deceased in order to absorb the remaining liquids before the lengthy natron treatment100. This analysis will be further discussed and compared to the other evidence about the use of the drop jar at the end of this chapter.

97 Messiha 1966, 190.
98 Iskander, Shaheen 1964, 201.
99 Iskander, Shaheen 1964, 200; Messiha 1966, 185-191.
100 Iskander, Shaheen 1964, 206-207.
The Tutankhamun drop jars

The last two calcite-alabaster drop jars to be discussed in this chapter originate from the tomb of Tutankhamun. These two drop jars are classified as drop jars based on their shape. However, in their composition and decorations they are distinctly different from each other and from the previously discussed drop jars. Both drop jars received, upon their discovery, an object number by Howard Carter and a Journal d’Entrée number upon arrival at the Egyptian Museum of Cairo, where they are still exhibited today\(^\text{101}\).

The first drop jar (object number 420; JE 62121) is a composition of an inner drop jar covered by a thick decoration layer consisting of two parts attached to each other (fig. 14). The decoration of this two-parted layer is carved out, which makes the inner drop jar at certain parts visible, such as at the shoulder. At the neck of the drop jar is a continuing motif of a thin band and a row of lotus petals with a dark blue colored background. On the shoulder of the drop jar is a broad carved-out band with incised details consisting of two main compositions. The first composition is slightly damaged and can be reconstructed as a winged scarab holding a solar disk and two cobras with his front feet, and a nb sign and plural strokes with his back feet. This first composition is a reference to the throne name of Tutankhamun \(nb-hpr-r^\ddagger\). On the two ends of the first composition, a \(rnpt\) sign and the numeral sign for 100 000 together create ‘hundred thousand of years’, wishing a long reign for the king, serve as a separation from the second composition. The second composition are two pairs of winged cobras with solar disks standing on \(nbw\) signs and between their wings are the throne and birth name of Tutankhamun. The first cobra is oriented towards the winged scarab with its back towards a second cobra, separated by an ‘\(nh\)’ sign. The second and third cobra are oriented towards each other and have, in addition

\(^101\) Manniche 1999, 38-40.
to the titulary of Tutankhamun, a nfr sign between their wings. The fourth cobra is oriented with its back towards the third cobra, also separated by an ṃḥ and with its front towards the winged scarab. The base of the drop jar is, similarly to the Gold Tomb faience drop jar, a relief of large and small petals with pronounced veins, forming a corolla of a lotus. Between the large decorative band and the lotus petals at the base is an incised inscription with its low relief painted in dark blue. This inscription, containing a wish formula for the king, may possibly refer to the purpose of fabrication and primary use of this drop jar during a religious festivity instead of having a purely funerary fabrication and use. The translation of the inscription is as follows:

“The perfect god, son of Amun, lord of the two lands, Neb-kheper-ra.
May your ka [live] for eternity and ever as ruler.
You shall spend the lifespan of Ra; and he shall fashion you daily in his own form,
and shall give to you a sed-festival like Horus upon his throne.
Son of Ra, Tutankhamun, ruler of Southern Heliopolis, (Ra) who gives life, stability and dominion forever.”

The second drop jar (with object number 435; JE 62127) is part of a larger two-part support installation (fig. 15). The drop jar was broken into seven pieces at its discovery and is lacking a small piece of the rim at the back. The drop jar itself is only decorated around the neck with a garland leaving a small blank space for the rim. The garland consists of three rows of a dark white-blue rectangular checkerboard pattern and a row of lotus petals with a dark blue background. The drop jar is supported at the bottom and on the sides by an elaborate stand. The stand consists of a lower supporting undecorated part and an upper decorated part with a combination of an ṃḥ sign, a lily, and a papyrus plant surrounded by a frame in the form of the rnpḫt hieroglyph. According to Manniche, this combination of symbols represents the endurance and life of the two lands of Egypt.

Fig. 14: The elaborate calcite-alabaster drop jar from the tomb of Tutankhamun – 25 x 15.8 cm. (Manniche 2019, pl. XIV-XV)

103 Manniche 2019, 16.
104 Manniche 2019, 16.
Both calcite-alabaster drop jars were discovered in the undecorated annex of the tomb of Tutankhamun (KV 62) in November 1927 by Howard Carter. The elaborate drop jar was found hidden in the heap of objects opposite the entrance of the annex, while the supported drop jar was found in the middle of a heap of objects accumulated in the center at the southern wall of the annex (see Annex 6 for photographs of the in situ position of the objects). These accumulated heaps of objects were the result of two independent raids by robbers, and, in contrary to the other rooms, after the robbery, no effort was made to restore the original positions of the funerary goods. At its discovery, the annex was filled with 40 ceramic jars originally containing wine, 34 calcite-alabaster vases originally containing ointments and oils, 116 boxes filled with food rations, and approximately 110 pieces of furniture and utensils. According to Carter and Mace, the annex initially served as a storage space for perfumed oils, unguents, wine and food rations, and the remaining objects were later added, possibly due to a shortage of space or a lack of organization. The numerous calcite-alabaster vases found in the annex were of a rich variety of simple and complicated shapes and decorations. Initially, all the vessels were sealed with calcite-alabaster lids or with stoppers, protecting their valuable contents. After the second robbers’ party, most of the sealings were broken, the precious oils

110 Carter, Mace 1933, 99; Manniche 2019, 2. 
111 Carter, Mace 1933, 98-104. 
112 Carter, Mace 1933, 110. 
113 It should be noted that more portable calcite-alabaster vessels filled with precious liquids were most likely victim of these robberies and the complete assemblage with which the king was buried cannot be fully reconstructed (Carter, Mace 1933, 105-106).
and unguents were scraped out (fig. 16), poured into waterproof bags, and most of the calcite-alabaster vessels were carelessly left behind\textsuperscript{114}.

Faience and bronze drop jars discovered in Egypt

The shape of the drop jar was introduced during the First Intermediate period\textsuperscript{115} and was starting from the New Kingdom not only adopted for ceramic and calcite-alabaster vessels, but a number of drop jars made of faience and bronze occur as well. It is interesting to briefly compare these drop jars made in these different materials and analyze their similarities and differences in decoration and find context before addressing the value and function of the calcite-alabaster drop jar in Egypt. These are fourteen faience drop jars found in funerary and ritual contexts, and five bronze drop jars found in the Great Aten temple at Amarna\textsuperscript{116}.

The fourteen complete faience drop jars are: the previously mentioned Gold Tomb drop jar, two from burials at Riqqeh\textsuperscript{117}, two from burials at Sedment\textsuperscript{118}, one from near the tomb of Paser at Saqqara\textsuperscript{119}, four from a temple in the Theban region\textsuperscript{120}, two without a provenance\textsuperscript{121}, and two fragmentary drop jars from the Hathor temple at Serabit el-Khadim\textsuperscript{122}. Two of these fourteen faience drop jars, namely the Gold Tomb drop jar and the one of the two Riqqeh drop jars, currently stored in the Petrie Museum, are made of white faience, while the other twelve drop jars have a blue color.

\textsuperscript{114} Carter, Mace 1933, 104-105.
\textsuperscript{115} Wodzinska 2010a, 151.
\textsuperscript{116} These fourteen faience drop jars and five bronze drop jars are all the drop jars I have encountered during my research. By conducting a more detailed study on faience drop jars, more might be found originating from different contexts. Smaller faience drop-shaped vessels, such as the faience jars discovered at Gurob (Gasperini 2018), and smaller undecorated metal drop-shaped vessels will not be further discussed here. For more information on these smaller metal drop-shaped vessels, see von Bissing 1901, 9-29 and Radwan 1983.
\textsuperscript{119} Martin, Schneider 1985, 27-29.
\textsuperscript{120} Barbotin, Leblanc 1999, 28.
\textsuperscript{121} von Bissing 1902, 61; Oriental Institute of the University of Chicago Online Museum Collection, Jar <https://oi-idb.uchicago.edu/id/9fb7eca5-9692-4374-869c-7320d157ad60> accessed on 09.04.2020.
\textsuperscript{122} Lilyquist 2008, 155-165.
In general, the shapes and decorations of the different faience drop jars are similar. The decoration is either incised or painted on the drop jar. The neck, like most of the calcite-alabaster drop jars, consists of a row of lotus petals and/or geometric decorations varying from simple colored lines, such as seen on the Gold Tomb drop jar, to several smaller rows of different motifs. The body of the faience drop jars are decorated\textsuperscript{123} with either inscriptions/cartouches, floral garlands, and/or detailed scenes, such as the king receiving floral offerings on the two Serabit el-Khadim drop jars\textsuperscript{124}. The lower body of the drop jars are occasionally similarly decorated as the neck with simple lines, such as on the Gold Tomb drop jar, or with more decorative floral and geometric bands, such as can be seen on two of the Louvre drop jars (fig. 17). The bottom of the faience drop jars is for all the fourteen drop jars decorated with a corolla of a lotus flower with petals of different sizes and pronounced veins. This corolla decoration of the bottom is unique for faience drop jars and is not used for the drop jars in other materials, except for the elaborate Tutankhamun calcite-alabaster drop jar.

Five bronze drop jars, all similar in shape and decoration, have been discovered at the Great Aten temple at Amarna (fig. 18.1; 18.2; 18.3)\textsuperscript{125}. The bronze drop jars have, compared to the calcite-alabaster and the faience drop jars, a long neck with an accentuated rim and a slight bulbous lower body\textsuperscript{126}. The decoration is rather simple, consisting of only a rectangular inscription on the shoulder of the drop jar containing the titulary of Akhenaten, and exceptionally a mention of Queen Nefertiti and the General Ramose\textsuperscript{127}. Interesting to mention in this category of metal drop jars are four complete smaller decorated drop-shaped vessels discovered at Tell Basta made of electrum and silver (fig. 18.4)\textsuperscript{128}. Three of these show similar decorations as the calcite-alabaster and the faience drop jars. The neck of these three vessels is incised with a row of lotus petals and/or their bottom incised with the corolla of a lotus flower.

\textsuperscript{123}This is apart from the faience drop jar found in Saqqara, whose body is blank.
\textsuperscript{124}Lilyquist 2008, 156-157.
\textsuperscript{125}Frankfort 1927, 210.
\textsuperscript{126}This type of bronze drop jars can possibly, as proposed by Barbotin and Leblanc, be correlated with the ancient Egyptian \textit{tjab} category of metal vases (Barbotin, Leblanc 1999, 27).
\textsuperscript{127}Frankfort 1927, 210; Radwan 1983, 126-130.
\textsuperscript{128}Lilyquist 2012, 9-13.
Curiously, a double cartouche of Tausret on the body of the now-lost vessel, previously stored in the Ägyptisches Museum in Berlin, was incised\textsuperscript{129}.

\textbf{2.3 The function and value of the drop jar in Egypt}

In general, the decoration of the drop jars found in Egypt vary from a simple incision of cartouches to more elaborate decorations with geometric and/or floral motifs, in certain cases combined with inscriptions and/or detailed scenes. On most of the drop jars, floral and geometric decorations are combined, and are characterized by tight and/or hanging floral garlands consisting of one or more rows of a rectangular checkerboard pattern and a row of lotus petals. Sometimes, a hanging floral garland surrounds a blossoming blue lotus flower, such as on the Gurob drop jar, or is completely replaced by lotus flowers, buds, and leaves, such as on the Saqqara drop jars. The background of the geometric and floral bands was roughly incised and most likely originally covered by a layer of dark blue paint, of which traces are still visible on several drop jars. This type of colored floral decoration is not uncommon among vessels of this period. During the New Kingdom, this was one of the most popular decorations incised or painted on the neck or shoulder of a variety of types of large vessels in stone, wood, ivory, ceramic, and faience\textsuperscript{130}. The motifs imitate fresh flowers and vegetal garlands, explicitly indicated by the occasional incision of a knot at the back of the vase. These vegetal garlands were worn as

\textsuperscript{129} Lilyquist 2012, 48-49.

\textsuperscript{130} Sparks 2007, 77.
necklaces and attached to storage jars of beer and wine during religious and funerary festivities\textsuperscript{131} (see a representation of this latter on fig. 19). These garlands, and imitations incised or painted on the vessels together with lotus flowers would symbolize rebirth\textsuperscript{132}. Do these imitations of fresh flowers and ritual floral garlands used during funerary and religious festivities incised on the drop jars also reflect the ritual and possible funerary use of this type of vase?

The question of the function of the drop jar can be derived from its find context, through an iconographical study of the drop jar, and, if possible, through a reliable analysis of the preserved remains inside of the vase. Six of the eight calcite-alabaster drop jars were found in a funerary context, which indicates their use as a burial good. These funerary contexts are royal tombs, such as the tomb of Tutankhamun and most likely also the Gold Tomb, as well as the tombs of private individuals, such as the Ard el-Naam tomb, the tomb of Maya and Meryt, and possibly the original tomb of Horemheb. Interesting about the inscribed drop jar discovered in the tomb of Tutankhamun is its possible primary production for a religious festivity during the life of the pharaoh, which would indicate the secondary function of the drop jar as a burial good. This use in a cultic context is also confirmed by the finds of faience and bronze drop jars in different temples. Both the use of the drop jar in funerary and cultic contexts are also confirmed by several iconographical representations\textsuperscript{133} of the drop jar in tombs, on temple walls, and exceptionally on one ostracon\textsuperscript{134}.

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\textsuperscript{131}Bell 1987, 57; Hope 1989, 8; Hope 1989, 90-91; Bevan 2007, 135; Sparks 2007, 77.
\textsuperscript{132}Bell 1987, 57; Manniche 1999, 98.
\textsuperscript{133}One example that does not contribute to the study of the use of the drop jar through iconographical representations, is a statue of a workman carrying, on his left shoulder, a drop jar decorated with a row of lotus petals. This figurine was discovered at Amarna, served as a container for cosmetics, and is currently exhibited at the Metropolitan Museum of Art (17.190.1963) (Hayes 1959, 316, fig. 198; Online Collection of the Metropolitan Museum of Art, Cosmetic vessel in the shape of a dwarf <https://www.metmuseum.org/art/collection/search/544043?searchField=All\&amp;sortBy=Relevance\&amp;ft=17.190.1963\&amp;offset=0\&amp;rpp=20\&amp;pos=1> accessed on 10.04.2020).
\textsuperscript{134}This ostracon (E.06379) is currently stored in the Art & History Museum in Brussels. On the ostracon, an imaginary animal scene is painted, consisting of four animal servants admiring and offering objects to a seated mouse, of which a hyena is offering a decorated drop jar filled with flowers (Delvaux, Pierlot 2013, 111).
On these depictions, the drop jars are either fully filled with flowers or do not have any visible contents. Different scenes with drop jars are recorded in three Nineteenth Dynasty tombs in Deir el-Medina\(^{135}\), where these were either part of an offering scene or part of a heap of offerings. An example of two drop jars filled with flowers is visible on an offering scene painted on the south wall of the tomb of sculptor Ipuy (TT 217) (fig. 20). In this scene, the deceased receives from his two grandchildren Nebnakht and Urner, ‘bouquets proffered in the temple of Amon in Karnak’, which are placed in the two decorated drop jars\(^{136}\).

In the tomb of Nakht-Amon (TT 335), two examples of decorated drop jars without visible contents are part of two different offering scenes and one filled with possible flowers is part of a heap of offerings. The first depiction is on the east wall of the first chamber, where the seated Nakht-Amon receives offerings from his children, including his daughter Ubkhet who offers a drop jar (fig. 21.1). On the west wall of this first chamber diagonally from the first depiction is a similar offering scene in which the wife of Nakht-Amon, Nebuemheset, is offering a drop jar to her parents\(^{137}\). In the second chamber on the elevation, a decorated drop jar filled with possible flowers is part of small heap of offerings\(^{138}\) (fig. 21.2).

A similar offering scene is seen on the south wall of the tomb of the workman Neferabu (TT5). In this scene, the son of Neferabu, Nedjem-Ger, offers him a drop jar without any visible contents\(^{139}\). Several examples of drop jars without any visible contents are also known from temple walls\(^{140}\), where these are part of numerous offerings by the king to different gods.

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\(^{135}\) A more detailed study of all the tombs in Deir el-Medina and the wider Theban region might bring more scenes featuring the drop jar to light.

\(^{136}\) According to DeGaris Davies, both drop jars were filled with water and sealed with ‘green stuff’ (DeGaris Davies 1927, 43).

\(^{137}\) Bruyère 1926, 121-125.

\(^{138}\) Bruyère 1926, 135.

\(^{139}\) Vandier, Vandier d’Abbadie 1935, 12.

\(^{140}\) Drop jars are depicted as part of a heap of offerings on the east and west wall of the court (The Epigraphic Survey 1979, pl. 30; pl. 60) and the north wall of the first hypostyle hall (The Epigraphic Survey 1981, pl. 185) in the temple of Khonsu at Karnak and on the relief of Thutmose III in the temple of Amon at Karnak (Wreszinski 1935, Tafel 33b).
An example of this is on the southern wall of the chapel of Amon-Ra at Abydos, where two decorated drop jars are part of offerings by Seti I to the bark of Amon\textsuperscript{141} (fig. 22).

![Fig. 22: A detail of Seti I offering to the bark of Amon with the two decorated drop jars surmounted by lotus flowers placed underneath the front of the bark. (© A. Corsi)](image)

It is clear from the iconography and find contexts that the various drop jars, made from different materials and with a variety of decorations, all had a ritual connotation. In the scenes, the drop jars are part of offerings to the gods as well as offerings to the deceased. They are represented as either held by a king, a family member, or supported with other offerings by a piece of furniture or separately by a stand. These stands are known from the archaeological record and were found in certain cases with the calcite-alabaster drop jars, such as possibly with the Horemheb drop jar, and other vessels, such as the calcite-alabaster vase discovered in the Gold Tomb. The supported Tutankhamun drop jar was an exception in this case, because the elaborate stand and the drop jar were one.

What was the specific use of the drop jar in these ritual contexts? On the pictorial representations, the drop jars are filled with flowers or do not have any visible contents. These invisible contents can be identified thanks to the preserved remains inside of three calcite-alabaster drop jars and the four Ramses II faience drop jars. As mentioned before, two calcite-alabaster drop jars were found in the tomb of Tutankhamun stored in the annex with 32 other calcite-alabaster vessels originally filled with precious liquids\textsuperscript{142}. No further analyses on the remains of the scrapped-out liquids of the calcite-alabaster drop jars were done, but what can be derived from the fingermarks in the preserved remains is that the precious liquid was dense most likely due to the use of animal fat as one of the ingredients\textsuperscript{143}. This animal fat together with a sort of resin have been identified during an analysis executed at the time of its discovery on the remains of a smaller extensively decorated vessel (JE 62124) from the tomb of Tutankhamun\textsuperscript{144}.

\textsuperscript{141} Calverley et al., 1935, pl. 10.
\textsuperscript{142} Carter, Mace 1933, 110.
\textsuperscript{143} Manniche 1999, 86-88.
\textsuperscript{144} Carter, Mace 1927, 206-210.
The only analyses undertaken on a calcite-alabaster drop jar, was done in the 1950’s on the Ard el-Naam drop jar. The contents of the drop jar were identified as mummification material, more precisely resin-soaked linen bags, which were placed inside of the body during the mummification. When keeping in mind the results of the Tutankhamun vessel, these results, pointing to the use of the drop jar as a storage container for mummification material, should be taken with a grain of salt. Additional evidence of a recent residue analysis conducted on the four Ramses II faience drop jars from a temple in the Theban region was unquestionable evidence for the function of the drop jar. The researchers discovered that the drop jar was most likely used during the New Kingdom as a container for an unguent made of animal fat and foreign pinopytha oil, originally stored in one of the many storage spaces in the temple. These analyses point to the use of these drop jars as containers for precious unguents and ointments, which can also be imagined for the other calcite-alabaster drop jars without any preserved contents. In the world of the living, these precious liquids would have had a ritual connotation, and were possibly used in the daily temple ritual to anoint the statue of the deities in conjunction with incantations, and/or during specific feasts or festivals, such as the Festival of the Valley. Additionally, the unguent had perhaps a medical purpose, serving as a remedy against ailments. In the world of the deceased, the unguents were used during funerary rituals, such as the Opening of the Mouth, and/or, as derived from the drop jars discovered in a funerary context, served as a precious burial good to ensure rebirth. Additionally, the results on the four faience drop jars yielded evidence for their re-use during the Ptolemaic period as canopic jars. This brings into question, the results of the analyses on the contents of the Ard el-Naam drop jar, which could have possibly, and especially due to its find in a mainly Greco-Roman necropolis, have been re-used during this period.

This use of the drop jar as a container for precious unguents and ointments in a ritualized sphere raises the following questions: What was the value of the calcite-alabaster drop jar in Egypt? Were these calcite-alabaster drop jars valuable on their own or were these seen as simple containers for precious liquids? As Schneider notes, the precious liquids were one of the main targets of ancient tomb robbing and, as Carter notes, their containers were, due to the size and weight, out of practicality left behind by the robbers. These opinions point to the drop jar, without its contents, as an object of no great importance and value. However, the large size and detailed decorations on all the drop jars indicate their high production cost, including the quarrying of the sizable large blocks of calcite-alabaster, and the time-consuming transformation of this block into a finely decorated stone vessel. The manpower and resources needed for this can only be imagined having been operated by the royal court. The container as a royal good is also supported by the finds of the calcite-alabaster drop jars in the tomb of Tutankhamun and possibly the tomb of a queen (KV 56).

145 Iskander, Shaheen 1964, 206-207.
146 Charrié-Duhaut et al. 2007, 962-964.
147 Manniche 1999, 33-35.
149 Manniche 1999, 113-125.
151 Charrié-Duhaut et al. 2007, 965.
152 Schneider 1995, 47.
153 Carter, Mace 1933, 144.
The finds of calcite-alabaster drop jars in tombs of individuals, possibly officials of the king, could be explained as the drop jar filled with unguents being one of the precious goods, among the renown golden collars, given to loyal servants as a reward\textsuperscript{154}. The finds of calcite-alabaster and faience drop jars throughout the Levant and Cyprus also point, other than their high value in Egypt, to their use and value in the broader Eastern Mediterranean. These finds will be further elucidated in the following chapter and lead to an answer in the fourth chapter on the value, function, and role of the drop jar in the Eastern Mediterranean.

\textsuperscript{154} Bard 2015, 139.
3. Calcite-alabaster and faience drop jars discovered in the Eastern Mediterranean

3.1 Introduction: stone vessels throughout the Eastern Mediterranean

Starting from the end of the fourth millennium B.C. and throughout the third millennium B.C. (EB II-III) diplomatic and trade relations between Egypt and the Levantine city-states were established. These Levantine-Egyptian exchanges intensified towards the end of the third and the early second millennium B.C., and more powers, such as Minoan Crete, Anatolia, and, on a small-scale, Cyprus, became involved in this international trade network. Maritime innovations and the low cost of the maritime trade led to the intensification and expansion of exchanges of goods during the Late Bronze Age, connecting directly or indirectly Egypt, Cyprus, the Levant, Anatolia, and Mycenean Greece. Other than commercial trade, goods were exchanged between the different rulers and elite through gift exchange or tribute, or taken by the invader as booty or taxes. Evidence for these extensive exchanges between the different regions is derived from the finds of numerous imports, iconographical, and textual sources. Additionally, this international trade left its mark on the local material culture with local imitations of the imports, the adoption of foreign elements in the decorations, and the creation of a hybrid decorative style, the so-called ‘International Style’.

Stone vessels are, due to their high preservation in the archaeological record, one of the most important groups in the study of the intraregional connectivity. Large amounts of stone vessels, with a domination of calcite-alabaster vessels, have been discovered in royal as well as non-royal contexts throughout the Eastern Mediterranean. These calcite-alabaster vessels were either undecorated, painted or incised with decorations and/or inscriptions. Compared to the undecorated and decorated vessels, the amount of discovered inscribed vessels is much lower. The inscriptions mainly consist of a pair of cartouches of an Egyptian ruler, with a majority of the vessels discovered in the Levant belonging to the reigns of Amenhotep III and Ramses II. Other than providing a terminus post quem, the cartouches also point to the unquestionable production of the vessels in an Egyptian royal workshop and emphasize their authenticity. For the uninscribed vessels, the dating of the object is less obvious, and additionally, their Egyptian origin is placed into question. It is important to note that the non-uniform decoration of these stone vessels, as also seen in the previously discussed drop jars,

156 Knapp 2018, 170.
159 Sparks 2003, 41-46.
160 The International Style is a hybrid decorative style in which decorative elements from the different regions in the Eastern Mediterranean and ancient Near East were adopted and fused to create a new style, which cannot be attributed to a decorative style of a specific region. The main decorative elements consist of scenes and figures related to kingship, such as nature and contest scenes with indigenous flora, animals (lions, bulls, and goats), and mixed creatures (griffons and sphinxes). Objects made in valuable materials, such as golden bowls, ivory plaques and figurines, stone and faience vessels, were incised and painted with these characteristic motives (Crowley 1989, 221-227; Feldman 2002, 10-23; Panitz-Cohen 2013, 550-551; Broodbank 2013, 376; Knapp 2013, 2-6; Luciani 2013, 519).
161 Bevan 2007, 1.
162 Sparks 2007, 159.
163 Sparks 2003, 49-51.
164 Sparks 2003, 45.
adds even more difficulty to the identification of a stone vessel with an Egyptian decorative style as an Egyptian product. The results of Christine Lilyquist’s study on ‘Egyptian’ stone vessels discovered at Kāmīd el-Lōz165 sparked an ongoing discussion on the authenticity of the calcite-alabaster vessels discovered throughout the Eastern Mediterranean. Were all these calcite-alabaster vessels produced in Egypt? Or were these local imitations? Was calcite-alabaster possibly exported as a raw material from Egypt and further modeled at a foreign workshop that imitated these typical shapes and decorations of Egyptian calcite-alabaster vessels? According to Peter Warren, who was later supported by Andrew Bevan, this was the case for Minoan Crete. At Knossos, both Minoan shaped vessels made of calcite-alabaster and the remains of calcite-alabaster waste were discovered at the site. According to Warren and Bevan, this is, in addition to the imported Egyptian stone vessels, evidence for the import of the Egyptian stone as a raw material and the local manufacture of prestigious Egyptianized objects in calcite-alabaster during the Early and Middle Bronze Age166. According to Rachael Sparks, this was also the case for the Levant during the Middle and Late Bronze Age, the ancient Egyptian iconographical and textual evidence of the international trade in raw blocks of precious stones, such as lapis lazuli and malachite, support her hypothesis167.

This hypothesis of the trade in raw blocks of Egyptian calcite-alabaster was questioned by Christine Lilyquist. Lilyquist’s main argument is the occurrence of calcite-alabaster formations and similar light-colored stones in the Eastern Mediterranean168, such as in Crete169, in Israel170, in Jordan, and possibly in Cyprus171. She states that these easily accessible local sources for calcite-alabaster were more favorable for the local production of stone vessels than the expensive calcite-alabaster imported from Egypt172. However, this theory is strongly rejected by Sparks, who firstly questions the adequacy of this local calcite-alabaster to make stone vessels, which in the case of the Jordan calcite-alabaster, she deems unsuitable. Additionally, she points to the lacking evidence of the contemporary exploitation of the quarries to the Egyptian quarries, such as the Israeli quarries, and to the absence of archaeological remains of calcite-alabaster workshops in the Levant173. A recent study at the Te’omim cave, situated in the central highlands of Israel, consists of contradicting evidence for this latter. The study pointed to the extensive exploitation of this calcite-alabaster formation during the Middle Bronze Age and its eligibility to locally produce stone vessels174. However, this study does not offer any additional evidence whether Egyptianized stone vessels were locally produced. At the current state of research, it cannot be said with certainty due to the lack of unambiguous evidence, if Egyptianized vessels were locally produced and if this was done with imported or local calcite-alabaster. Therefore, only calcite-alabaster vessels with royal inscriptions can with certainty be traced back to Egypt, while the uninscribed vessels with an Egyptian decorative

165 Lilyquist 1996.
167 Sparks 2007, 154.
169 Barbieri et al. 2002, 408.
171 Lilyquist 1996, 140.
173 Sparks 2007, 160.
174 Frumkin et al. 2014, 752-756.
style should be analyzed with more care. For these uninscribed vessels, more certainty about the Egyptian origin of these vessels can be gained through a closer study of their find contexts and associated finds. Both decorated and inscribed drop jars have been discovered in the Eastern Mediterranean in a variety of contexts. In total, three calcite-alabaster and one faience drop jar were unearthed in the Levant and one faience drop jar and recently one made from calcite-alabaster in Cyprus (see Annex 2 for a map with an indication of the findspots of the drop jars).

In the following chapter, all the drop jars will individually be addressed with a description of their shape, their decorations, their find context, and associated finds. Prior to this, the archaeological site where each calcite-alabaster drop jar was discovered will shortly be introduced with their importance in the international exchange network. As an introduction to each section with first the drop jars discovered in the Levant and afterwards the drop jars discovered in Cyprus, the political and economic situation of each region and the Egyptian influence in this region will shortly be addressed.

3.2 Calcite-alabaster and faience drop jars discovered in the Levant

The Levant, consisting of the region of Palestine, Jordan, Israel, Lebanon, and Syria, was during the Late Bronze Age characterized by city-states with heterogenous politico-economic systems. These different city-states, diverging in extent and influence, were ruled by kings or the elite. This diversity can be explained by their differences in the geographical location of the city-state, its proximity to natural resources, and its dependence on external powers. The prevalent resources, such as cedarwood, precious stones and metals, agricultural produce, livestock, oil, wine, and manpower, and the location in the midst of international land and sea routes, made the Levant a desired region of conquer for great empires, such as Egypt, the Mitanni, and the Hittites. At the beginning of the Late Bronze Age (LBIA-B), Egypt controlled a main part of the Levant, including significant centers and regions such as Ugarit, the Beqa Valley, and Byblos in the northern Levant. This was the result of a peace treaty between the competing empires of Egypt and the Mitanni, who during the end of the fifteenth century and the beginning of the fourteenth century B.C. became a prominent power. During this period, the politico-economic involvement of Egypt was rather moderate. It rested on the forging of alliances with the local rulers and the imposition of tribute and taxes. The advent of the Hittites in the second half of the fourteenth century B.C. (LBIIA) brought change to this. The Hittite empire conquered the Mitanni territory in northern Syria and the Egyptian control over a large part of the northern Levant was lost after the Hittite conquer of southwest Syria and its alliance with the Amurru kingdom in northern Lebanon. This led to a more intense involvement of Egypt in their maintained territory, until the end of the Twentieth Dynasty, with the establishment of small military posts along important trade routes and temples, and a more expressed footprint in the material culture. The situation in the inland regions, such as central Syria and Jordan,
differed from the coastal regions and were mainly characterized by small agricultural settlements with a limited involvement and influence of Egypt\textsuperscript{182}.

Its complex occupation history and central geographic location in the international trade network made the Levantine region a crossroad of cultures. This multiculturality is not only reflected in the finds of rich imports, but also in the foreign elements in the locally produced products\textsuperscript{183}. A differentiation is made between the widely distributed imports, such as Cypriot and Mycenean pottery, available to all classes of society acquired through independent merchants\textsuperscript{184}, versus the more unique goods: imports in precious materials and ‘International Styled’ objects restricted to the ruling upper classes of society\textsuperscript{185}. The possession of these luxurious goods would indicate the close relation/vassalship of the king and elite with the other powerful rulers, of which Egyptian luxury objects were perceived as the most valuable. This would have enabled them to demonstrate and maintain their dominant role to their local subjects\textsuperscript{186}. In other words, the foreign prestige goods were markers of local power and authority.

One of these markers were the stone and faience vessels decorated with Egyptian motifs discovered in various Levantine sites. In total, three calcite-alabaster drop jars and one faience drop jar\textsuperscript{187} have been discovered in Lebanon, Palestine, and Jordan (see Annex 2). The drop jars are characterized by the typical Egyptian drop shape and have decorations consisting of geometric and/or floral motifs, in two cases combined with a royal cartouche. The calcite-alabaster drop jars were discovered in a non-royal tomb in Beirut and in a subterranean structure in the palace of Megiddo. On the contrary, the faience drop jar was discovered in a cultic context at Tell Deir ‘Alla.

**The Beirut drop jar**

Beirut was once one of the smaller harbor settlements on the Levantine coast founded at the beginning of the Early Bronze Age\textsuperscript{188}. At the beginning of the second millennium B.C. Beirut grew in importance and became integrated in international exchanges with Crete, Cyprus, and Egypt indicated by the discovery of a gneiss sphinx of Amenemhat IV\textsuperscript{189}. Due to the construction of the modern city over the ancient remains, the reconstruction of the early history of the city is more difficult. However, through foreign textual references and a few archaeological excavations in the center of Beirut, it is not impossible\textsuperscript{190}. From the Amarna letters, it is derived that Beirut became during the Late Bronze Age, a significant city-state with

\textsuperscript{182} Fischer 2013, 567; Luciani 2013, 511.
\textsuperscript{183} Sherratt 2013, 505-506.
\textsuperscript{185} Panitz-Cohen 2013, 550.
\textsuperscript{187} The smaller drop-shaped vessel discovered at the temple of Beth Shean and the fragments of drop-shaped vessels discovered at the Hathor temple at Timna’ (Higginbotham 2000, 209-210) will not be discussed in this study. Due to their smaller size and fragmentary state, these cannot with certainty be classified within the definition of drop jars defined in this study.
\textsuperscript{188} Badre 1997, 12-14.
a king, who was a close vassal of the Egyptian pharaoh\textsuperscript{191}. This alliance is visible in archaeological records due to numerous Egyptian artifacts dated to the New Kingdom discovered in funerary and possible cultic contexts in the modern city center (Bey 003). These concentrations were discovered inside the settlement, which was constructed and fortified during the Early and Middle Bronze Ages, and, together with the later additional architectural features, pointed to continuous habitation of the town lasting well into the Late Bronze Age\textsuperscript{192}. The discovery of a calcite-alabaster drop jar incised with the cartouches of Ramses II from a rock-cut tomb inside the ancient fortifications provides more evidence for this close connection between the city-state of Beirut and the Egyptian kingdom.

In March 1954, a cave with Bronze Age pottery was accidentally discovered during the construction works of the Byblos building\textsuperscript{193} in the Kharji district in Beirut\textsuperscript{194}. The tomb was located on the southeast of the Bronze Age settlement inside of the fortification wall\textsuperscript{195} (fig. 23). After this discovery, a rescue excavation was undertaken by the Directorate General of Antiquities of Beirut, which led to the discovery of a total of four tombs cut in the bedrock of this cave. During the rescue excavation, a total of circa 300 artifacts were discovered in the four tombs, which led to their dating to the Middle and Late Bronze Age\textsuperscript{196}. In the first chamber of the double-chambered tomb in the Kharji Cave (chamber 1 of Cave 4) (fig. 23), the inscribed calcite-alabaster drop jar was discovered together with several other rich finds, such as one smaller undecorated calcite-alabaster vase, two basalt mortars, a high amount of local and foreign ceramics (Canaanite, Minoan, Mycenean and Cypriot), bronze and silver objects, stone tools, an animal figurine, scarabs, and beads in precious stones\textsuperscript{197}.

\begin{figure}
\centering
\includegraphics[width=\textwidth]{fig23.png}
\caption{A map with an indication of the location of the Kharji tombs in red and a plan of the double-chambered tomb 1.}
\end{figure}

193 At the discovery, the parcel was part of the property of the \textit{Maqasid}. This led to the donation of approximately 24 artifacts to Saeb Salam, the former president of the \textit{Maqasid} and prime minister of Lebanon (Saidah 1993-1994, 141; Hankey 1996, 12).
194 Chéhab 1955, 51.
After its discovery, the calcite-alabaster drop jar was brought to the National Museum of Beirut and registered under number F586\textsuperscript{198}. The vase has a typical drop shape with a rim slightly curving towards the exterior, a slightly bulbous lower body, and a rounded base. The drop jar has a small crack in the middle of the body and a main part of the decorations is damaged. Incised around the neck of the drop jar is a tight garland consisting of two thin blank bands surrounding a row of lotus petals. Underneath this garland, on the front of the drop jar, are a pair of cartouches of Ramses II. The cartouche on the left states his birth name: $r^5$-ms-sw mrj-jmn, and the cartouche on the right, his throne name: $[wsr-mt^t-r^t]$ stp-n-rt with above each cartouche two ostrich feathers with a sun-disc and underneath a nbw sign\textsuperscript{199}.

To whom did this double-chambered tomb, and more importantly the calcite-alabaster drop jar with the cartouches of Ramses II, belong? Due to a lack of records of the in situ position of a majority of the objects and a lack of the records of any human remains\textsuperscript{200}, it is only through a study of the rich assemblage that an answer to this question can be provided. According to Roger Saidah, the high number of finds and their lengthy use point to the identification of the double-chambered tomb not as an individual burial, but rather as a family tomb. The multiple occupants of the tomb and the lack of the in situ position of the objects make it impossible to attribute the drop jar to one individual of the family. What can be derived from this context and the richness of its associated finds is that the owner of the drop jar was a member of a wealthy family\textsuperscript{201}. This indicates that the wealthy family, most likely part of the local elite, was either directly or indirectly involved in the exchange of foreign bulk goods and more importantly of unique luxury products.

\textsuperscript{198} Saidah 1993-1994, 171.
\textsuperscript{199} Ward 1993-1994, 211; Sparks 2007, 320.
\textsuperscript{200} Saidah 1993-1994, 141-209.
\textsuperscript{201} Saidah 1993-1994, 206.
The Megiddo drop jars

Located on a mount in the Jezreel Valley in the north of Israel\textsuperscript{202} (see Annex 2), Megiddo acquired a significant role in the international exchange network since the beginning of the second millennium B.C. This was due to its strategic geographical location along a predominant land route connecting Egypt and the ancient Near East\textsuperscript{203}. Since this period, the royal city was in close contact with the Egyptian kingdom, but it was only around 1475 B.C. that Megiddo was officially submitted under the Egyptian rule. It was then that the composite army of the different Levantine city-states was defeated by the grand military campaign of Thutmose III. This led to Megiddo being the first of the Levantine towns conquered and submitted to the Egyptian kingdom. The archaeological records in Megiddo indicate that the continuity of the habitation of the Middle Bronze Age settlement point to the peaceful surrender of the town\textsuperscript{204}. This conquest led to a further and more intense development of the town as one of the most important trading centers in the Levant\textsuperscript{205}. Additional buildings were erected during the Late Bronze Age, but the overall structure of the town remained, which consists of two separate settlements both surrounded by a fortification wall. These two settlements were the Upper city with royal, religious, and residential quarters, and on the northeast of this, the smaller residential Lower city\textsuperscript{206}. At the beginning of the Late Bronze Age, a large royal palace and a gate house were built in the north of the Upper city\textsuperscript{207} (fig. 25). During the Late Bronze Age, the palace went through some architectural alternations with the main architectural change being the addition of a subterranean three-chambered structure to the west of the palace\textsuperscript{208} (indicated by a red rectangle on fig. 25).

![Fig. 25: A plan of the royal palace and the gate house at Megiddo with an indication of the three-chambered subterranean structure. (Ussishkin 2018, 253, fig. 12:15)](image-url)

\textsuperscript{202} Ussishkin 2018, 18.
\textsuperscript{203} Ussishkin 2018, 171-174.
\textsuperscript{204} Ussishkin 2018, 221-235.
\textsuperscript{205} Ussishkin 2018, 236.
\textsuperscript{206} Ussishkin 2018, 265-268.
\textsuperscript{207} Loud 1948, 16; Ussishkin 2018, 242-248.
\textsuperscript{208} Loud 1948, 31; Ussishkin 2018, 253.
The tripartite structure was discovered between 1935 and 1939 by a team of the Oriental Institute of Chicago directed by Gordon Loud and was named ‘the treasury’ after the high number of precious artifacts discovered inside of the rooms, such as golden jewelry, imported pottery, calcite-alabaster vessels, and a high amount of small ivory objects. The chaotic distribution of the finds, the presence of several fragments of other precious goods, and traces of destruction by fire inside of the rooms, were most likely the result of an invasion and looting - perhaps by the Sea People - in Megiddo at the end of the Late Bronze Age. Gordon Loud and David Ussishkin reconstructed that the subterranean structure must have originally contained a greater amount of rich goods, which were most likely displayed on now-perished wooden shelves. Unfortunately, the original positions of the different objects were not recorded.

In total, 35 calcite-alabaster vessels survived the looting, including three florally decorated vessels, namely two calcite-alabaster drop jars and a large calcite-alabaster amphora (fig. 26 for drawings of these vessels and Annex 7 for photographs of these vessels). After their discovery, the calcite-alabaster drop jars were moved to the Oriental Institute in Chicago (A21110) and the Rockefeller Museum in Jerusalem (37.962). Both vases are the only known examples of calcite-alabaster drop jars with painted decorations in the broader Eastern Mediterranean. Even from Egypt no painted examples are known so far. Other types of larger stone vessels with painted decorations are quite commonly found inside and outside of Egypt, but are not as frequent as the stone vessels with incised decorations. The application of the paint on the vessels was a less time-consuming decoration technique, but instead of reflecting a lesser value, it might indicate a personal preference of the owner, the production of the vessels at different workshops or the local application of the decorations.

The first painted drop jar, currently stored in the Oriental Institute in Chicago, has a rim slightly curved outward, a long, almost straight, neck, a slightly curving lower body, and a rounded bottom (fig. 26). It is damaged on the upper part of the front of the vase, where several large pieces broke off and were largely reassembled during its restoration. In the middle of the front of the drop jar some vague remains of the decorations painted in black paint are still visible. The faded decorations consist of a floral garland with a thin blank band, a row of lotus petals, and a second thin blank band, surrounding a blossoming flower. A similar decoration and shape can be seen for the second drop jar that was discovered in the ‘treasury’. The second drop jar, currently stored in the Rockefeller Museum in Jerusalem, differs slightly in shape from the previously discussed drop jars. It has the typical straight neck and drop-shaped body, but what makes it unique is its slight carination at the juncture of the neck and the shoulder, and its narrower lower body (fig. 26). The destructive invasion resulted in severe damage on the main

210 Loud 1939, 3-9; Loud 1948, 29-31; Ussishkin 2018, 253-255.
211 Loud 1939, pl. 258-261.
212 Oriental Institute of the University of Chicago, Jar <https://oi-idb.uchicago.edu/id/cadf1d75-b842-4c6a-8585-f4727cf05906d> accessed on 05.05.2020; Sparks 2007, 320.
213 Sparks 2007, 320.
214 Caubet 1985, 54.
215 Sparks 2007, 77.
216 Sparks 2007, 320.
part of the lower body and traces of burning on several areas\textsuperscript{217}. Fortunately, the main part of the drop jar and the decorations remained preserved, which enabled a full reconstruction of the original drop jar. The preserved decorations\textsuperscript{218} consist of a tight floral garland painted around the neck and, such as the previous drop jar, of a hanging floral garland surrounding a blossoming flower painted in the middle of the front of the drop jar. The floral garlands are both identical in pattern and consist of a thin blank band, a row of lotus petals, a second thin blank band, and a thicker darker colored band. As noted by Sparks, the decorations were painted in red and black paint\textsuperscript{219}. Potentially, black was used as a background color, similarly to the Egyptian dark blue of the calcite-alabaster drop jars. A third calcite-alabaster vessel, currently also stored at the Rockefeller Museum in Jerusalem (37.961) and also discovered in the ‘treasury’, has similar decorations as the two calcite-alabaster drop jars. The calcite-alabaster amphora has painted black and red remains around its neck \textsuperscript{220} of a tight floral garland consisting of a thin blank band, a row of lotus petals, a second blank band, a second row of lotus petals, a third blank band, and a thin darker colored band (fig. 26). Underneath this tight garland, a hanging floral garland with an identical pattern as the second drop jar surrounding a blossoming blue lotus is painted.

When comparing the decorations of the three vessels, what stand out is that the floral garlands are almost all identical, but the blossoming flowers all differ from one another. These similarities in decorations of vessels discovered in the same context is also recognized in the drop jars and vessels discovered in Egypt. This indicates the high probability of the production of the vessels discovered in the same context in Egypt and those discovered in the ‘treasury’ at Megiddo in the same workshop. The flowers on the three vessels from Megiddo can most likely all be identified as blossoming lotus flowers, even though these are not identical. This variation is also visible on the decorated vessels discovered in Egypt, such as the decoration on the drop jars described in Chapter 2, pointing to the non-consistent depiction of the blue lotus.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{fig26.png}
\caption{A drawing of the two Megiddo drop jars and a detail of the decorations of calcite-alabaster amphora. (Loud 1948, pl. 261)}
\end{figure}

\textsuperscript{217} Sparks 2007, 320.
\textsuperscript{218} The description of the decoration of the drop jar is based on the drawing by Loud (Loud 1948, pl. 261) and the concise description by Sparks (Sparks 2007, 320), due to the inability to access high quality photos of the vase.
\textsuperscript{219} Sparks 2007, 320.
\textsuperscript{220} Sparks 2007, 327.
The discovery of the two calcite-alabaster drop jars in the three-chambered subterranean structure in the palace of Megiddo together with a high number of rich objects are additional evidence for the close connection of the Levantine city with the Egyptian kingdom during the Late Bronze Age. This discovery indicates the significant value and use of the calcite-alabaster drop jars by the rulers of Megiddo in a daily context.

The faience drop jar from Tell Deir ‘Alla

In 1964, a faience drop jar incised with a cartouche of Tausret was discovered at Tell Deir ‘Alla by a team of Leiden University under the direction of Henk Franken\(^2\). Tell Deir ‘Alla is situated in the eastern Jordan Valley, which was part of the Gilead region renowned for its agricultural produce\(^2\) (see Annex 2). During the thirteenth and twelfth centuries B.C., the settlement became a prominent town with a domestic quarter and a large religious complex. The religious complex consisted of a central elevated room, the cella, with ‘a treasury’ east of it, and storage and service spaces west of it\(^2\) (fig. 27). In these spaces, local domestic and cultic pottery together with imported Mycenaean and Cypriot pottery and other imported objects, such as cylinder seals, scarabs, amulets, beads, calcite-alabaster and faience vessels, were discovered. One of these discovered objects was a severely damaged faience drop jar unearthed along the north wall of the elevated cella\(^2\).

The faience drop jar originally had a turquoise blue color, but due to an earthquake followed by a destructive fire at the end of the Late Bronze Age, the faience drop jar, as well as the other finds, were heavily burned\(^2\) and crushed underneath the collapsing walls and roof. As a result of this, the vase obtained a dark brown color and a main part of the back and front of the right half of the drop jar was irreparably damaged (fig. 28). After its restoration, the drop jar recovered its typical drop shape with a long straight neck, slightly bulbous lower body, and rounded bottom. The decorations on the faience drop jar consist of a row of lotus petals incised around the neck and a band with a geometric triangular motif incised around its lower body. Between these two bands of decorations are the remains of an incised rectangle surrounding a preserved cartouche of Queen Tausret. The cartouche contains her birth name: \(t\bar{s}-w^r-t\ \, stp-nmwt\), preceded by \(nb\ \, h^u\)w (lord of the appearances), and followed by a \(nbw\) sign. When compared to the previously discussed inscribed drop jars, it can be proposed that originally a second cartouche containing the throne name of Tausret, preceded by \(nb\ \, t\,s\,wj\)f (lord of the two

\(^{221}\) Franken 1992; Steiner, Wagemakers 2018, 109-117.
\(^{223}\) Franken 1992, 163; Steiner, Wagemakers 2018, 135; Greenberg 2019, 326-328.
\(^{225}\) Franken 1992, 30; Steiner, Wagemakers 2018, 99.
lands) and followed by a second nbw sign, was incised on the right of Tausret’s throne name. On the contrary to the faience drop jars discovered in Egypt, the Tell Deir ‘Alla drop jar does not have a corolla of a lotus flower on its base.

The discovery of this inscribed faience drop jar raises a lot of questions on the role of Tell Deir ‘Alla and its relation to Egypt. According to Franken, the site was a trade as well as a center for local cultic practices built by the Egyptian kingdom to guarantee constant access to the Gilead produce and extra work forces. At the site, several southern Levantine tribes of the surrounding region would meet, collect their produce, and trade with primarily Egypt, but also Syria, Cyprus, and Mycenean Greece. All these exchanges were undertaken in a secure environment and blessed by the local deities. The discovery of rich imported objects, including the inscribed faience drop jar, would be interpreted as gifts or offerings to the local gods, as a token of support or alliance, which would then be displayed by the local priests in the sanctuary. According to Robert Wenning and Erich Zenger, the occurrence of these rich imports could also indicate to the Late Bronze Age site as a part of a royal palace or a non-cultic trading settlement.

This hypothesis was later supported by van Wijngaarden (2002, 105-107), van der Steen (2008, 19-22), and Steiner and Wagemakers (2018, 134-135).


Franken 2008, 38; Sparks 2013, 84.

3.3 Calcite-alabaster and faience drop jars discovered in Cyprus

The Late Bronze Age was a period of prosperity for Cyprus with impactful political and economic changes. These changes were mainly stimulated by the more intense involvement of Cyprus in the international trade network, due to its strategic location, and the higher demand for Cypriot products, such as copper, timber, and local pottery. Additionally, an increase in population led to the foundation of more settlements, mainly along the southern coast of Cyprus between the Troodos mountains and Enkomi, due to their proximity to the Mediterranean Sea, which facilitated international trade. Other than these coastal centers, inland towns, and villages with economic and/or religious functions ensured the extraction of raw materials, the production, and/or the flow of products to other manufacturing towns or coastal centers for further redistribution.

Unlike the Levantine city-states, Cyprus was not under direct control of different powerful empires during the Late Bronze Age, but rather became a close and independent vassal. Two main views exist on the politico-economic organization of Cyprus during this period. Most scholars believe that Cyprus was divided into independent polities with heterogenous politico-economic systems for a main part of the Late Bronze Age. Each independent polity would have been ruled by elite families and their territory would have consisted of a powerful center, such as possibly Enkomi, Kiton, and Hala Sultan Tekke, and its surroundings. The cohesion between these different polities would have been created through interregional rituals. This view contrasts with the several mentions of a ‘king of Alashiya’ in the Egyptian, Ugaritic, and Hittite texts. According to Susan Sherratt and Edgar Peltenburg, who support this first hypothesis, ‘the king of Alashiya’ would have merely served as a title without any additional meaning or political power in order to successfully integrate in the international trade network, in other words this ‘king’ would have been a “primus inter pares.” This hypothesis is mainly criticized by Arthur Bernard Knapp, who believes that these mentions of a king together with the archaeological evidence reflect the reality of Late Bronze Age Cyprus with an absolute ruler or a powerful group of elites. Additionally, he argues that Enkomi, due to its prominent role throughout the Late Bronze Age, served as a politico-economic center of the kingdom for the assemblage and redistribution of local and foreign goods.

What is generally agreed upon, despite their different opinions about the politico-economic organization, is the major role of elite groups in the Late Bronze Age society. Their authoritative role was gained through the control of natural resources, of which copper was the most

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230 Steel 2004, 158; Steel 2014, 583.
233 Either replacing a kingdom around the fourteenth-thirteenth century B.C. (Muhly 1989, 302-303; Pickles, Peltenburg 1998, 90; Sherratt 1998, 296-301; Georgiou 2011, 114; Peltenburg, Iacovou 2012, 346-347; Georgiou 2015, 130), being replaced by a kingdom during this period (Crewe 2007) or alternating between a kingdom and independent polities dependent on the type of settlement during the Late Bronze Age (Keswani 1996, 234-239; Keswani 2004, 154-157; Crewe 2007, 155-159).
234 Peltenburg 2012, 16.
236 Sherratt 1998, 297; Peltenburg 2012, 8-18; Peltenburg, Iacovou 2012, 349-351.
important, which allowed them to establish powerful contacts with the other Eastern Mediterranean rulers. The exchanges enabled the elite to have access to international luxury products\textsuperscript{238}. Similar to the role of luxury goods in the Levantine region, the international luxury goods served as status symbols and an identity marker of the Cypriot elite. Together with ritual ceremonies, this enabled the local elite to showcase their status and to promote their authority in a specific settlement or a larger region to the other elite groups as well as the non-elites\textsuperscript{239}. These luxury products are mainly discovered in funerary contexts, but also in domestic and cultic contexts, and vary from small objects made of faience, ivory, stone, and metal, such as cylinder seals, scarabs, amulets, and jewelry, to imported pottery, faience, and stone vessels decorated with characteristic motifs from a specific region or in the ‘International Style’\textsuperscript{240}. As previously mentioned, these luxury objects with characteristic motifs from a specific region, unless when inscribed, do not necessarily indicate their origin from that specific region, but could also have been local products imitating these motifs\textsuperscript{241}.

One group of these luxury goods discovered in Cyprus are the stone and faience vessels either undecorated or decorated with Egyptian geometric and floral designs, in certain cases combined with elaborate representations and/or inscriptions\textsuperscript{242}. A type of these vessels are the drop jars of which two examples, one calcite-alabaster and one faience drop jar\textsuperscript{243}, have been discovered at two Late Bronze Age sites in eastern Cyprus. Both drop jars are particularly similar in shape and decorations to the other calcite-alabaster and faience drop jars discovered in Egypt and the Levant. The calcite-alabaster drop jar was recently discovered at the shortly inhabited trading settlement of Pyla-Kokkinokremos, while the faience drop jar was discovered in a rich tomb at Enkomi.

**The Pyla-Kokkinokremos drop jar**

This section is - due to the discussion of unpublished material from the Pyla-Kokkinokremos excavation - not included in the online publication of this master’s thesis.


\textsuperscript{240} Keswani 1996, 219; Knapp 2013, 2-5.

\textsuperscript{241} Knapp 2013, 1-6.

\textsuperscript{242} Åström 1984, 17-24; Clamer 1990, 104-107; Jacobsson 1994, 78-83.

\textsuperscript{243} The faience drop jar without a context currently stored in the Louvre (S575/AO 31594) (Jacobsson 1994, 229) and a fragment of a possible faience drop jar discovered at Hala Sultan Tekke in 2019 (P. Fischer, Season 2019 <http://www.fischerarchaeology.se/?page_id=2797> accessed on 12.06.2020) will not be further discussed in this study.
This section is - due to the discussion of unpublished material from the Pyla-\textit{Kokkinokremos} excavation - not included in the online publication of this master's thesis.
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The faience drop jar from Enkomi

In 1896, a faience drop jar was discovered in a funerary context at Enkomi by a team of the British Museum under the direction of Alexander S. Murray, Percy Christian, and Arthur H. Smith. Enkomi, located in the Mesaoria plain in the east of Cyprus (see Annex 2), was a newly founded settlement at the end of Middle Bronze Age/beginning of the Late Bronze Age (MCIII-LCIA), consisting of several freestanding houses and a ‘fortress’. During the fifteenth-fourteenth centuries B.C. (LCIIA-IIIB), Enkomi underwent a major transformation from a small settlement into a prominent fortified city with a structured layout with perpendicular streets dividing the town into several districts (fig. 31). These different districts consist of domestic quarters and several notable buildings, such as the ‘Area III building’, and the later ‘Bâtiment 18’ and the ‘Ashlar building’ containing the renowned sanctuary for the Horned God.

Throughout its occupation, Enkomi was one of the primary centers for the export of Cypriot resources and products, mainly copper and local pottery, to Egypt, the Aegean, the Levant, and Anatolia. This made Enkomi an important center of Cyprus, and possibly the politico-economic center of a wider region. In exchange for the exported goods, the inhabitants of Enkomi received large quantities of foreign products, pottery, and rich imports, of which the latter were mainly deposited inside of tombs. These tombs vary from rare ashlar and tholos to more common shaft and chamber tombs cut in the bedrock under the floors of the houses and to the east of the settlement in and next to the cliff. One of these rock-cut chamber tombs with a rich burial assemblage is tomb 61 located under the heavily damaged domestic architecture in district 3E (fig. 31). In this tomb, golden jewelry, small bronze objects and weaponry, faience beads, two small stone vessels, pottery, fragments of ivory, and an elaborate faience drop jar were discovered in 1896 by the British Museum mission.

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244 Murray 1900, 1.
245 Dikaios 1971, 499-500; Courtois et al. 1986, 5; Crewe 2007, 84-85.
246 Dikaios 1971, 501-536; Courtois et al. 1986, 5-7; 18-20; Crewe 2007, 76-81.
248 Crewe 2007, 159.
250 Murray 1900, 30; Courtois et al. 1986, 41; Crewe 2007, 82.
251 Murray 1900, 44; Courtois et al. 1986, 41.
After its discovery, the faience drop jar was brought to the British Museum, where it received museum number 1897.0401.999 and is currently displayed\textsuperscript{252}. The complete and undamaged faience drop jar has a narrow neck with a rim slightly oriented outwards, a bulbous lower body, and a rounded bottom with a flattened tip (fig. 32). It has a white greenish blue color with polychrome decorations painted on the drop jar. On the neck of the drop jar, a continuous motif with a greenish-blue band, a row of lotus petals, and a blank band, are painted. On the body of the drop jar is a two-parted composition\textsuperscript{253}, similar to the Sedment faience drop jar. The first composition consists of the Egyptian infinity god Heh kneeling on two continuous bands, a greenish-blue and a white one. In his two hands, he is holding a blossoming lotus flower and a palm branch resting on a tadpole and a snt-sign. These are the symbols for the eternal and infinite reign of a ruler. On both of his stretched arms, a second pair of blossoming lotus flowers are dangling. The second composition, separated by a vertical blank band on both sides of the first composition, consists of a loose floral garland surrounding a papyrus branch with horizontal protrusions. The floral garland consists of a blank row, a row of lotus petals, and a second blank row. The base of the drop jar is covered by a typical corolla of the lotus flower with expressed veins of the leaves.

Fig. 32: The Enkomi drop jar – 22,50 x 9,80 cm. (Courtois et al. 1986, pl. XXVI ; © British Museum)

Due to the lack of any records on the \textit{in situ} position of the objects and on any human remains, it cannot be said with certainty to whom this elaborate drop jar once belonged. Possibly, tomb 61 was, such as the tomb in the Kharji Cave in Beirut, a family or communal burial instead of a tomb of one individual. What is clear from the burial assemblage is that valuable locally produced objects and rich imports, especially the Egyptian drop jar, point to the wealthy and authoritative status of the owner(s) buried inside of the tomb.

\textsuperscript{253} Jacobsson 1999, 45.
4. The value, function, and role of calcite-alabaster drop jars in the Eastern Mediterranean

The finds of numerous Egyptian stone vessels throughout the Eastern Mediterranean point to their unquestionable value. Value is culturally and socially defined, leading to various perceptions of the value of different groups of objects through time and space. In the case of the Eastern Mediterranean during the Late Bronze Age shared values were established between the international rulers and elite, due to the dense interconnectivity. The numerous finds of stone vessels and mentions in the diplomatic correspondence, mainly the Amarna letters, suggests that stone vessels were one of the main precious goods given from the Egyptian pharaoh to a foreign royal court and/or elite groups in order to create or maintain an alliance. By accepting and possibly displaying these gifts, the foreign rulers could indicate the support of this alliance or accept the dominant role of the ruling policy. The possession and display of stone vessels shared a common value as status and authoritative symbols in the local policy used to showcase and justify the power of the local rulers.

Large amounts of stone vessels are mentioned in four cuneiform letters discovered at Tell el-Amarna. In these four letters, the stone vessels are part of dowry goods given from the pharaoh to a foreign ruler, in order to forge or maintain an alliance. One of these Amarna letters (EA 14) lists a variety of prestigious gifts from an Egyptian pharaoh, most likely Tutankhamun, given to the Kassite king Burnaburiash in exchange for a marriage with his daughter. The following passage of this list indicates that a large amount of filled as well as empty stone vessels were exchanged between the rulers:

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“… [_employee] a-ḫa-ar ū-nu-te₂₅⁴ ū₃ na₄ ša₁ dug₃ [a ma-lu-ū] [x] lim₄ ū₃ ū₃-nu-tu₄…
… na-ḫa-ar ū-nu-te₂₅⁴ ri-qū-tū ša na₄₁ me šu-ši ī₃ …”
“…the total of the vessels of stone full of ‘sweet oil’: [x]000 and 7 vessels…
…the total of empty vessels of stone: 160 and 3…”
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This passage states that the stone vessels did not only serve as a simple container for precious liquids, but were in itself also seen as an individual prestigious good. The value of an individual type of vessel can be derived from its distribution rate and its estimated production costs. As previously seen, large calcite-alabaster vessels required more resources, manpower, and time to produce than smaller vessels. As an additional and time-consuming step in the production process, the vessels could have been finely incised or painted with decorations by highly skilled artisans. Approximately one of five Egyptian stone vessels discovered in the Levant, consisting of mainly large vessels, were decorated. According to Sparks, due to the application of both painted and incised decorations on mainly precious large vessels, both decoration techniques should be interpreted as equally valuable and might reflect different personal preferences.
instead of different values\textsuperscript{263}. This would indicate that the painted decorations on the Megiddo drop jars would be identical in value to the drop jars with incised decorations, such as the Pyla-Kokkinokremos drop jar and the eight calcite-alabaster drop jars discovered in Egypt. As with the drop jars discovered in Egypt, the decorations and shapes of the drop jars discovered in the Levant and Cyprus are all similar with characterizing tight and/or hanging garlands of lotus petals, often combined with a blossoming blue lotus on the shoulder of the vase. All in all, it can be stated that other than its size, the value of a type of vessel was also dependent on the presence or absence of decorations, being more valuable when decorated. Additional value to a vessel was added when it was incised with a royal inscription. These royal inscriptions were mainly restricted to the larger vessels and in certain cases combined with finely incised decorations\textsuperscript{264}. Unlike the decorated and undecorated vessels, it can be stated that the presence of cartouches and other Egyptian inscriptions on the stone and faience vessels demonstrate their production at an Egyptian royal workshop. This indicates the unquestionable Egyptian origin of the inscribed vessels, such as for the Beirut and the Tell Deir ‘Alla drop jar. Locally, the possession of an inscribed Egyptian vessel would be perceived as a more prominent marker for authority than the uninscribed vessels, and could potentially indicate a direct contact between the owner of the vessel and the powerful Egyptian pharaoh\textsuperscript{265}. Although, instead of a direct contact, the inscribed vessel might have been acquired through a re-gifting from the foreign rulers to a loyal ally, subject, and sometimes even another ruler\textsuperscript{266}.

Due to the lack of Egyptian inscriptions on the Megiddo, Pyla-Kokkinokremos, and Enkomi drop jars, the Egyptian origin of the calcite-alabaster and faience drop jars is uncertain. If the calcite-alabaster of the drop jars was extracted in Egypt, then the stone was either exported as a raw material or the drop jar was exported as a half-fabricate, namely as an undecorated drop jar, or as a finished decorated drop jar. All these stages of production of large calcite-alabaster vessels, due to the high cost and effort of quarrying and/or processing, cannot be imagined as having been managed by private individuals, but rather must have been organized by the Egyptian royal court. For the export of calcite-alabaster as a raw material, there is at the current state of research no unambiguous evidence, even though it is believed by certain scholars, such as Warren\textsuperscript{267}, Bevan\textsuperscript{268}, and Sparks\textsuperscript{269} that this was done. The calcite-alabaster drop jars were possibly also produced from local calcite-alabaster of which formations occur in Israel, Crete, Jordan, and possibly Cyprus\textsuperscript{270}. As the recent study at the Te’omim cave in Israel demonstrated\textsuperscript{271}, the quarrying techniques of calcite-alabaster were known outside of Egypt and quarrying happened extensively. However, more research is needed on the calcite-alabaster vessels discovered in the Eastern Mediterranean to be able to distinguish with certainty possible local imitations from Egyptian imports.

\textsuperscript{263} Sparks 2007, 77.
\textsuperscript{264} Sparks 2003, 44; Sparks 2007, 77.
\textsuperscript{265} Sparks 2003, 45.
\textsuperscript{266} The concept of passing downs gifts between rulers and elite is briefly discussed in Liverani (1990).
\textsuperscript{267} Warren 1969, 125-126; Warren 1991, 297.
\textsuperscript{268} Bevan 2003, 67.
\textsuperscript{269} Sparks 2007, 154.
\textsuperscript{270} Lilyquist 1996, 140; Barbieri et al. 2002, 408; Frumkin et al. 2014, 752-756.
\textsuperscript{271} Frumkin et al. 2014, 752-756.
The blocks from the local quarries or from Egypt, as well as the Egyptian calcite-alabaster half-fabricsates, would have been brought to a foreign workshop, where these would have been further fashioned into a drop jar and/or decorated with Egyptian motifs. To be able to acquire a finished product with Egyptian decorations, a great knowledge of the production techniques of calcite-alabaster vessels and Egyptian decorations would be needed. Either this knowledge was acquired independently by the local artisans, who were possibly able to perfectly imitate the Egyptian imports and produce local copies, or through the presence of Egyptian artists at the local workshop.

The exchange of Egyptian physicians, magicians, and artisans as a part of diplomatic exchanges together with precious goods to the different regions in the Eastern Mediterranean are known from the Amarna letters. These professionals were, temporarily send to the foreign court to perform their professional duties, for example healing a wounded king, after being requested by the foreign ruler. As John Barnes noted, these professionals were only sent to foreign courts, when their profession could not be practiced from a distance or the fruit of their profession could not have been exported, such as was possibly the case for the Minoan wall paintings discovered at Tell el-Dab’a and at Qatna. Therefore, it can be imaged that due to the manageable transportation of the drop jars, the Egyptian artisans, who crafted or painted fine decorations on these large vessels, did most likely not travel to foreign courts. If Egyptian craftsmen were exchanged, the locally produced Egyptian vessels, and possibly also the drop jars produced in Egypt, would lose their status as being an Egyptian royal gift, which would lessen their value. This would also have been the case if the drop jars would have been locally produced and decorated or if undecorated drop jars produced in Egypt would have been exported and decorated by local artisans.

In the aforementioned passage of the letter from an Egyptian pharaoh to Burnaburiash, a majority of the vessels that were gifted, contained ‘sweet oil’. This ‘sweet oil’ can be identified as a costly unguent or perfumed oil. In case of the drop jar, it is stated through a study of the find context, the iconographical evidence, and results of the residue analyses discussed in Chapter 2, that it was employed as a container to store precious unguents in a funerary and religious context in ancient Egypt. Did the drop jars discovered outside of Egypt share the same function as the drop jars in Egypt? Or were these used for other purposes? Due to the lack of any iconographical evidence and preserved contents of the drop jars discovered in the Levant and Cyprus, the function of the drop jar outside of Egypt, can only be proposed by taking a closer look at the find contexts and associated finds of the different drop jars and compare these with those discovered in Egypt. As pointed out by Bevan, the transfer of the function and the value of an object through different cultures is dependent on the method of exchange. If the exchange of goods or information was direct, there was a higher possibility of knowledge and adoption of the original function of the object than through indirect exchange with several middlemen.
During the Late Bronze Age, the rulers of the city-states in the Levant were under direct influence of Egypt, while the rulers in Cyprus had close diplomatic relations with the powerful Egyptian empire. Large decorated and/or inscribed Egyptian calcite-alabaster vessels were, due to their high value, exclusively exchanged between rulers and the upper classes of society. This category of vessels would not have been accessible to the lower classes of society and their acquisition through commercial trade, tribute, booty, or taxes was highly unlikely. The large calcite-alabaster drop jars would be classified in this group of vessels, indicating the high probability of the transmission of knowledge on the original function of the drop jar by the Egyptian to Levantine and Cypriot rulers.

Most of the find contexts of drop jars in the Levant and Cyprus are similar to those in Egypt, even though there are some drop jars discovered in some unexpected contexts. In Egypt, calcite-alabaster drop jars were originally filled with precious unguents possibly used during funerary rites and served as rich burial goods, while faience drop jars were additionally discovered in temple contexts and served to store unguents possibly used during rituals, and festivities, or as a remedy. Only one of the four calcite-alabaster drop jars, namely the inscribed Beirut drop jar, was discovered in a tomb with other valuable objects pointing to its unquestionable use as a precious funerary good. In tomb 61 at Enkomi, a painted faience drop jar has also been discovered with several other rich burial goods. The Beirut drop jar can due to the cartouche of Ramses II be traced back to the Egyptian royal workshop, while the Enkomi drop jar, lacking any inscriptions, might possibly have been produced and/or decorated in a Levantine or Cretan faience workshop. However, the elaborate Egyptian symbolism, decorations, and composition almost identical to the other faience drop jars discovered in Egypt, point to a more probable production of the vase in Egypt than in the Levant or Cyprus. Therefore, the finds of both drop jars in these private tombs could be explained as a direct contact between the pharaoh and the wealthy deceased or family, or as a gift originally given to the ruler of the region and re-gifted to the individual(s).

For both drop jars, their use as burial goods is identical to the function of most of the calcite-alabaster and faience drop jars in Egypt. Unfortunately, there is no evidence of preserved contents inside of the drop jars or of residue analyses undertaken to determine their more precise function. It has been proposed by William Ward that the Beirut drop jar served as a libation or flower vase. The latter has also been proposed as a function for drop jars in the Levant by Sparks together with the possible use of the drop jar as a storage jar for wine and beer during festivities. However, when keeping in mind the function of the drop jar in Egypt, there is a higher probability that both drop jars were used as containers filled with Egyptian produced precious unguents or solid perfumes.

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275 Sparks 2007, 268.  
278 Sparks 2007, 57.  
279 Solid perfumes could, in contrary to liquid perfumes, been stored in large containers and preserved longer when kept in a dark space not exceeding 37°C. This allowed the long-distance transport of these perfumes (Manniche 1999, 63).
The second faience drop jar, an unambiguous Egyptian product due to the incision of the cartouche of Tausret, was discovered in the cella of the temple for local gods at Tell Deir ‘Alla. This again is in correspondence to the find context of the faience drop jars in Egypt. It has been proposed by Franken and Sparks that the drop jar and other rich imports were, other than diplomatic gifts, also offerings to the local gods\textsuperscript{280}. Again here no mention of the contents of the drop jar has been made. It is possible that the drop jar did not have any contents or perhaps the original contents evaporated during the destruction of the temple complex. If the drop jar contained an unguent or another precious liquid, it can additionally be proposed that these were used during local rituals, for healing wounds or as a perfume\textsuperscript{281}, as suggested by Courtois for the calcite-alabaster vessels discovered in a cultic context at Enkomi\textsuperscript{282}.

The remaining two contexts in which calcite-alabaster drop jars have been discovered in the Levant and Cyprus are in a royal palace at Megiddo and a trading settlement at Pyla-Kokkinokremos. The find of 35 calcite-alabaster vessels, including two painted drop jars, in the ‘treasury’ of the royal palace at Megiddo are material evidence of the exchange between the Egyptian and Levantine royal courts of prestigious goods described in the diplomatic letters. Although, none of these calcite-alabaster vessels have an Egyptian inscription, it can be proposed due to the high concentration of the calcite-alabaster vessels, their find inside of a royal palace, and their association with other precious international goods, that these goods were acquired through gift exchange and possibly the calcite-alabaster vessels were produced in an Egyptian royal workshop. The choice of bicolor painted decorations instead of incised decorations on the drop jars is exceptional. These painted decorations might possibly reflect a personal preference of the king of Megiddo, but do not necessarily reflect a lesser value of the gift\textsuperscript{283}. There is also a possibility that the painted decorations were not applied in the Egyptian royal workshop, but were locally added, possibly to accentuate the Egyptian origin of the stone vessel. Further analyses on the preserved remains of the black and red paint could lead to more clarity on the Egyptian manufacturing of these vessels.

The most unexpected find context of a calcite-alabaster drop jar was in a shaft at the Cypriot trading-settlement of Pyla-Kokkinokremos.

This section is - due to the discussion of unpublished material from the Pyla-Kokkinokremos excavation - not included in the online publication of this master’s thesis.

\textsuperscript{280} Franken 2008, 38; Sparks 2013, 84.
\textsuperscript{281} Manniche 1999, 61-63.
\textsuperscript{282} Courtois et al. 1984, 124.
\textsuperscript{283} Sparks 2007, 77.
From the study of these contexts, it is clear that the calcite-alabaster drop jars, as part of the larger group of stone vessels, played an important role in the international diplomatic relations as luxury goods exchanged between rulers and/or elite groups to establish or maintain alliances. The discovery of the calcite-alabaster and faience drop jars in a variety of contexts, if these were not locally produced, point to different acquisitions of the vases through direct or indirect contacts with the Egyptian royal court. Possibly, the discovery of drop jars in non-royal contexts, such as in the Kharji Cave in Beirut, in the shaft at Pyla-Kokkinokremos, and the Enkomi tomb, can be explained as a redistribution of the royal gifts by the foreign ruler to members of the local elite as a reward for their loyalty. This would indicate that the drop jars would not have been perceived as an ordinary container. Rather, they would have had internationally as well as locally a more prestigious and symbolic meaning as a marker of alliances and more importantly as an object containing the essence of the powerful Egyptian empire.
5. Conclusion

What was the value and function of the Egyptian calcite-alabaster drop jar in Egypt and in the Eastern Mediterranean during the Late Bronze Age? In Egypt, six of the eight calcite-alabaster drop jars have been discovered in royal as well as elite funerary contexts. From the high production cost and discovery of the vases in rich funerary contexts, it is clear that the calcite-alabaster drop jars in Egypt served as precious burial goods, most likely acquired by wealthy individuals as a royal reward for their services and loyalty. This was possibly also the case for the faience and bronze drop jars, which were not only discovered in funerary contexts, but also in temple contexts diffused around Egypt. From the iconographical evidence and results of residue analyses on several drop jars, it can be concluded that the drop jar in ancient Egypt functioned as a container for a precious unguent. Previous scholars have accentuated the high value of this unguent in ancient Egypt, which led to the devaluing perception of the drop jar itself as an ordinary container.

This devaluing perception is contradicted when taking a closer look at the calcite-alabaster and faience drop jars discovered in the Levant and Cyprus. In total, four calcite-alabaster and two faience drop jars have been discovered in two elite burials, a royal context, a temple, and a domestic building in the Levant and Cyprus. Although these have been discovered in a variety of contexts, the drop jars shared most likely a common value as prestigious goods exchanged between the different rulers in the Eastern Mediterranean, either royals or groups of ruling elites. The drop jar was perceived as an object with a diplomatic meaning as a local identity marker for the elite, which assigned authority and power together with the other large Egyptian vessels and precious imports. What the precise function of the drop jar in the Levant and Cyprus was cannot be said with certainty, due to a lack of any preserved remains inside of the drop jars or iconographical evidence. However, it can be proposed that due to the prestigious nature of the drop jar, the similar find contexts, and the high possibility of the transfer of the original function between the Egyptian royal court and foreign rulers, the function of the calcite-alabaster and faience drop jars in Egypt as an unguent container were known and adopted in the Levant and Cyprus.
Annex 1: A map of ancient Egypt with an indication of the findspots of seven of the eight calcite-alabaster drop jars. (Bard 2015, 227, map 8.1)
Annex 2: A map of the Eastern Mediterranean with an indication of the findspots of the four calcite-alabaster (red) and two faience drop jars (green) discovered in the Levant and Cyprus. (Bard 2015, 229, map 8.2)
<table>
<thead>
<tr>
<th>Egypt</th>
<th>The Levant</th>
<th>Cyprus</th>
</tr>
</thead>
<tbody>
<tr>
<td>C. 2686-2160 B.C.</td>
<td>Old Kingdom</td>
<td></td>
</tr>
<tr>
<td>C. 2160-2055 B.C.</td>
<td>First Intermediate Period</td>
<td></td>
</tr>
<tr>
<td>C. 2055-1650 B.C.</td>
<td>Middle Kingdom</td>
<td></td>
</tr>
<tr>
<td>C. 1550-1069 B.C.</td>
<td>New Kingdom</td>
<td>C. 1500-1050 B.C.: Late Bronze Age</td>
</tr>
<tr>
<td>C. 1550-1479 B.C.</td>
<td>Eighteenth Dynasty (Ahmose-Hatshepsut)</td>
<td>C. 1500-1425 B.C.</td>
</tr>
<tr>
<td>C. 1479-1375 B.C.</td>
<td>Eighteenth Dynasty (Thutmose III- Amenhotep III)</td>
<td>C. 1425-1350 B.C.</td>
</tr>
<tr>
<td>C. 1375-1300 B.C.</td>
<td>Eighteenth Dynasty (Amarna period)</td>
<td>C. 1350-1250 B.C.</td>
</tr>
<tr>
<td>C. 1300-1190 B.C.</td>
<td>Nineteenth Dynasty</td>
<td>C. 1250-1150 B.C.</td>
</tr>
<tr>
<td>C. 1190-1140 B.C.</td>
<td>Twentieth Dynasty (Ramses III-Ramses VI)</td>
<td>C. 1150-1075 B.C.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C. 1075-1050 B.C.</td>
</tr>
</tbody>
</table>

Annex 3: An overview of the periodization of the Bronze Age in the different regions of the Eastern Mediterranean (based on the Oxford Handbook of the Archaeology of the Levant 2013) and the Oxford Handbook of the History of Ancient Egypt (2003)).
Annex 4: A geological map of ancient Egypt with an indication of the quarries in use during the New Kingdom (T4 = el-Qawatir; T5 = Wadi Bershawi; T8 = Hatnub and T9 = Bosra (Wadi Assiut)).

(Harris, Storemyr 2009, 16-17)
Annex 5: 1. Plan of the excavated areas at Ard el-Naam.
2. Sketch of Area D with an indication of the Eastern communal tomb.
3. The calcite-alabaster drop and its associated finds in situ.
   (Messiha 1966, 187, fig. 1b; 188, fig. 2; pl. XV)
Annex 6: Photographs of the two calcite-alabaster drop jars at their discovery in the tomb of Tutankhamun.
(Carter 1933, pl. XXX-XXXI; Burton photograph 1125)
Annex 7: Photographs of the two Megiddo drop jars and the decorated calcite-alabaster amphora.
(Loud 1948, pl. 260)
Annex 8: A photograph of *in situ* position of the firstly discovered half of the calcite-alabaster drop jar in the southern shaft in Space 5.27 at Pyla-Kokkinokremos. (courtesy of J. Bretschneider)
7. Bibliography

C. Aldred, ‘Valley Tomb no. 56 at Thebes’, *Journal of Egyptian Archaeology* 49 (1963), 176-178.


M. Bell, ‘Regional variation in polychrome pottery of the 19th Dynasty’, *Cahiers de la Céramique Egyptienne* 1 (1987), 49-76.


Z. Cochavi-Rainey, C. Lilyquist, *Royal gifts in the Late Bronze Age, fourteenth to thirteenth centuries B.C.E.: selected texts recording gifts to royal personage* (Beer-Sheva, 1999).


T.M. Davis, ‘The finding of the tomb of Siptah; the unnamed gold tomb; and the animal pit tombs’, in T.M. Davis (ed.), *The Tomb of Siptah; The Monkey Tomb and the Gold Tomb* (London, 1908), 1-5.


A. Gardiner, ‘Only one king Siptah and Twosre not his wife’, *Journal of Egyptian Archaeology* 44 (1958), 12-22.


H. Georgiou, ‘Relations between Cyprus and the Near East in the Middle and Late Bronze Age’ *Levant: Journal of the British School of Archaeology in Jerusalem* 11 (1979), 84-100.


C.R. Higginbotham, Egyptianization and elite emulation in Ramesside Palestine: Governance and accommodation on the imperial periphery (Leiden, 2000).

C.A. Hope, Pottery of the Egyptian New Kingdom: Three studies (Occasional Paper 2; Burwood Victoria, 1989).


I. Jacobsson, Aegyptiaca from Late Bronze Age Cyprus (Studies in Mediterranean archeology 112; Jonsered, 1994).


P.S. Keswani, Mortuary ritual and society in Bronze Age Cyprus (London, 2004).


C. Leemans, Description raisonnée des monuments égyptiens du Musée d'Antiquités des Pays-Bas à Leide (Leide, 1840).


C. Lilyquist, ‘The objects mentioned in the texts’, in Z. Cochavi-Rainey, C. Lilyquist (eds), Royal gifts in the Late Bronze Age, fourteenth to thirteenth centuries B.C.E.: selected texts recording gifts to royal personages (Beer-Sheva, 1999), 211-218.


L. Manniche, *The ornamental calcite vessels from the tomb of Tutankhamun* (Leuven, 2019).


E. Peltenburg, ‘Hathor, faience and copper on Late Bronze Age Cyprus’, *Cahiers du Centre d’Etudes Chypriotes* 37 (2007), 375-394.


D. Redford, *Egypt and the Canaan in the New Kingdom* (Beer-Sheva: Studies by the Department of Bible and Ancient Near East 4; Beer-Sheva, 1990).


H.D. Schneider, Egyptisch kunsthandwerk (Amsterdam, 1995).


H.D. Schneider, M. Raven, J. Harvey, Life and death under the pharaohs: Egyptian art from the National Museum of Antiquities in Leiden, the Netherlands (Perth, 1997).


R.T. Sparks, Stone vessels in the Levant (Leeds, 2007).

R.T. Sparks, ‘Re-writing the script: decoding the textual experience in the Bronze Age Levant (c.2000-1150 BC), in K.E. Piquette, R.D. Whitehouse (eds), Writing as material practice: substance, surface and medium (London, 2013), 75-104.


L. Steel, Cyprus before history: From the earliest settlers to the end of the Bronze Age (London, 2004).


G.J. van Wijngaarden, *Use and appreciation of Mycenaean pottery in the Levant, Cyprus and Italy* (Amsterdam, 2002).


A. Wodzinska, *A manual of Egyptian pottery*, II Naqada III-Middle Kingdom (AERA Field Manual Series 1; New Hampshire, 2010a)


**Online sources**


Oriental Institute of the University of Chicago Online Museum Collection, Jar <https://oi-idb.uchicago.edu/id/9fb7eca5-9692-4374-869c-7320d157ad60> accessed on 09.04.2020.

Oriental Institute of the University of Chicago, Jar <https://oi-idb.uchicago.edu/id/cadf1d75-b842-4c6a-8585-f4727c05906d> accessed on 05.05.2020; Sparks 2007, 320.


Sources only used for images


Online Illustrations


Fig. 1. Artifacts made in three different types of calcite-alabaster from the Online Collection of the National Museum of Antiquities of Leiden, Kan; I oor <https://www.rmo.nl/collectie/collectiezoeker/collectiestuk/?object=2924> accessed on 03.04.2020; the Online Collection of the National Museum of Antiquities of Leiden, Mens; Anoniem <https://www.rmo.nl/collectie/collectiezoeker/collectiestuk/?object=868> accessed on 03.04.2020; the Online Collection of the National Museum of Antiquities of Leiden, Vaas; voet <https://www.rmo.nl/collectie/collectiezoeker/collectiestuk/?object=2961> accessed on 03.04.2020.

Fig. 4. A blue-painted ceramic drop-shaped jar (29,6 x 16 cm) from the Online Collection of the Brooklyn Museum, Blue-Painted Vase with Marsch Scene <https://www.brooklynmuseum.org/opencollection/objects/3666> accessed on 08.04.2020.

Fig. 6. The decorated Gurob drop jar from the UCL Petrie Museum Online Catalogue, Vases UC30084 <http://petriecat.museums.ucl.ac.uk/detail.aspx#44867> accessed on 29.02.2020; Petrie 1937, pl. XXXIII.
Fig. 17. The four faience drop jars of Ramses II from C. Décamps, *Quatre vases au nom de Ramsès II* <https://www.louvre.fr/oeuvre-notices/quatre-vases-au-nom-de-ramses-ii> accessed on 29.03.2020.

Fig. 18. 1. Three of the five bronze drop jars found at the Aten temple at Amarna from the Online Collection of the British Museum <https://research.britishmuseum.org/research/collection_online/collection_object_details.aspx?objectId=135698&partId=1&searchText=58454&page=1> accessed on 29.03.2020.

Fig. 19. A detail of painted wine jars decorated with floral garlands in the tomb of Nebamun from the Online Collection of the British Museum <https://www.britishmuseum.org/collection/object/Y_EA37984> accessed on 20.05.2020.

Fig. 20. The offering of bouquets from the temple of Amon at Karnak inside of two drop jars by the grandchildren of Ipuy from the Institut Français d’Archéologie Orientale Le Caire, *Tombes de Deir el Medina: Couverture photographique* <https://www.ifao.egnet.net/bases/archives/ttdem/?tt=217> accessed on 31.03.2020.

Fig. 21. A detail of the Ubkhet offering a decorated drop jar to her father on the east wall of the first chamber from Osirisnet, *Nakhtamon – TT 335 Chamber A* <https://www.osirisnet.net/tombes/artisans/nakhtamon335/e_nakhtamon335_02.htm> accessed on 05.04.2020.

Fig. 22. A detail of Seti I offering to the bark of Amon with the two decorated drop jars surmounted by lotus flowers placed underneath the front of the bark, photo taken by A. Corsi <https://www.flickr.com/photos/johndoodo/42920621285> accessed on 05.04.2020.

Fig. 32. The Enkomi drop jar from Courtois et al. 1986, pl. XXVI; Online Collection of the British Museum, *Flask* <https://www.britishmuseum.org/collection/object/G_1897-0401-999> accessed on 13.06.2020.