EXCHANGE, DESTRUCTION, AND A TRANSITIONING SOCIETY

INTERREGIONAL EXCHANGE IN THE SOUTHERN LEVANT FROM THE LATE BRONZE AGE TO THE IRON I

Jesse Michael Millek

TÜBINGEN UNIVERSITY PRESS

Exchange, Destruction, and a Transitioning Society: Interregional Exchange in the Southern Levant from the Late Bronze Age to the Iron I

Dissertation

zur

Erlangung des akademischen Grades

Doktor der Philosophie

in der Philosophischen Fakultät

der Eberhard Karls Universität Tübingen

vorgelegt von

Jesse Michael Millek

aus

West Berlin, New Jersey, USA

2019

RessourcenKulturen

RessourcenKulturen
Band 9

Serie's Editors:
Martin Bartelheim and Thomas Scholten

Jesse Michael Millek

EXCHANGE, DESTRUCTION, AND A TRANSITIONING SOCIETY

Interregional Exchange in the Southern Levant from the Late Bronze Age to the Iron I

TÜBINGEN
UNIVERSITY
PRESS

To my wife Anna.
Without you this would not have been possible.

*Just because an intellectual trend
seems irresistible is no reason for
not resisting it* (Evans 2001, 13).

Content

Abbreviations

EBA	Early Bronze Age
MBA	Middle Bronze Age
LBA	Late Bronze Age
MC	Middle Cypriote
LC	Late Cypriote
LH	Late Helladic
LM	Late Minoan
NAA	Neutron Activation Analysis
EA	El Amarna document
NA	Not Applicable
NASB	New American Standard Bible
Bo	Boğazköy: Istanbul and Berlin, Inventory
KRI	K. A. Kitchen, Ramesside Inscriptions, Historical and Biographical I-VII, Oxford, 1969-1989
KUB	Keilschrifturkunden aus Boğazköi, Berlin
RS	Tablets from Ras Shamra
KTU	Keilalphabetische Texte aus Ugarit

List of Figures

List of Tables in Appendix II

List of Maps in Appendix III

Forward

The work presented here is a slightly updated version of my PhD dissertation submitted on December 16th 2016. Thus, some relevant research which was published after this date has not been included in the present volume. This work would not have been possible without the help of many people, and I would like to thank them. First, of course, I want to thank the SFB 1070 for providing me with the funding to do this project. Without the help of its many members, this project would not have been possible. I would like to specially thank Shyamala Subramanian who helped me through many a German paperwork conundrum.

Next, I would like to thank Jens Kamlah my supervisor over the three years I worked on the dissertation. Without his constant help, advice, and critical feedback I would not have been able to do all that I have done. I would also like to thank both Peter Pfälzner and Martin Bartelheim who too guided me throughout this project and provided me with helpful advice. To my colleagues and friends, I too owe a debt of gratitude. So thank you Alexander, Andrea, Ivana, Sarah, Valentina, and Virginia for getting lunch or coffee and for listening to what I am sure was far too much about trade and collapse.

I would also like to thank those who have helped me with some of the more technical aspects of this work. To Steve Faust, thank you for making a database from scratch and for going through volume after volume to find every last piece of Cypriot pottery that we could come across. To Jakob Kempendorf, thank you for both your work on the database, but also your tireless work on making maps. Jakob is the best cartographer who also doubles as a pastor that I know. I would also like to thank Uwe Müller and the rest of the editorial team for their work on improving my dissertation for its publication as a book.

There are of course many others who without their help and support I would not have been able to complete this dissertation. To the many professors, doctorial students, and the one masters student who answered my questions about their research, gave me their unpublished dissertations, or pointed out articles which I had not known about I say thank you.

Of course, I must thank my family. I would like to thank my parents Nick and Linda for their support over the years. Finally, to my wife Anna. It is to you that I owe the greatest debt. It is obvious that I dedicate this work to her because without her I never would have been able to get this far.

Summary

The goal of this volume is to examine one key aspect of the transition from the Late Bronze Age to the Iron I in the Southern Levant, the development and changes in interregional exchange both over time and in the region as a whole. Interregional exchange is most easily seen in the appearance and disappearance of non-local material culture and materials. Twelve non-local types of material culture were collected into a database in order to track the development of interregional exchange over the course of the LBA to the Iron I. With this data, we can ask what effect if any did changes in interregional exchange have on the ‚collapse‘ of the LBA societies in the Southern Levant. To help answer this question, I also explore briefly the theory of collapse, and the various proposed causes for the ‚collapse‘ at the end of the LBA in the Eastern Mediterranean along with the theories for trade and exchange in anthropology and archaeology. Another key aspect of this work is the examination of the supposed wave of destruction which took the Southern Levant by storm asking to see if these events might have affected trade and contributed to the transitions during the end of the LBA into the Iron I. In all this work seeks to see what changes took place in interregional exchange, how might destruction have affected this, and was this the cause for the transition to the Iron I.

1. Introduction

1.1. Introduction

The Late Bronze Age (LBA) ca. 1550–1200 BC, and specifically from 1400–1200 BC, in the Eastern Mediterranean has been called the 'International Age'. It is described as a period when the Great Kings interacted across vast expanses, trading, sharing information, and at times going to war against each other. The LBA is also known as the time of great trade among the rulers, elites, and merchants of the Eastern Mediterranean as ships traversed the Mediterranean, carrying a wealth of cargo in their holds, while caravans trekked across great expanses of land taking materials north and south, east and west. In the Southern Levant, the LBA is one dominated by the Egyptian presence which was forced on the region after the campaigns of Tuthmose III and which continued until the end of Ramesses III's reign, influencing the culture and leaving a visible mark in the archaeological record. However, the LBA is not only known for its positive aspects but also because of its end. The collapse of the kingdoms and powers around the Eastern Mediterranean has drawn much interest as historians, scientists, archaeologists, and others have examined the possible causes and reasons why once mighty empires fell, bringing about what many in the past have called the 'Dark Age'. As part of this description, wars, earthquakes, famines, disruptions, invaders, and other factors have all been called upon to answer the lingering question of why this collapse came about.

This 'Dark Age' in the Southern Levantine chronology is limited to the Iron I ca. 1200–1000 BC, and it is painted as an era when trade and exchange with neighbours stopped, accesses to vital metals were cut off, the land was invaded by the 'Sea Peoples' bringing with them the dreaded Philistines of the Old Testament, while new social entities, like the Israelites, sprang up. A multitude of theories have been raised to explain the cultural changes which took place in the transition from the LBA to the Iron Age, and to explain the collapse of the Egyptian hegemony over the region and the fall of the 'Canaanite' culture. This is where the present work begins.

1.2. Purpose of the Study

The aim of this work is to examine and shed light on the transition from the LBA to the Iron I in the Southern Levant. I will do this by focusing on one particular aspect of the LBA to the Iron I transition, which is interregional exchange and how it affected or did not affect the collapse and the cultural changes in these two periods. Particularly, the use of interregional exchange as a cultural resource will be explored, all the while asking several questions. Did the disappearance of interregional exchange at the end of the LBA cause the collapse of the Southern Levant, and did this bring about social change? What role did the 'Sea Peoples' have in this transition, and did the destruction of cities and towns cause a breakdown in interregional exchange and thus the collapse? What was the development both regionally and chronologically of non-local materials brought to the Southern Levant during both the LBA and the Iron I? Other questions besides these will also appear throughout the text as they are discussed in specific chapters.

1.3. The Chronology of the Eastern Mediterranean and the Region of the Southern Levant

Questions about chronology abound, and trying to tie together multiple regions into one comparative dialog produces many of these questions and often times circular reasoning, where a pot dates a deposit while the deposit helps to date the pot. The

Period	Egyptian dynasties	Egyptian Kings	Southern Levant	Cyprus	Aegean
MBA/LBA 1650–1450	Early 18th Dynasty 1540–1475	Ahmose 1550–1525	LB IA 1550–1450	LC IA 1650–1550	LH IIA 1600–1450
				LC IB 1550–1450	
Mid-late LBA 1450–1200	Mid-late 18th Dynasty 1475–1295	Tuthmosis III 1479–1425	LB IB 1450–1400	LC IIA 1450–1375	LH IIB 1450–1400
	19th Dynasty 1295–1186	Amenophis III 1390–1352	LB IIA 1400–1300	LC IIB 1375–1340/25	LH IIIA:1 1400–1375
		Ramesses II 1279–1213	LB IIB 1300–1200	LC IIC 1340/1325–1200	LH IIIA:2 1375–1300
					LH IIIB 1300–1190
LBA transitional/Iron I	20th Dynasty 1186–1070	Ramesses III 1186–1155	Iron IA 1200–1150	LC IIIA 1200–1100	LH IIIC 1190–1030
			Iron IB 1150–1000	LC IIIB 1100–1050	

Fig. 1.1.   Comparative chronology of the regions presented in this study.

overarching chronological issues aside, the above chart is meant as the general guide which will be followed throughout the remainder of this work (*fig. 1.1.*). While the major focus of this work is on the Southern Levant, many of the objects under study, such as Cypriot and Mycenaean pottery, are discussed largely in terms of their own regional specific chronology. It is of course known that not all chronologies line up perfectly and changes are inevitable, however, the above chart will be the basis for the following discussion.

Likewise, the specific region must also be delineated here, as the term 'Southern Levant' may not mean the same region to everyone. The borders given here follow the traditional north to south 'from Dan to Beersheba' (Judges 20:1 NASB) extending to the Mediterranean coast in the west and including Transjordan in the east. The northerly border follows traditional boundary lines excluding Lebanon. Thus, sites in Lebanon like Tyre are not included as part of the Southern Levant as it is defined here.

1.4.   Methodological and Theoretical Approaches

1.4.1.   Method

This work focusses on both archaeological and historical information from the LBA and the Iron I, though the main emphasis is on the archaeological record. The reason for this as detailed in chapter 4 is the lack of much of the relevant textual data concerning trade and exchange in the Southern Levant from the LBA and the Iron I. Rather than relying on textual information from before or after these periods and outside of the Southern Levant, the focus will be on the relevant historical sources pertaining to the Southern Levant and largely on the archaeological evidence in the form of non-local materials and objects. In order to do this, a database of non-local material culture found in the Southern Levant dating to the LBA and the Iron I was created.
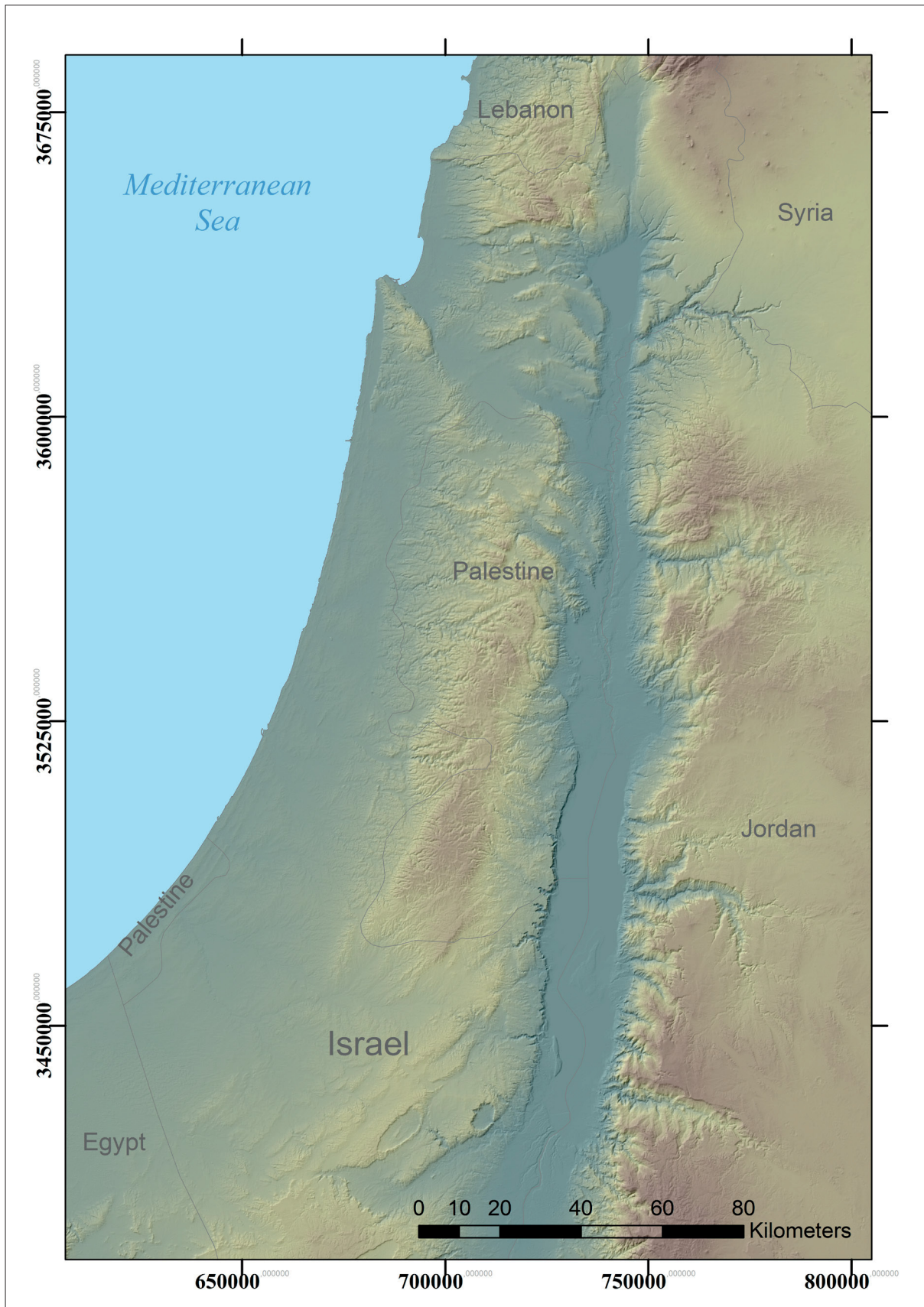
Fig. 1.2.   Map of the Southern Levant.

1.4.2.   The Tübingen Database

The present work was part of a larger project, project A06, under the umbrella of the SFB 1070 ResourceCultures. Part of project A06 was to construct a database containing as many possible non-local materials and objects dated to the LBA and the Iron I in order to observe their chronological and temporal developments.[1] The database currently consists of six types of non-local pottery (Cypriot, Mycenaean, Minoan, Western Anatolian, Qurayyah ware, and imported Egyptian pottery) discussed in chapters 6 and 7, three kinds of Egyptian objects (Egyptian stone vessels, Egyptian amulets, and Nile perch) discussed in chapter 7, and precious metals (gold, silver, and electrum), cedar of Lebanon, and Hittite objects all discussed in chapter 8. The Tübingen Database and its bibliography are still a work in progress as stamp seals, cylinder seals, and precious stones are also being added. However, this was not completed to a degree in which it could be included in this work in a meaningful way at the time of writing. Likewise, the database is still being utilized by other researchers of project A06, and it will unfortunately not be included into the present publication.

Given the large number of materials and types of objects, the database and thus the presentation of the database had to concede to certain limitations. In other works discussed in chapters 6–8, such as Gittlen's dissertation on Cypriot pottery in the Southern Levant (Gittlen 1977), he goes into great detail on the chronological development and use of certain types of Cypriot wares such as Base Ring I to Base Ring II, the frequency of bowls to juglets, and the frequency of these objects in domestic or funerary contexts. The same is true of other studies which examined in detail Mycenaean pottery, Egyptian pottery, Egyptian stone vessels and others where only one type of object was being studied. However, this work is meant to examine broad trends in a wide variety of non-local material culture, meaning only a general analysis

could be conducted. As each of these non-local materials and objects have warranted a dissertation, a book, or two for each subject, it is an impossibility to produce as detailed an analysis here. As such, the chronological and regional development is discussed in detail, and where previous work has already examined these more detailed aspects which could not be included in the Tübingen Database, they have been included in the discussion. This is not always the case, however, such as with the precious metals from the LBA and Iron I which have yet to be examined in detail. In this case, only the chronological and regional development from the sample can be discussed; still, this material is one which needs to be examined in full in the future.

The data in the database has been entered in a systematic fashion based on the material. For pottery, this includes the site, the date of the find to one or more periods (i.e. a find dated to LB I or if dated from 1330–1250 equals LB II etc.), the place of origin, (i.e. Cypriot, Minoan, Mycenaean etc.), the period of production of the object based on the pottery style (i.e. LH IIIA2), and the number of finds. Each sherd was not entered as a single piece of data. Rather, they were entered based on the specific number of sherds of one type of pottery in one reference. Because this work cannot go into greater details, whole vessels were entered with a number 1 the same as a single sherd. Moreover, with the pottery, often times it is mentioned that a site and specific stratum has 'some Cypriot pottery', 'many sherds of Base Ring II' and so forth. Rather than exclude this known but unquantified pottery, these sherds have been entered with 'stand in' numbers. These range from 3 to 10, with the number 3 given where it is stated there are 'a few' sherds, and 10 given to 'numerous'. These sherds have also been noted and are pointed out in chapter 6 and chapter 7 where stand-in numbers have been used for specific sites and types of pottery. The other six types of non-local material and objects were included in a similar fashion, noting the site, the period, the type of object, and the amount. A basic statistical analysis has been applied to the data to track the regional and chronological development for each individual non-local material along with a comparative analysis of the data (i.e. Cypriot pottery to Mycenaean pottery). This will be detailed further in chapters 6–8.

---

1   The database was constructed by Steve Faust of University of Tübingen, the data was largely entered by Steve Faust and Jakob Kempendorf also of the University of Tübingen. The work was overseen by Jens Kamlah and myself. Without their tireless effort, this project would not have been possible.

1.4.3. Destruction

Destruction plays a large role in many of the scenarios for the end of the LBA in the Southern Levant. Whether that trade and exchange was broken up because of raiding 'Sea Peoples', earthquakes striking levelling cities and also helping to break apart these networks, nameless hordes, peasants, Egyptians and others have all been blamed for the destruction of sites and cities. By proxy, this often details the fall of the LBA in the grand theories for the end of the period. However, destruction has not been critically examined in the past (see Millek 2017). To come to a clearer picture of the situation at the end of the LBA in the Southern Levant, all cited destruction events were examined based upon the method I have previously proposed, though this was expanded upon and given more detail in this work (Millek 2017).

Each cited destruction has been examined under the same method. This method first seeks to delineate the scale of the destruction. The first is a partial destruction, where the information is not clear enough to state how extensive the destruction was though destruction has been mentioned. This is followed by a single building destruction where only one building from that phase suffered destruction. The next stage is a multi-building destruction, which is when multiple buildings from a single phase suffered destruction, presumably from the same event. The final scale is site-wide, where evidence of destruction is found in every excavated area. Aside from the scale of the destruction, each site has been examined in detail before and after the destruction to see what social and economic conditions might have led up to the destruction and how the people responded to the destruction. This is coupled with a detailed analysis of the destruction event in an attempt to determine the cause of the destruction. These are classified into five different basic classifications. The first is 'No Destruction'. This is when a destruction event has been cited, but this is based on an assumption, too little evidence, or simply a misscitation. Second is 'Unknown' which is accordingly employed when there is too little evidence to come to a conclusion about the cause of the destruction. Third is 'Natural Destruction' which is due to

earthquakes or other types of destruction which do not involve any human activity. 'Accidental Destruction' is the fourth category, and finally 'Human Activity' or the purposeful destruction of a building. Sometimes a cause is assumed by an interpretation of the material, but without proof. When this is the case, a question mark has been placed next to the classification (such as 'Natural: Earthquake?').

Taking this all together, methodologically I attempt to examine the regional and chronological development of the non-local materials and objects based on a numerical and statistical basis. Likewise, I attempt to analyse the development in destruction events, that is, what led up to the event and how people responded. In this way, I focus on the archaeological material as the first point of evidence. Thus, rather than holding to the theory that 'Sea Peoples' or earthquakes destroyed massive amounts of sites at the end of the LBA and then to going to look for evidence to support this, I begin by looking at the evidence from destruction first and ask if this supports the hypothesis, in this case that destruction caused the breakup of interregional exchange.

1.4.4. Theoretical Approaches

This work covers a broad range of theoretical issues from 'what is collapse', 'how to define trade and exchange in anthropology and archaeology' to 'connection versus contact', amongst others. Because of this, the majority of the theoretical discussion has been partitioned out across the various chapters. Collapse is discussed in chapter 2, trade and exchange in chapter 3, and contact and connectivity in chapter 4. However, there are three theoretical themes which must be discussed here, as they are the basis for much of the interpretation which is to follow.

The first is the theoretical model under which this work is based along with project A06. This is the theoretical framework of the SFB 1070 RESOURCECULTURES (Bartelheim/Hardenberg/Staeker 2014; Bartelheim *et al.* 2015). While a full discussion of the theoretical concepts is presented in chapter 3 in context with how interregional exchange can be seen as a resource, a brief overview

of the concepts is warranted here. In view of the conceptual paradigm of the SFB 1070, resources are seen as more than raw materials and means of production in the traditional economic sense (Bartelheim *et al.* 2015, 39). Rather, resources here are not only these raw materials but they are viewed as both tangible and intangible means which, in a given society, are viewed as a resource (Bartelheim *et al.* 2015). Thus, in this case, religion and beliefs, while intangible, can be viewed as a resource affecting the society. Moreover, resources do not act alone as it is often the case that a resource can only be viewed as a resource when it is part of a network, 'Composed of people, objects, technologies and knowledge. Combined they allow for the access, preservation, efficient use and distribution of resources' (Bartelheim *et al.* 2015, 40). This is known as ResourceComplexes. In this work, interregional exchange itself can be viewed as an intangible resource which only functions when a ResourceComplex is in place. This concept will be discussed further in chapter 3. Finally, this work and thus project A06 are part of the SFB 1070's project division A. Developments. This project division's aims are described as, 'Project Division A. Developments concentrates on diachronic studies about the role of resources in processes of social and cultural change. The focus will be on historical situations in which access to raw-materials and natural products was granted locally, regionally or continuously through established ways of distribution' (Bartelheim/Hardenberg/Staeker 2014, 25). Therefore this work will also aim to examine the development of interregional exchange and its effect on the societies in the Southern Levant both regionally and chronologically.

The second theoretical theme is not so much a theory as it is a guiding question. This question is, 'What do we know, and how do we know it?' Some explanation for this is likely needed. For well over a hundred years, theories for the end of the LBA have been proposed. The same is true for the development of trade and interregional exchange from the LBA to the Iron I, and in some cases, this has led to a situation where theories are based on theories based on theories, and the actual archaeological and historical data is lost or ignored.

One such example is the focus on the study of Cypriot pottery in the Southern Levant. In a recent book chapter on Cisjordan from 'The Oxford Handbook of the Archaeology of the Levant on the Late Bronze Age', Nava Panitz-Cohen states that Cypriot pottery would have entered *via* gateway ports such as *Tell Abū Ḥawām* and *Ǧezīret en-Nāmī* (Tel Nami) and would have been distributed to inland Canaan *via* regional hubs such as at Megiddo and Beth-Shean (Panitz-Cohen 2014, 544). She makes this claim based on the work of Michal Artzy who has excavated at both *Tell Abū Ḥawām* and *Ǧezīret en-Nāmī*, and Bernard Knapp, a Cypriot archaeologist specialised in LBA trade and exchange. However, this is the exact opposite of what the archaeological material states. As I will demonstrate in chapter 6, 82% of Cypriot pottery is found south of the Yarkon River while Mount Carmel, the Akko Plain and the Jezreel Valley, the region that was claimed to be the entry point for Cypriot pottery, yielded only 10% of all Cypriot pottery. Moreover, in every period, there was always a concentration of Cypriot pottery in Cisjordan south of the Yarkon River. Another example comes from *Tell el-Baṭāšī* (Tel Batash/Timna) which has been repeatedly claimed to have been destroyed at the end of the LBA (Dagan 2004, 2679; Yasur-Landau 2010a, 216; Metzer 2015, 143) while the excavators have repeatedly stated the site was not destroyed (Mazar 1997, 76; Kelm/Mazar 1995, 67–72).

It is because of examples like these that one of the guiding theoretical questions is, again, 'What do we know, and how do we know it?' In more words this question asks what is the theory that is being proposed, what are its tenets, its supporting evidence, and how do we know that these tenets and supporting evidence are true. Thus, the aim of this guiding theoretical question is to always, when possible, deconstruct the argument to its basic parts, ask if these parts are supported by archaeological and historical evidence, and to put the parts back together into a picture which more accurately reflects the archaeological and historical record. This may lead to pointing out that certain tenets of the LBA exchange are not as strong as one might believe, such as theories concerning LBA merchants in the Southern Levant which we actually know

very little about, as discussed in chapter 4. Given this guiding question, the third theoretical approach should not be surprising.

The third theoretical approach is that the archaeological and historical evidence will be examined under the view of minimalism. Minimalism versus maximalism runs at the heart of many of the theories for trade and exchange in the LBA to the Iron I in the Eastern Mediterranean. One need only look at three articles from one book to understand the divide between these two camps. In the book 'Archaic State Interaction: The Eastern Mediterranean in the Bronze Age', John Cherry, Susan Sherratt, and Eric Cline respond to each other's works, with Cherry representing the minimalist and Sherratt and Cline the maximalists. Sherratt in her contribution to the book states that, in order to fully understand trade and world systems in the ancient world, 'The problem demands that we allow enough scope for **informed imagination'** (S. Sherratt 2010, 91; Emphasis my own). She goes further to say, 'We need to lose our embarrassment over thinking about what we do not find and cannot measure and (to borrow Donald Rumsfeld's phraseology) consistently make room for such 'known unknowns' in our reconstructions of interaction. If dealing with such 'shadows' makes us open to the charge, from some quarters (see Cherry, chapter 5, this volume), of writing fiction or proceeding unscientifically, then this cannot be helped' (S. Sherratt 2010, 91).

Cherry in response states that there are of course 'known unknowns'; however, he does not find this as license to take, 'Evidence of very different types from widely separated periods characterized by quite dissimilar socio-political arrangements' (Cherry 2010, 131), in order to reconstruct evidence for trade. He goes on to say that, 'Of course, absence of evidence cannot be automatically treated as evidence of absence, but we need more than merely 'informed imagination' to tackle what we suppose, but cannot be sure, are gaps in the archaeological record' (Cherry 2010, 131). He also goes on to say, 'Allowing that archaeological evidence may provide a very incomplete picture does not adequately justify invoking imaginary exchanges in materials and on a scale for which no evidence exists' (Cherry 2010, 138).

In the same book, Cline goes on to rebuff Cherry saying that the minimalist approach he proposed was not constructive. Cline goes further, commenting on another paper written by Manning and Hulin (2005), who also generally take the minimalist approach, saying, 'I must address a nihilistic statement recently made by Manning and Hulin. In what I see as a deliberately minimalistic and ultimately harmful interpretation of the available data' (Cline 2010, 164). He refers to their statement that the data in Cline's 'Sailing the Wine-Dark Sea' is 'An inadequate, if not misleading, basis from which to analyze trade' (Manning/Hulin 2005, 283). The validity of both of these claims will be examined in detail as well as in greater context in chapter 4. However, what these three articles from the same book demonstrate is the great divide between these two interpretive camps, and it should be stated outright and clearly that I fall in line with Cherry and the minimalists. This is in part due to my other theoretical leaning as an empiricist, and also, much like Cherry, I prefer to first see what exactly we know before stepping too far into the realm of informed imagination.

Wiener cautioned that, 'It would appear that the risk of underestimation of the amount of societal impact on long-distance trade in the Bronze Age is at least as great as the risk of overestimation' (Wiener 1991, 326). This caution is not lost to me and it is the reason for the guiding question I have already described. Moreover, as Cherry stated, 'It is more productive to try to understand the broad temporal and spatial patterns' (Cherry 2010, 138). This is the approach taken in this work to first comb through the archaeological data, to find out what are the broad temporal and spatial patterns, and as per the second theoretical question, whether this evidence supports the standing theories for cultural change and collapse at the end of the LBA.

1.5.   Organisation of the Work

After this general introduction, the work is divided into four main sections. The first section, comprised solely of chapter 2, focuses on the theory

of collapse, and the theories for collapse throughout the Eastern Mediterranean. Chapters 3 and 4 comprise the second section, with chapter 3 focusing on the theory of trade and exchange and the theoretical concept of the resources, while chapter 4 examines the evidence of the LBA trade from the textual sources and the concept of contact versus connectedness. The third section is made up, again, of solely chapter 5 which examines the destruction of sites in the Southern Levant at the end of the LBA and if this affected the ability to exchange. Chapters 6–8 present the data from the Tübingen Database. Chapter 6 examines the non-local pottery, chapter 7 the Egyptian objects, and chapter 8 the precious metals along with cedar wood and Hittite objects. Chapter 9 is a summary and conclusion based on the previous chapters.

2. The 'Collapse' at the End of the Late Bronze Age?

2.1. Introduction

'Sea Peoples', pirates, raiders, system collapse, revolts, debt, climate, drought, famine, earthquakes, and destruction are all reasons given for the collapse of the LBA in the Eastern Mediterranean. These theories and explanations take into account a wide field of sources, from the archaeological and textual finds in Greece, to the inscription and images on the walls of Medinet Habu in Egypt, and include modern day scientific research into past climates or economic theories which have been applied to the past. All of these various reconstructions generally take into account the same evidence, and yet, there are a variety of results depending upon the interpretation of that evidence. While the Southern Levant is only a small part of the Eastern Mediterranean, the theories which surround its 'collapse' often take into account the historical and archaeological developments in Greece, Anatolia, Northern Syria, Cyprus, and Egypt. The purpose of this chapter is to first give a brief examination of some of the theories concerning the end of the LBA in Greece, Hittite Anatolia, Ugarit,[2] Cyprus, and the Southern Levant along with Egypt's involvement in the region. This brief examination cannot of course cover all theories, as to do justice to each region would require a dissertation or book of its own. After setting the stage for these individual regions, I will present the theories which have been proposed to explain the 'collapse' of the Eastern Mediterranean civilisations.

In the following pages, it should always be remembered that the theories and evidence presented are filtered through the worldview of the writers, the political situation of the country they were written in, and the popular political and social problems of the time in which the theories were written. As Silberman accurately stated, 'Interpretations of the LBA collapse continue to be deeply – if often unconsciously – affected by modern social and economic trends' (Silberman 1998, 268). In addition, he goes on to say, '[Archaeologists are] deeply affected by the hopes, fears, and power relationships of their own societies' (Silberman 1998, 268). These are important words to remember, as this will become all too clear concerning the LBA collapse theories. However, before looking at these, both, the regional and Eastern Mediterranean-wide theories, we must take a step back and examine another pertinent question relating to the collapse of the LBA, and that is: what is collapse? As with most areas of study, the words used to describe the events in the LBA such as collapse, decline, transition, or crisis can have different meanings, to different people, at different times. It is here we shall begin in trying to understand just what a collapse is.

2.2. The Theory of Collapse

Collapse as a phenomenon is said to take place amongst the smallest of cultures to the largest of empires (Tainter 1988, 5). It can involve destruction, loss of trade, loss of urbanisation, the abandonment of sites, the abandonment of technology or inventions such as writing, and many other symptoms. However, the term 'collapse' is problematic, and what follows here is only a brief examination of the wide research on collapse.[3] Attempts to try to define collapse have been part of

---

2 This work could not include a discussion of the entire Northern Levant. For a recent examination, see Pfälzner 2012.

3 This discussion will only focus on collapse theory in general and the reasons given for the LBA collapse. For books and articles discussing the collapse of other societies see: Middleton 2017; Faulseit 2016; Faulseit (*ed.*) 2016; Tainter 2016; Middleton 2012; McAnany/Yoffee 2010; Middleton 2008, 53–97; Schwartz/Nichols (*ed.*) 2006; Tainter 1988; Yoffee/Cowgill (*ed.*) 1988. See also references therein.

the scholarly debate for the past several decades. In the past, collapse was often ignored, as Yoffee pointed out, as much more effort was placed into trying to understand how societies rose and not what brought them to a close (Yoffee 1988, 1). Yet, in recent research, there has been a greater effort to try to understand why a society collapses, whether it is the Roman Empire, the classical Maya, or the LBA civilisations, among many other examples of 'collapse'. However, as Tainter noted in 1988, there is no single meaning for the term collapse, as it means different things to different people at different times (Tainter 1988, 4). Yoffee also stated that, 'It is clear that it cannot be assumed that everyone understands the same thing about collapse' (Yoffee 1988, 14). More recently, Middleton has shown that, even with more than twenty years of research into collapse theory, 'The terminology of collapse is widely recognized as unclear and problematic; even the existence and utility of collapse as a concept is sometimes called into question. Collapse is a loose term that collocates with a range of equally problematic words and concepts such as decline, fall, crisis and anxiety, transition, and transformation' (Middleton 2012, 259 f.). Middleton goes on to say that words like 'transition' may mask the true horror of the events which took place during a collapse, as fighting, war, famine, and other such possible events which could have contributed to a collapse would be sure to have a negative effect on the people living at the time. Likewise, 'anxiety' and 'crisis' may fail to accurately describe how the people at the time of the collapse interacted with the goings-on, as there might have been positive aspects for some members of society even during the 'crisis' (Middleton 2012, 264). Thus, even with decades of research, there is no common understanding of what is meant by collapse, or the words which are often times associated with it. It often comes down to the question of, 'What does collapse mean to you?' With that being said, there are any number of definitions or non-definitions for collapse and symptoms thereof, along with the different scenarios in which past societies are believed to have collapsed.

2.3. Defining Collapse

Tainter defined collapse as, 'A society has collapsed when it displays a rapid, significant loss of an established level of sociopolitical complexity' (Tainter 1988, 4 f.). The size of society does not matter to Tainter, as long as there is a rapid loss of sociopolitical complexity which takes place in only a few decades. A collapse is thus, in archaeological terms, a quick event with drastic changes (Tainter 1988, 4 f.). Schwartz has more recently defined collapse as, 'The fragmentation of states into smaller political entities, the partial abandonment or complete desertion of urban centers, along with the loss or depletion of their centralizing functions, the breakdown of regional economic systems, and the failure of civilizational ideologies' (Schwartz 2006, 5 f.). Yoffee, conversely, does not define the word collapse. Instead, he stated, 'The term collapse is not used in order to project a new analytical cell in which data can be fitted or discarded. It simply serves as a short hand for a set of research objectives designed to conjoin individual cases so that they may be investigated beyond their familiar ethnospecific environments' (Yoffee 1988, 18). Most recently, Faulseit has defined collapse by saying, 'Collapse is probably best understood as the fragmentation or disarticulation of a particular political apparatus' (Faulseit 2016, 5). Middleton, who summarised a much wider body of collapse definitions, has stated that, 'Much more frequently collapse is used to mean the fairly rapid ending of states (including empires and much smaller entities), which itself can involve fragmentation into smaller units, change in urban settings, redistribution of population in the landscape, and changes in ideology made visible in architecture and the arts' (Middleton 2017, 23).

Outside of these definitions, Kaufmann describes collapse as:

'Associated with the reduction in the capacity of the people in the afflicted polity to feed, house, cloth, and defend themselves collectively and individually. Sometimes religious practices and institutions also declined. The quality of life ... diminished. Populations fell sharply ... [and] one thing is

clear: whenever that cluster of changes ordinarily referred to as the collapse of civilization occurred, disintegration of overarching governmental organizations was a prominent feature of the process' (Kaufmann 1988, 219 f.).

Tainter gave his own list of nine collapse symptoms:
– A lower degree of stratification and social differentiation.
– Less economic and occupational specialisation, of individuals, groups, and territories.
– Less centralised control.
– Less behavioural control and regimentation.
– Less investment in the epiphenomena of complexity i.e. monumental architecture, the arts, and literary achievements.
– Less flow of information between individuals.
– Less sharing, trading, and redistribution of resources.
– Less overall coordination and organisation of individuals and groups.
– Smaller political units which control smaller territories (Tainter 1988, 4).[4]

What is clear from these definitions for collapse and for the symptoms of collapse given by Kaufmann and Tainter is that collapse is generally viewed as a 'bad thing' which mainly affects the uppermost levels of society. Most of the symptoms of collapse given by Tainter deal with the urban nature of a society and focus on a top-down view looking towards the elites and not the peasants. Schwartz mentions it is often believed that both collapse and regeneration are caused by the elite or those who want to become elites in a broken society. Thus, it is traditionally viewed that both the rise and fall of civilisation is due to those with power ignoring the people below. However, this negates the importance of the non-elite members of society who would have also played a large part in either a collapse or the regeneration of society (Schwartz 2006, 9). This top-down view of society and collapse

is a common theme in collapse research. The question of whether collapse is a 'bad thing' or a 'good thing' often times depends on the perspective the researcher chooses to take (Middleton 2012, 285), that is, either that of the elite or the villager being ruled over. In Kaufmann's view, 'Every farmer, every artisan, every merchant and trader, every town and city elder, and even every priest was to some extent a beneficiary of the overarching political and administrative structures above him' (Kaufmann 1988, 221). While this may have been true, this also ignores that farmers, artisans, merchants, traders, town, city elders, priests, slaves, or any other group which may have also suffered under the overarching political and administrative structures. Taxation, corvée, and other such burdens placed on the people by the elites and rulers of society may have meant that, once those ruling forces were out of the way because of a collapse in the palaces, this might have led to a more egalitarian society (Middleton 2012, 265).

This top-down view is most clearly seen in the term Dark Age, which Middleton defines as 'A period with comparatively few written texts, sites, or pottery; qualitatively it also characterizes a time perceived as less stable, more violent, less civilized (or urban) and less 'good', with material culture that is judged inferior to that of other periods' (Middleton 2012, 265). As Middleton notes, the term is negative and unfashionable, but still the term and the idea behind it exist in scholarly writings (Middleton 2012, 265). However, this is a very etic perspective and does not consider the emic view. Writing is a good example of this, as one of the symptoms of a 'Dark Age' is the 'loss' of writing. Yet, the term 'lost' should not be applied to periods when writing is no longer used in areas it was once a part of. Rather, 'abandoned' is a better term, as people who knew how to read and write chose not to teach this skill to their progeny as writing itself, now considered to be one of the most important inventions of humankind,[5] was no longer considered

---

4   Nur would add to this list the abandonment of sites, collapsed buildings and other physical markers of collapse outside of societal and urban shrinkage (Nur/Burgess 2008, 273).

5   Particularly for the academic historian whose entire career is based on researching past written documentation and the writing of new documents such as journal articles or books.

important. This concept can be again placed on the arts and architecture, as 'worse quality' architecture or buildings that are 'not as grand' as times before may reflect a new cultural understanding of art and architecture rather than a 'decline'.[6]

Tainter also wrote on this, as he believes that, normally, scholars see complexity as a positive aspect and that societies would have wanted to have more complexity. However, he states that what may be more likely is that scholars prefer complexity. With the loss of complexity in the past, it means there are fewer archaeological finds, there is less material to add to our databases, and the artefacts and ruins found may not be as appealing to the public as grand temples or palaces. Thus, because of this, there will be less money for research and less money for our museums (Tainter 1988, 197). A true catastrophe! The same can be said of those who work with the written sources, as a 'Dark Age' without writing is of no use to them and thus, of course, worse than the times when written sources were abundant (Tainter 1988, 197 f.). These personal views leach into the work and make collapse and the 'Dark Ages' to follow to seem bleaker and more severe than they may have been, because the research prospects are bleaker than when researching prosperous societies.

Recently, Tainter has fleshed out this idea by examining the invasive and often times unnoticed view of progressivism: that is, complexity is the goal of a society to reach what is more commonly known as 'civilisation' (Tainter 2016, 30 f.). Thus, in this generally subconscious view seeking complexity, the loss or 'collapse' of this complex society would be a catastrophe, and, as Tainter states, 'Considering collapse to be a catastrophe, it was natural that we would then look for factors that might cause a catastrophe. Hence we have focused on such explanations as barbarian invaders, peasant revolts, climate change, or environmental damage' (Tainter 2016, 37). This is indeed the case for the end of the LBA throughout the Eastern

Mediterranean and in the Southern Levant. The emergence of more villages and less urban sites during the Iron I Southern Levant is part of the collapse of the LBA. Yet, this is only due to a progressivist narrative, as for the people themselves, village life may have been a better alternative than the system they were living under previously. Thus, when framing the questions around 'collapse', Tainter goes on to say, 'Rather than asking, 'What went wrong?' it would be more productive and less biased to situate collapse within the broader anthropological question, 'What causes societies to vary and change in complexity?' (Tainter 2016, 37).

Another question which should be added onto this also attempts to take the etic view of the situation in asking, 'After this 'collapse', who won and who lost?' In anything in life, there will be winners or losers, and how a situation plays out will also determine who benefits from that situation and who has something taken away. In the case of most 'collapsed' civilisations, the 'losers' are perhaps easiest to see. These are the rulers, kings, elites, and other who benefited from the system in place before the 'collapse'. However, a 'collapse' may bring the death of the king or ruler, the displacement of elites, the loss of workers and funds to support an opulent life style and so on. Thus, in this case, for the archaeologist, the 'loser' is often very visible, but the winner may not be and the benefits they received from this change may not be archaeologically or historically impressive. If the loss of an overarching dictatorship brought about the end of forced labour and the ability to live life normally in a village, this would have been a boon for the normal person; however, it may only show up in the archaeological record as a village without grand architecture or anything else newsworthy. Nevertheless, to ignore those people who may have benefited from a 'collapse' is to ignore a large body of the population, and these factors must be taken into consideration.

What is clear from all this is that collapse and the words surrounding it are not clear and are not well defined. They are often based on the understanding of the scholar, his or her political and social viewpoint, the current political, environmental, and economic problems, along with who is funding the work (Tainter 2016, 29). There are

---

6   Though as Middleton states, even the term 'decline' is often times more used to describe reduction in population or the number of sites and military and economic power (Middleton 2012, 263). However, again the question can be asked of how this 'decline' was viewed by the people and how they engaged in this process. Again, an often ignored side of collapse research.

two general camps when trying to define the term 'collapse', these being leaving the term undefined and attempting to define the word. In Yoffee's view there is not one definition for collapse, and the term should not be defined or put into a box.[7] Secondly, there is Tainter, who believes that 'collapse' and other words associated with it must be defined (Tainter 2016, 33). Following along in the middle ground is Middleton who describes 'collapse' as:

'A term ascribed to a range of processes and events that at their core have rapid or dramatic political and social change. That change has correlates in material culture, whether at the level of the political fragmentation of large empires or the demise of individual polities within a culture zone. It can result in and be a part of the transformation of a culture or signify the end of materially distinct communities. The onus is on writers to indicate clearly what they mean by collapse and not to confuse or abandon the concept' (Middleton 2012, 267 f.).[8]

Each view has its merit. For Yoffee, he is correct that trying to fit all types and features of collapse into one neat and nice definition will not necessarily be a help, as a single definition means something will be left out. While I generally agree more with Tainter and Middleton that the term 'collapse' must be defined, there remains the problem that the question will always be, 'What does collapse mean to you?' However, this is only the case when each author defines the word, yet often

times the painstaking task of defining research terminology is left aside for the general thought that everyone will know what you are saying. Yet, this leaves us in the current situation that 'collapse' is broadly understood and broadly misunderstood. Perhaps, the term 'collapse' is too large a topic to define with any accuracy, and thus it may be better to partition the term into smaller units.

The term 'collapse' is often applied to wide regions, but within these regions, not every area may have 'collapsed'. We can ask if Carchemish truly collapsed during the LBA/Iron Age transition. In this case, is the rapid social transition at Carchemish, where it became the seat of a Great King, truly indicative of collapse, or is it a political change? Thus, perhaps it is best to add more descriptive words to the term collapse, such as regional-collapse, sub-regional-collapse, urban-collapse and more. Middleton has suggested five units typically affected in a collapse after examining a large body of collapse research. He suggests that collapse comes in the forms of: 1. Individual communities; 2. Political units (empires, states, dynasties, chiefdoms, etc.); 3. Cultural units (civilisations, ideologies, lifestyles); 4. Systems including world systems; and 5. Populations and peoples (Middleton 2017, 25–29). Thus, to better understand what we mean by collapse, the term itself must be more descriptive. Additionally, it may be best to use multiple terms to describe 'collapse'-like occurrences. Collapse may best describe what happened in the urban centres, but transition or decline may better describe the processes in the *hinterlands*. The problem may lie in that we often times choose to use one word to describe a complex situation when it could be better described by multiple words, as collapse, decline, and transition are not mutually exclusive. Thus, 'collapse' as a term is not defined here, as adding another definition into the slew of definitions will not help solve the problem. Rather, the basic definition for 'collapse' will follow after Tainter's mentioned before. Moreover, when looking at the Southern Levant, the question must be asked if the term 'collapse' should be applied to the end of the LBA. However, the 'collapse' of the Southern Levant is in many ways subjective and focused on a progressive view. To decide if it 'collapsed' or not before looking at the archaeological and historical evidence would only guess

---

7   'The term collapse is not used in order to project a new analytical cell in which data can be fitted or discarded. It simply serves as a short hand for a set of research objectives designed to conjoin individual cases so that they may be investigated beyond their familiar ethnospecific environments' (Yoffee 1988, 18).

8   This is a good definition for collapse, but it does not necessarily further our understanding of what collapse is. If every scholar defines collapse in their own way without an underlying theme or definition, than we will be left with many more definitions for collapse than we have had before. Additionally, it combines both collapse and transition into a single term even though the two terms describe different situations and circumstances. Thus, it is still worthwhile to try and find a definition for the term which can be agreed upon by at least most of the scholarly community to enable a scholarly discourse on the subject. However, as with most other terms, this may be an impossibility.

at what is to come, and if one says the Southern Levant 'collapsed' one will look for and find the evidence to support this. However, while asking the question, **what do we know and how do we know it** throughout this work, it will become clear that many of the catastrophic suggestions for the end of the LBA are not borne out by the material evidence. Thus, judgment on a definition will wait until the evidence is put forward to see what type of 'collapse' might have occurred in the Southern Levant at the end of the LBA.

While there is confusion in what the term collapse even means, this has not stopped researchers from proposing many different models for how a society would or could collapse. Each theory is fraught with its own theoretical problems and political underpinnings. One of the most recent debates in collapse research is the extent to which humans are an active cause of collapse. Diamond, in his book 'Collapse: How Societies Choose to Fail or Survive', argues that in most cases the collapse of a society was caused by fateful or fatal decisions made by the people which proved to be the downfall of their society (Diamond 2005, 419–440). The rulers of the society either did not notice there was an impending problem, or if they did, they chose not to take action against it, or took the wrong actions. Even such things as natural disasters would not have caused a society to collapse; rather, they would have only amplified previously existing problems in the social fabric. Thus, Diamond concludes that it was the core values and basic convictions of a society which often stood in the way of their ability to break from tradition or convention to be able to respond to new threats or changing times, which would then lead to the collapse of society (Diamond 2005, 432–434). This generally places Diamond in the ecocide school of collapse.

McAnany and Yoffee, responded to this in another recently edited volume, in which they stress that peoples and societies are not so rigid and are able to adapt to changes. No single ruler would have had the power to 'Engineer their own environmental ruin' (McAnany/Yoffee 2010, 9).[9]

This was also noted by Tainter, as he believes that dealing with changes is typically what helps to make a society run properly, effectively, and to maintain growth (Tainter 1988, 50). In other words, societies are not monoliths which simply pass through time never changing; rather, they move, shift, act, and react to changes as peoples, empires, natural catastrophes, and other factors come and go. This has led McAnany and Yoffee to suggest that, rather than focus our study on why societies collapse, we should investigate what makes them resilient (McAnany/Yoffee 2010, 5–10). Faulseit has also noted that resilience needs to be investigated; however, rather than separating the study of collapse from resilience, he states that both are part of the same phenomenon. Thus, they need to be studied together (Faulseit 2016, 4–6).

Another critical part of collapse studies is regeneration. In his volume on collapse and regeneration, Schwartz defines regeneration as 'By regeneration we mean the reappearance of societal complexity (states, cities, etc.) after periods of decentralization, not the reappearance of *specific* complex societies' (Schwartz 2006, 7). He goes on to say that if collapse involves the disintegration of states and systems, regeneration should be 'the reconstruction of the same kinds of institutions and phenomena' (Schwartz 2006, 7). While this is certainly a form of regeneration, this in many ways succumbs to the problem Tainter pointed out of progressivism. Regeneration, when examined from another point of view, can also encompass the development of new ways of life. Thus, the village life which was a crucial part of the Central Highlands in Cisjordan is certainly not a regeneration of a state level society; however, it should be viewed as regeneration, as a region which was not greatly inhabited during the LBA was during the Iron I, likely due to some of the events and shifts which occurred at the end of the LBA. Thus, in the view of this work, regeneration need not be the rise or recovery of a state level society. It is the development of new ways of living and exploiting what may have been a disaster in order to foster recovery, even if this regeneration is dissimilar or less 'advanced' than what came before.

---

9   See for a full discussion McAnany/Yoffee (*ed.*) 2010.

2.4. Types of Collapse

The theories for why societies collapse are numerous; however, many of these theories can fall into some general classifications. Tainter listed eleven general theories on how a society might collapse. Many of these theories are represented in the research on the LBA collapse; thus, I will briefly review them here.

This first theory is 'Resource Depletion either Caused by Man or Climate Change' (Tainter 1988, 44). This is generally viewed as climate changes which cause droughts or societies outstripping the land, and is in general part of the ecocide school of thought (Middleton 2012, 271). One aspect of these theories which is important to this discussion is that it also takes into account the loss of trade networks, external resources, and imported goods, a subject which will be looked at in more depth in the following chapters. One of the assumptions of this theory is that the society which is about to collapse looks on without doing anything while they become ever weaker (Tainter 1988, 44–50). However, as Tainter asks, 'What structural, political, ideological, or economic factors in a society prevented an appropriate response?' (Tainter 1988, 50).

Second is 'New Resources', or that a new and bountiful resource was discovered, and because of this there was less need for critical control of resources. However, this view is generally reserved for less complex societies and does not apply to the LBA collapse (Tainter 1988, 51 f.).

Third is 'Catastrophe' such as plagues, droughts, earthquakes, and volcanoes. However, Tainter believes that, 'As obvious and favored as catastrophe scenarios are, they are among the weakest explanations of collapse' (Tainter 1988, 53). He believes that complex societies have undergone and survived catastrophes without trouble before, and the idea is too simple and does not accommodate the complexities of human society (Tainter 1988, 53).[10]

The fourth theory is 'Insufficient Response to Circumstances'. This idea is that there is a fundamental limitation of sociopolitical and economic systems which prevents a society from making an appropriate response to a new problem, leading to collapse. Thus, this is again a view which looks at societies and empires as monoliths which cannot or will not respond appropriately to changes in their environment, whether that is political, economic, or natural (Tainter 1988, 54–60). However, there is not enough known at this time to say that complex societies are inherently static, incapable of shifting directions, or that they cannot respond to climate, catastrophe, or changes in production (Tainter 1988, 60).

The fifth theory is 'Other Complex Societies', which states the competition between two societies will cause a collapse. While clashing of societies were and ever will be a part of history, there is no evidence to say both competitors will fall from this clash. Rather, one will rise to take over the other (Tainter 1988, 61 f.), much as happened with the Hittites and the kingdom of Mitanni.

The sixth theory is 'Invaders', which is the idea that one society or group of people, typically less advanced, attacks and destroys whole civilisations. It is used as a *deus ex machina* for a given civilisation and it is still very popular in the scholarly literature (Tainter 1988, 62–64).[11] However, as will be seen, this theory is now not as well liked. Tainter says the theory is, 'Standing alone, an acceptable explanation of nothing' (Tainter 1988, 64). He goes on to rename such theories 'Poltergeist models' as, 'Collapse is caused by mysterious trouble makers, whose behavior is inexplicable, and whose very presence is difficult to show' (Tainter 1988, 64).

The seventh theory is 'Conflict/Contradictions/Mismanagement' or that conflicting goal between social classes causes uprisings which bring about the end of the elites and the stratified society. This would fall under class conflict, Marxian contradiction, and elite misbehaviour and mismanagement; however, this theory would mean that the elites of a society completely ignored the needs of the lower classes which they relied on, a sentiment Tainter does not agree with (Tainter 1988,

---

10 For discussion on this see the sections on climate change and earthquake storms.

11 Such as the Sea Peoples, or the barbarians of Drew's theory for collapse.

64–73). He asks why over-taxation or oppression is the cause of some societies to collapse and not others, and he believes that, 'Exploitation is a normal cost of stratification; and bad government is a normal cost of government' (Tainter 1988, 72). He also believes the same can be said of peasant revolts which are usually caused by a disgruntled populace and some faction of the intellectual upper class or military who help to give shape to this dissatisfaction. However, revolutions and revolts of this nature normally do not seek to cause collapse but to replace one regime with another that is more suitable to the populace's needs and wants (Tainter 1988, 73). Thus, while oppression cannot be taken out as a factor in collapse, it does not seem to fit for why a society would collapse.

Tainter's eighth theory is 'Social Dysfunction' which refers to some unknown internal problem which causes collapse; however, this is without evidence to support what that vague cause was (Tainter 1988, 73).

The ninth theory is 'Mystical Factors' which is often associated with the biological analogy of society, both in how it grows and dies (Tainter 1988, 74–86). One of the main problems with this model is its reliance on biological growth analogies, on value judgments, and explanations which reference intangibles things. While we can scientifically measure why living things die, there is no way of doing this for a complex society, as no known controlling mechanisms can be found which cause the birth or death of a society (Tainter 1988, 84). As Cowgill states, these types of theories are, 'prone to invoking the 'operation' of the Law of This or the Principle of That as pseudo-explanations' (Cowgill 1988, 251).

The tenth theory is, 'Chance Concatenation (a series of interconnected things or events) of Events' or, when small chance events all happen at the same time which, when brought together, bring about the end of a society (Tainter 1988, 86 f.). This view has become more popular in recent years as multiple reasons are given for the collapse of a society rather than simply one cause. However, Tainter does not agree with this view, as he believes collapse theory should be able to be generalised to all instance of collapse (Tainter 1988, 86). I would disagree with this view. There are many different reasons and factors why a

society might rise, and these may not have been the same for the people in South America as they were for the people in Mesopotamia. Likewise, there would be different reasons why societies would collapse which would not be the same in one place and time as in another. While some parts of human societies may be generalised, not everything can be put under one theory.

The last theory in Tainter's list is 'Economic Explanations'. Internal economic weaknesses within a society could bring about the downfall of a society (Tainter 1988, 88). In Tainter's view, this would follow the principle of diminishing returns where as a society grows more complex, there will be more government, and more effort and energy will be needed to run this system. However, at some time, a limit will be passed where, when energy is put into the system, lesser and lesser returns will be given. In addition, with increased complexity there is an increase in what is needed to run the system, thus further taxing the larger part of society even more. This would eventually lead to collapse, which Tainter states might be an 'Economic Alternative' to complexity (Tainter 1988, 91–120, 195–198). Again, what may be a catastrophe to the administrators may not be to the bulk of the population (Tainter 1988, 198; see also Tainter 1995).

With this discussion in mind, I turn to the grand theories for the end of the LBA, first with a focus on the regional theories followed by the theories which 'explain' the end of the LBA for the entire Eastern Mediterranean.

2.5. Regional Theories of Collapse

2.5.1. The Fall of Mycenaean Greece

There are a number of reasons cited for the collapse of the Mycenaean world; however, only some of these theories will be presented here.[12] The Mycenaean civilisation developed, flourished, declined, and collapsed, all during the course of

---

12 For a complete examination of these theories see: Middleton 2008; 2010; 2017, 88–102. Some other theories such as earthquake storms, climate change, and the Sea Peoples which have also been used to explain away the 'collapse' will be examined together with the other regions they are said to have affected.

Fig. 2.1.   Map of major sites in the Aegean during the LBA.

the LBA (see *fig. 2.1.*). This collapse of the Mycenae-an palace system at the end of Late Helladic (LH) IIIB and into LH IIIC has been attributed to a va-riety of causes. Such theories for the cause of the collapse range from invaders from the North, such as the mythical Dorians, destroying all that was in their way, to a collapse of the economy by overex-ploitation of the land combined with an overpopu-lation problem (Dickinson 2010, 484 f.).

During LH III, a regional power shift occurred in the Aegean. In the time previous, the Minoan so-ciety ruled over Crete, but by some point in the 14th cent. BC, it appears that mainland Mycenaean peo-ple had taken control over the island economically or possibly even politically, as some Linear B texts suggest (Hallager 2010, 156). This shift appears to have taken place after the second destruction of Knossos, and it is possible that with Mycenae taking control over the island, the administrative features moved to the palaces on the Mycenae-an mainland. The expansion to Crete was not the only territorial takeover which the Mycenaeans

took part in. Their expanding influence during LH IIIA–B took them north to Mount Olympus, west to Epirus, and east to the Dodecanese (Shel-ton 2010, 143). However, the physical marks of the Mycenaeans travelled far further than these boundaries, as Mycenaean juglets, mainly small containers for oils or other liquids, travelled far and wide. While it is uncertain whether there was direct trade, trade down the line, or other forms of exchange, what is clear is that Mycenaean pottery reached as far as Egypt into Nubia, to Cyprus, the Levant, and has even been found as far away as Spain (Dickinson 1994, 252). The palaces at Myce-nae, Tiryns, Thebes, and Pylos and the Linear B tablets at Pylos and Knossos illustrate the power held by the Mycenaeans during the 14th and 13th cent. BC (Middleton 2017, 88).[13] The 'collapse' of

---

13   However, as Middleton notes, there is not one 'Myce-naean culture as not all of the material culture or architec-tural practices were the same in every region of mainland Greece (Middleton 2017, 89).

the Mycenaean world is marked by a series of destruction events in the decades around 1200 BC, bringing an end to LH IIIB. Along with these destruction events, there are fewer archeologically visible settlements, and subsequently, Linear B ceased to be used. The construction of monumental architecture also stopped along with fresco painting and ivory working (Middleton 2017, 90).

One of the older models for the collapse of the Mycenaean Palace society is the overspecialisation of the palace economy. Renfrew describes this model, that when an early state society like the Mycenaean Palace society grows too quickly, the governing system will become top-heavy. He goes on to say that within this development, the early state would have focused on specialised activities such as cash crops like olive oil or wine. However, this specialisation would have gone too far, and the society would have overspecialised, creating a system that was highly dependent on this produce (Renfrew 1987, 133 f.). Renfrew believes that during the growth of the Mycenaean Palace society, they in fact did overspecialise, and that it could not withstand any small changes in circumstance, whether it was a series of bad harvests, or if the fertility of the land began to fail. Once this system began to fail, the central authority would have lost its control even though it formally had power and prestige, and with this loss, it no longer would have had the power to support the craft specialists or farmers who specialised in crops like wine or olive oil. This would have led both the crafts people and farmers to look for another way to feed themselves, which would have caused them to switch to subsistence farming. Thus, began the 'Dark Age' in Greece (Renfrew 1987, 133–135).

Sanders agrees with this model, as she believes that Greece had an overspecialised economy, with too great a dependence on a central administration, the necessity for safe and efficient transportation and communication, and overpopulation which had exhausted the land, diminishing the growing potential. She goes on to say that the Mycenaean palace society eventually fell because this overspecialisation was coupled with a weakening economy that could not sustain itself. The political system fell apart, in part because of natural disasters that broke up trade, and internal pressures which were reinforced and made worse

by hostile invaders from the North. Some of the destruction was caused by these northern invaders, the rest resulting from internal wars between states. Finally, after several generations, Greece eventually collapsed and fell into the 'Dark Age' (Sandars 1987, 180–197). However, Dickinson has recently noted that the basis for both of these theories is unfounded. When examining the textual evidence, there does not appear to be any overspecialisation, at least not for all parts of society. While the palace might have specialised in certain cash crops or activities, there is no evidence to say that everyone was forced into this system. Other wealthy landowners could have controlled and planted what they wished to, and regular farmers could also plant what they wished; there is nothing in the texts to suggest that the palace had a heavy-handed control over every person living within the area they had influence over (Dickinson 2010, 487 f.).

Betancourt's model for the collapse of the Aegean postulates that the economy of the palatial society was fragile and in a precarious balance. The growth of the population meant the palace had ever to tighten their control on the land and production; however, eventually, there were too many people and not enough food. A late snow, or hail, or other poor climactic conditions lasting for two years or more might have caused a chain of events to unfold. These events caused people to leave the Aegean in search of better land elsewhere, and along the way, they disrupted trade and rose up against the palace, leaving a swathe of destruction in their wake. This then led to a system collapse where the palaces were no longer able to rebuild after their administrative system had crumbled (Betancourt 2000, 300). Shelton presents a similar course of events. During LH IIIB, there were ever increasing social problems putting stress on the palace: the palace then started to tighten their control over the economy, and when isolated destruction events occurred, this only put more stress on the society, eventually causing it to break (Shelton 2010, 145). However, Dickinson casts doubt on this story. According to Dickinson, there is no clear evidence of overpopulation or overexploitation of the land. Additionally, the palace had the ability to store food in times of bad climate, as they knew there could have been a poor

growing season (Dickinson 2010, 488). While skeletal analysis shows a common undernourishment, this can be expected in a hostile environment based on farming (Dickinson 1994, 85). Moreover, if there was a peasant uprising that destroyed the palatial centres, then where are the victors, and why, if having taken control, did they abandon their land and migrate somewhere else? (Dickinson 2010, 488).

Invasion theories have also been popular in the past, whether it was the 'Sea Peoples', Dorians, or some unnamed group, these armies or marauding bands of raiders have been blamed for the collapse. However, there is no evidence of invading people, or new settlers, and the question Dickinson asks is why the invaders destroyed the cities when it would be more reasonable to leave them intact, as in previous invasions (Dickinson 2010). Also, the whole process of destruction cannot be linked to one period of time, and it most likely took twenty to thirty years for all of these destruction events to take place (Dickinson 2010, 487). Thus, if it were an invading army, why did it take them thirty years to destroy all of the palaces? Another prime mover associated with the collapse of the Mycenaean world are earthquakes: however, while some excavators at Mycenae, Midea, and Tiryns claim they were destroyed by earthquakes, this does not explain the collapse (French 1998, 2–4; Maran 2009, 242). While earthquakes might have caused some of the destruction, it does not explain why the collapse occurred as at other times, such as on Crete, where the society was able to build itself anew after an earthquake event (Dickinson 2010, 488; Middleton 2017, 93 f.). It also fails to explain how the other cities were destroyed, and the decrease in the population.

Maran paints a different picture of the events surrounding the collapse in the Argolid. He points out that the palaces were still building and growing right on the eve of the collapse, and in his view, they did not see the collapse coming. However, past warfare and costly building projects had put their toll on the society. More and more people were being put to work for the military or for building projects and being taken away from agricultural production, leaving the villages which supported the place without many people to work. This created a growing strain on the villages,

placing the fate of the society in the balance. What pushed it into destruction was not the burning of the palaces, but of the villages, which would have broken the support network of the palaces, leading to no support going to or from the palace and causing the swift implosion of the political order. This then led to armed conflicts, which spread throughout the rest of the Aegean world and eventually affected the entire Near East (Maran 2009, 255). However, this theory is not without its flaws, as I have already pointed out that the palace and villages were at least to some degree able to support themselves. Another problem is exactly what happened in the villages and the rural lands. Most of the archaeological work has focused on the palaces and not on the *hinterland*, leaving our knowledge of what really happened there up to debate and guesses (Shelton 2010, 144; Dickinson 1994, 78).

The most nuanced view of the 'collapse' comes from Dickinson, who believes it is easier to describe the collapse than to say how it happened. He states, 'It is a waste of effort to try and isolate a single cause or prime mover for the Collapse… [as] it seems very likely that the course of events was too complicated to be reconstructed without the help of written documents' (Dickinson 2010, 489). Dickinson points out that the construction of fortifications is both a sign of tension but also that these walls would have taken time and a large labour force to build. Thus, the immediate nature of the threat does not appear to be true, and the collapse must have come by surprise. On the other hand, as Maran points out, the walls could also have been symbolic messages of the inapproachability and unlimited power of the palace (Maran 2009, 248). The fortifications were most likely in response to increasing pressures between city states who were struggling over the control of resources (Dickinson 2010, 485; 1994, 86). While there might have been economic struggles, to what extent these reached is unknown, as the Pylos documents from LH IIIB do not give the impression of the palace scraping away at the people for tribute and taxation (Dickinson 1994, 86). Dickinson tentatively tells the story of the collapse that, while facing increasing strain with other city states during LH IIIB, states were brought to a breaking point by war, earthquakes, crop failure or some other

factor which brought the society down. However, he does not say this is what happened – rather, it is only a possible scenario built from what we know at the moment (Dickinson 2010, 489).

Dickinson is likely correct that there was no one reason for the collapse, and it is too difficult to reconstruct the picture of what happened. Returning to the question of **what do we know and how do we know it**, the answer for the Aegean demonstrates why Dickinson does not see a reconstruction of the events possible from the available data. One of the crucial factors is the lack of work and knowledge about the villages and *hinterlands* which might have been a major part of the collapse. Also, with only Pylos producing enough documents to know about the city during the end of the LBA, how the economy worked at the time or which pressures were being put on the people is left to assumptions based on one set of texts. It is not even known exactly if there was a single Mycenaean kingdom ruled over by a king at Mycenae, or if it was a set of independent city states, or a Delian League, with 'Members contributing money, men, and ships to a common cause such as overseas trade or warfare' (Beckman/Bryce/Cline 2011, 5 f.). Thus, there are a number of crucial pieces of information which are still lacking, a problem shared with every region at the end of the LBA. Moreover, while the terms 'collapse' and 'Dark Age' have been used to describe LH IIIC and the following ages until the Archaic Period, this view, too, has changed in recent years, leaving the Dark Ages not as dark as once imagined.

LH IIIC has been characterised by the loss of the Linear B writing system, a decrease in the population, the end of the palaces, the loss of high quality art and crafts, an absence of large scale building projects, and the lack of imported luxury goods. There was the loss of the Mycenaean koine as local styles developed, any rulers that did exist in this time were not very distinct from the rest of the population, and there was a chronic instability which lasted throughout the Post Palatial Period (Beckman/Bryce/Cline 2011, 486; Shelton 2010, 146). While much of this is visible in the archaeological record, there is also some evidence of growth such as at Tiryns and Lefkandi. It would seem logical that this growth took place, as instead of fleeing to

archaeologically invisible hamlets, some parts of the society fled to these centres, causing them to regenerate, though not in the same way as before (Lemos 2006, 87; Dickinson 2010, 486 f.). However, this collapse might not have been bad for everyone, as farmers could have turned to subsistence farming rather than focusing on producing wine or other commodities (Dickinson 1994, 88; van de Mieroop 2010, 247–249). Also, with the lack of a palace, the people would not have been taxed, or not to the same extent, and they would not have been conscripted into corvee or into military services. Thus, while the 'collapse' may have been a loss for the palace, it might have been a benefit for the people and thus, from their perspective, not a 'collapse' at all.

Small states that, while most say the culture of the Aegean fell backwards, the people simply used what they had, differently. They would have retained many of the elements of the past culture, but there would have also been change, such as in the local styles of pottery rather than in the Mycenaean *koine* (Small 1998, 283). In his view, the past models of chiefdoms and rulers did not die with the LBA, rather, they continued on a much smaller scale. Palaces would have been able to support themselves and their works, and controlled their own land, but nothing more (Small 1998, 286–289). However, much of what we know about this period comes from tombs, and dating is difficult, as pottery styles became more localised and thus more difficult to correlate across regions (Jung 2010, 174 f.). Nevertheless, as Middleton sums up, 'Whatever caused the palace states to disappear, the collapse did not mean the end of Mycenaean civilisation, nor the disappearance of people from Greece – Mycenaean style pottery, for example, continued to be made for more than a century, and it influenced the earliest 'Greek' styles ... So, there were still people, buildings, settlements, and Mycenaean pottery in the period after the collapse of the palace states' (Middleton 2017, 98–100).

2.5.2. The End of the Hittite Empire

The story of the Hittite collapse is in some ways more clear than that of the Aegean. For the Hittites, there is an abundance of names of rulers,

both for the Hittites kings but also their vassal states. Texts tell of the history and the great acts of kings, the treaties they signed, the wars they fought, the troubles they faced, and much more. However, this wealth of information is also the great weakness in trying to understand the Hittite collapse. As Seeher pointed out recently, what we know about the collapse of the Hittite empire comes from a long refined understanding of texts, and the story of the collapse is based almost entirely on these texts. He goes on to say that little is known about this time from archaeological excavations, and thus, there is very little physical evidence that speaks of the collapse of the Hittites (Seeher 2011, 378 f.). Kealhofer and Grave also reveal that our understanding of the following Iron I in the Central Anatolian Plateau, the former base of the Hittite empire, is relatively unknown, as there is a scarcity of excavated sites from this time. This, in conjunction with the lack of historical documentation, means there is a gap in our understanding, leaving many questions, which cannot be answered at this time (Kealhofer/Grave 2011, 415). Thus, with this in mind, I will focus on the last rulers of the Hittite Empire and some of the problems, which might have led up to the 'collapse' of the Hittite Empire.

The story of the last years of the Hittite empire is based on little information, and many assumptions taken from scant historical texts. After the coup brought about by Hattusili III over Urhi-Teshub (Bryce 1998, 251–288; Beal 2011, 592 f.), Tudhaliya IV inherited a country on the eve of a disaster. However, upon taking the throne, Tudhaliya tried to secure his position within Hattusa by granting favours to other members of the royal family. He granted them power and reinstated them to formally held positions all in the hope that this would keep his hold on the throne secure (Bryce 1998, 334). What happens next is unclear. According to a treaty inscribed in bronze, Tudhaliya IV made a pact with his cousin Kurunta, the king of the Hittite subkingdom of Tarhuntassa in Southern Anatolia. Exactly what went on between these two is uncertain, but several bullae were found that have the name of Kurunta with the royal designators as he called himself Great King (Hawkins 1994, 91). This title was only ever to be used by one ruler at any given time, and there

could not have been two Great Kings. Exactly what transpired is still up for debate. Hawkins believes that at least for a short period of time, Kurunta seized the throne in a coup until at some point, Tudhaliya IV was able to reclaim the throne, as his children ruled after him (Hawkins 1994, 91). Collins believes that there were perhaps two Great Kings in Anatolia at the time, with Tudhaliya IV in the North sharing the title with Kurunta in the South (Collins 2008, 70 f.). Singer does not believe there was a military coup at all; rather, Kurunta and Tudhaliya simply shared the title (Singer 2000, 26). However, Beal places this event after the death of Tudhaliya IV at the beginning of Suppiluliuma's II reign, changing the entire understanding of how these events would have played out (Beal 2011, 594). Nonetheless, as Bryce points out, until more information about the events is found, we can only be certain that there was political unrest during the last decades of the Hittite empire (Bryce 1998, 354).

Besides a possible coup and threats from the royal family, Tudhaliya IV also faced danger from the expanding power of the Assyrians. Tukulti-Ninurta I attacked the Hurrian lands to the north west of Assyria, which were under the protection of the Hittite hegemony. However, Tukulti-Ninurta I continued taking the Subari Lands including all the majors passes into Anatolia. In an attempt to try and stop Tukulti-Ninurta, Tudhaliya fought against him at Nihriya; however, he lost and was forced to retreat (Collins 2008, 67 f.). Tudhaliya also faced dangers in the west as uprisings were an ever-occurring problem, and it appears as if he had to fight against some faction of Ahhiyawa in taking back the city of Millanwanda; however, the exact outcome of this is unclear (Bryce 2003a, 70 f.). He claims to have had victory in the Lukka lands in south-western Anatolia, but if he did or not is unknown, and all that is known is that this area was another problem his son Suppiluliuma II would inherit (Collins 2008, 69).

Other events in Tudhaliya's reign are similarly unclear, and those outside of the Hittite records appear to simply be false. One such story is that Tudhaliya claims to have taken control over Alasiya (Cyprus) and forced them to sign a subordination treaty. It is proposed that, perhaps feeling sandwiched in between Ahhiyawa and Assyria,

Tudhaliya took ships from Ugarit and Amurru and launched an attack on the island to gain control over its resources and trade networks, leaving the island with pro-Hittite regime (Collins 2008, 69; Bryce 1998, 356–358; Beal 2011, 294). However, this historical reconstruction is lacking. There is no archaeological evidence from Cyprus to say there was ever a Hittite regime on the island (Cadogan 1998, 12; Iacovou 2013, 588). Moreover, to believe this story, one has to also accept that the Hittites, a land-based people, took naval forces from Ugarit, who were loath to give military support, and sailed to Cyprus, took it over, and left leaving no evidence behind. Perhaps Tudhaliya fought groups from Cyprus; however, his account must be taken with caution as there is insufficient archaeological or historical evidence to say Cyprus was ever a vassal of the Hittite empire.

One notable aspect of Tudhaliya's reign is his expansion of the city of Hattusa. It is unknown when or by whom, but it appears as if part of Hattusa was burned either during a coup, or at some other time for other reasons. Because of this, Tudhaliya set about to rebuild the city and expanded it to its greatest size in all its history, making it one of the great cities of the ancient Near East. Tudhaliya rebuilt the Yazilikaya rock sanctuary, and built the great 'King's Gate', so named for its statutory. However, even with all this, the Hittite empire was about to collapse. Problems again appeared in the short-lived reign of the next king Arnuwanda III (ca. 1210 BC). While his father seems to have been at least in some ways a resilient king, Arnuwanda III had such a short reign that he left no heir and also no archival or monumental records (Collins 2008, 72). It is not known how Arnuwanda died; it is possible he died of natural causes, but this is far from certain (Beal 2011, 594). With the death of Arnuwanda III, his brother Suppiluliuma II was left to assume control (Bryce 1998, 361).

Suppiluliuma II inherited a land fraught with problems both within and without. Exactly what happened, though, during the reign of Suppiluliuma II is up to debate, as there are very few tablets from his reign. What has been found is again subject to doubt, such as Suppiluliuma's defeat against Alasiya. It is said he fought three battles against Alasiya, the first two being on sea and the last on land; however, the validity of this is far from certain. Collins and Singer both place the last land battle on Hittite soil, but they also give the victory to Suppiluliuma; however, Singer believes it was the 'Sea Peoples' who attacked and not the people of Alasiya (Collins 2008, 73; Singer 2000, 27). Bryce is not certain who it was who attacked, but he does place the victory with the Hittites according to the documentation (Bryce 1998, 366). However, Yakar doubts the validity of the Hittite victory, as they had already lost much of their power over the northeastern Mediterranean basin (Yakar 2006, 37). Who attacked and how the battle took place is unknown.

Likewise, Suppiluliuma's campaign and victory in the Lukka lands have also been called into question, whether he actually did retake the area and completely defeated the enemy or if it remained an uncontrollable danger to the empire (Yakar 2006, 37). Suppiluliuma is also said to have fought and retaken Tarhuntassa, which was possibly lost to the empire during the reign of Tudhaliya IV. He retook the important port of Ura, keeping the link to Syria and Egypt open (Bryce 1998, 364; Collins 2008, 73; Hawkins 1994, 92). Another notable part of Suppiluliuma's II reign is that Ugarit refused to help both Hattusa and Carchemish, withholding the supply of both food and military support and demonstrating the weakening control the Hittites had over their vassal states.

The exact date for the end of the empire is not known, but likely some time close to 1200 BC, Hattusa was abandoned and partially burned, the Hittite cuneiform writing was lost, and the empire never rose again (Gates 2011, 405). Beal believes this was a result, in part, of the influence of the 'Sea Peoples'. His version of the story sees Suppiluliuma II trying to defend the long coast from an invading force that was moving along the sea and perhaps the land. However, while fighting at the coast, the Kaska in the north attacked inland. As he was losing the battle at the coast because of the mass invasion, Suppiluliuma was unable to break away from the fighting to defend his heartland, leaving the country overrun by barbarians from the north and from the sea (Beal 2011, 595). Yakar takes a similar approach, that 'Sea Peoples', and perhaps other unnamed outside sources, were putting military pressures on the coast, which was coupled with the unstable and weak political

structure and led to a domino effect, bringing about the end of the empire (Yakar 2006, 47 f.). Yakar also argues that there was a terrible famine at the time, as Egypt had been sending grain since the reign of Hattusili III, and Suppiluliuma asked Ugarit to supply grain (Yakar 2006, 38), stating, 'My Majesty myself am perishing' (RS 18.147; Beal 2011, 594). This then only added to the problems the country faced and put extra stress on the people.

Collins also points to famine as one of the driving forces behind the 'collapse'. He believes the western part of the empire faced droughts, which created social tensions. These tensions were magnified by the political situation, as the people could not leave their regions, bound to stay according to the vassal treaties (Collins 2008, 76). Heavy taxation as was in effect in all the land. In Emar, people had to sell their children to pay their taxes to Hattusa, as the required tribute varied between 700 to 2000 shekels of gold (Collins 2008, 76; Singer 2000, 24). With these factors, pressure built in the west until the political system could no longer restrain it, and the dam broke as people moved by land and sea to find food and better homes and could not be stopped, as the local authorities no longer had the power to hold back the tide of people. These groups ravaged the land, and the Kaska took this opportunity and burned Hattusa (Collins 2008, 76–78). While these accounts of the 'collapse' of the Hittite empire share certain similarities, there are also those who doubt these stories.

Beal notes that while there are letters about the need for grain, he doubts that this is what brought the empire down, as the Hittites had gone through famines before and there is no given reason why this one was different enough to bring about the end of the empire (Beal 2011, 594 f.). Likewise, Bryce doubts the drought theory, saying there is no real evidence for a drought or famine. This is not to say that droughts were not a problem for the Hittites, but that they were not as bad or prolonged as generally described in the scholarly literature (Bryce 1998, 375). If there was a famine in the land, Bryce sees it more as a man-made problem rather than an act of nature. During the reconstruction and expansion of Hattusa under Tudhaliya IV, human resources would have been taken away from the military and agricultural

production. As long as grain could be brought from Syria, the Southern Levant, or Egypt, there would have been no problem with food even if there was a drought. However, if the trade routes were disrupted either by pirates or by hostile coastal cities, this would mean the grain would have been cut off, leaving the country in a dire situation. Bryce sees this as a possible situation helped along by marauders from the West helping to speed up the process of collapse (Bryce 2002, 255; 1998, 373–375), but he also points out that there was not one single or most important factor either internal or external which brought about the end of the empire. He believes that there must have been some kind of cause or events that affected Greece, Anatolia, and the Near East, but what it was, how it happened, or what the cause of it was is unknown (Bryce 1998, 378).

Outside of these theories, though, there are other problems, such as who destroyed Hattusa and how the city fell. Yakar and Seeher both note that the destruction and last days of Hattusa are far more complicated than once thought. Yakar explains that during the last days of Hattusa, perhaps during the time of Suppiluliuma II, a large number of temples in the Upper City were turned into habitation areas. These former temples were transformed into areas with metal workshops, storage facilities, and they have characteristic domestic qualities. Houses were built on unoccupied ground and also in temple compounds. Yakar sees this as evidence for the political deterioration of the Hittite empire and that vast numbers of people were fleeing to the city in front of the Kaska attack (Yakar 1993, 12). However, it should be stated, that from the archaeological and historical evidence, there is no clear culprit(s) for who destroyed Hattusa. Seeher has also argued that the destruction of the buildings at Hattusa did not take place all at the same time, that the buildings had already been abandoned before they were put to the torch and that the city was largely dilapidated. He believes that all the furniture, tools, equipment, and anything else that could be removed was loaded onto carts and taken out of the city by Suppiluliuma II before the city was destroyed, as all of these things are missing from the archaeological record (Seeher 2001, 623–634). Collins states that the citadel, many of the temples, and areas of fortification

including the Sphinx Gate were all burnt, but Genz points out that the ceremonial areas, public buildings, and fortifications are the only parts of the city that were burned (Collins 2008, 80; Genz 2013, 470–472). He also goes on to say there is no evidence the city was destroyed by the 'Sea Peoples', and it was most likely the result of an internal struggle (Genz 2013, 477). What this evidence indicates is that, firstly, Hattusa has clear evidence of crisis architecture (Driessen 1995, 65–76; Zuckerman 2007, 3 f.), and secondly that we must consider other possibilities than that the city was destroyed by invaders be they the Kaska or others. The specific destruction of the monumental or religious structures at Hattusa suggest that this was a kind of termination ritual (Zuckerman 2007, 5–7). However, while it may be that the Kaska or others destroyed these symbols of Hittite power, it cannot be taken out of the realm of possibility that the Hittites themselves could have burned these structures to keep them out of the hands of invaders.

With all this being said, there is again no clear answer why the Hittite Empire fell. It is again likely a combination of factors, as Middleton has suggested (Middleton 2017, 113). However, there are still several questions, which remain unanswered, such as, what was the fate of Suppiluliuma II? He seemingly disappears, and as Bryce suggests, if he abandoned Hattusa, he must have had a destination in mind, perhaps in the southeast of Anatolia or northern Syria (Bryce 2012, 1, 12). Yet, it is not known whether Suppiluliuma II became part of the Neo-Hittites, whether he lived in exile, or whether he was killed in a battle. Thus, this crucial piece of information about the end of the royal household remains a mystery, much as the exact factors in the 'collapse' of the Hittites. Nevertheless, as Yakar points out, the end of the empire was not sudden and was part of a longer process (Yakar 2006, 49).

Beal notes that with the loss of the written Hittite language in the Anatolian Plateau, possibly around 1180 BC, there is no documentary proof to say what happened in this region (Beal 2011, 596). In addition, little is known archaeologically about what happened on the Anatolian Plateau (Kealhofer/Grave 2011, 415). Thus, the stories surrounding the once great Hittite heartland and how

it came to its final end, or even what happened in the so called Dark Age to follow, is unclear and awaits further investigation. Some of what we know comes from the lack of material such as the apparent 'loss' of writing on the Anatolian Plateau, and there is also an apparent (Beal 2011, 596; Sams 2011, 604) halt in the mass produced professional Hittite pottery. Administration seems to disappear from the Plateau but exactly what happened surrounding this is uncertain. In some of the villages and towns there appears to be some evidence of a fiery destruction, but from the little evidence it is not clear if this came from a conflagration, a single event, or even a single period (Seeher 2011, 379).

What must not be overemphasised, though, is the loss of life, as only a small amount of the Hittite world was actually destroyed (Bryce 1998, 382), and a massive permanent depopulation of entire regions in Anatolia does not seem to be a likely scenario. As Yakar points out, the smaller independent villages who were fairly self-sufficient, relying on mixed farming for their economy, would have been less affected by the loss of the administrative centres (Yakar 1993, 3). Again, much as in the Aegean, this could very well be a case where 'collapse' was only seen as a bad turn of events in the long run for those in power and not for those of the lower levels of society. If it is true that people were being taken away from farming to work on palaces, then the 'collapse' would have allowed them to be free from taxation and conscripted labour. Thus, how the people in the villages viewed these turn of events might have been more positive. With that said, the Hittites did not come to a complete 'collapse', as Carchemish was able to take advantage of the situation.

Kuzi-Teshub, the son of the last known viceroy of Carchemish Talmi-Teshub, grasped the opportunity to take the title of Great King for himself. While in Egyptian records, Carchemish is listed as having been, 'cut off' which has been commonly assumed to mean destroyed by the 'Sea Peoples', there is no evidence that the city was destroyed, as its architecture and royal house remained intact (Collins 2008, 80; Beal 2011, 596; Hawkins 1994, 92). While his kingdom was vastly reduced, the rise of Carchemish is evidence that what might disadvantage one can be an opportunity for another. In this case, the 'collapse' of the Hittite Empire and

the fall of Hattusa granted Kuzi-Teshub the opportunity to be the king of the first of the Neo-Hittite kingdoms (see Bryce 2012). There also appears to have been another king or some sort of ruler in Tarhuntassa with perhaps strong Luwian ties (Hawkins 1994, 93; Bryce 1998, 383). Thus, from this, it does not appear as if the empire completely disappeared nor was the situation as disastrous as normally described. Elements of the empire remained and changed with the times, both in its Eastern and Western parts. This more nuanced view sees a lack of evidence, which makes it difficult to find the cause or causes for the collapse of the empire, and it also points out that the collapse was only partial, and perhaps even benefited some sections of society.

2.5.3. Ugarit January 21st 1192 BC

The history of Ugarit at the end of the LBA is closely tied to the Hittites. While being a vassal state of the Hittite empire, it was also a fully-fledged state of its own (Yon 1992a, 112). It held an important position within interregional exchange both north to south and east to west, exchanging with Egypt, Mesopotamia, and bringing goods from Mycenae and Crete (Yon 1992a, 112 f.).[14] While Ugarit's economy seems to have been strong, the same cannot be said of its military (Vita 1999, 493; Yon 2006, 21). It also appears Ugarit had no real naval forces, and while it has been estimated that the city had a fleet of 150 trading vessels, how these could have been used in warfare other than in moving men from one place to another is uncertain (Raban 1988, 262; Vita 1999, 497; Astour 1965, 256). However, the army continued to grow weaker, and while it was able to manage the area of its kingdom, it does not appear that it would have been prepared for any major war, which some have suggested helped to lead to its demise (see *fig. 2.2.*).

The 25 or 30 years of Ammurapi III's reign, the last king of Ugarit, are masked in mystery

and conjecture, much the same as the final years were for the Hittites. While Ammurapi remained under a vassal treaty to the Hittite king, during his reign it does not appear from the texts that he fulfilled many of his obligations. A letter between Merneptah king of Egypt and Ugarit explains how Merneptah was unable to send the sculptures the king of Ugarit had requested; however, with the letter he also sent luxury goods to the king of Ugarit. It demonstrates that Ugarit in its final years was taking independent political action with another foreign power (Singer 1999, 711; see also Morris 2015b).

Another aspect of Ugarit's fraying ties with the Hittites was their refusal to supply grain to the Hittites. While grain shortages in Hatti go back to the reign of Hattusili III, the problem in both Anatolia and Ugarit appears to be worse at the close of the 13th cent. Merneptah boasts that after having sent grain to Anatolia, he 'caused grain to be taken in ships, to keep alive the land of Hatti' (KRI IV 5,3; Singer 1999, 715). There was also a possible famine in Ugarit as well. In an Akkadian letter found at Aphek from ca. 1230 BC, the governor of Ugarit Takuhlinu wrote to Haya the Egyptian governor of Canaan asking for 250 *parisu* (ca. 15t) of grain to be paid in silver. This relatively small amount of grain paid for at great expense demonstrates the desperate situation they may have been in, as this grain was transported up the coast and then later to ports in Southern Anatolia (Singer 1999, 716). However, when Suppiluliuma II, or an official under him, demanded a vital grain shipment from Ammurapi, calling it a matter of 'Death or life', Ammurapi responded with an excuse by saying there was no food in his land (Singer 1999, 716 f.; Beal 2011, 594). Whether there was a famine in Ugarit, and if there was, to what extent it neared the scale of the situation in Anatolia, is unclear. There is a letter found in the House of Urtenu from an official located somewhere within the land of Ugarit to the king, stating, 'The gates of the house are sealed. Since there is famine in your house, we shall starve to death. If you do not hasten to come we shall starve. A living soul of your country will you no longer see' (RS 34.152; Singer 1999, 719). However, whether these statements are over exaggerated or not is unknown, as is who sent this letter and exactly to whom it was sent.

---

14 However, as Bell notes, there is doubt if Ugarit ever dealt directly with Mycenae or if they simply had contact with Cyprus who had contact with Mycenae (Bell 2009, 34). In addition to this, Ugarit has not been found in any Linear B tablets (Yasur-Landau 2010b, 836).
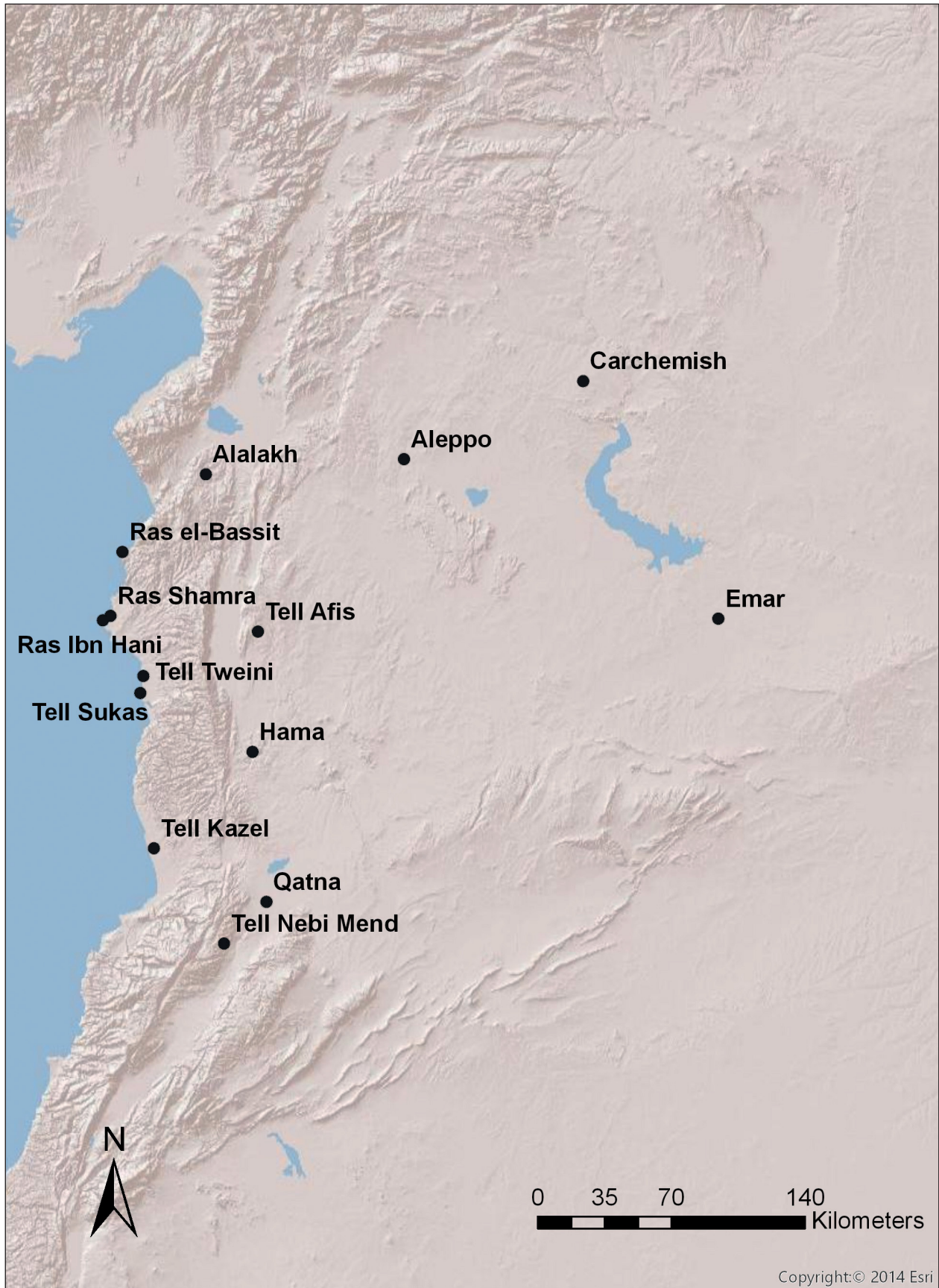
Fig. 2.2.   Map of major sites in Syria during the LBA.

Ugarit too failed to send military assistance when it was asked for by the Hitties (Yon 1992a, 114). When asked repeatedly to send military assistance by either Hattusa or Carchemish, Ammurapi of Ugarit refused to send any men or claimed that his chariotry were in poor shape and his horses were famished. This was an ever-present problem between Ugarit and Carchemish; however, in these final years it came to a head as the king of Carchemish accused Ugarit of not sending their best mariyannu troops. The king of Ugarit replied by saying, 'Is the Sun involved? The Sun is not, and therefore it is all right for me to keep them back' (Singer 1999, 723). This seems to indicate that during the final years Ugarit was only willing to take orders from the Sun or King of Hatti and not from the lowly viceroy of Carchemish. In a display of its weakened state, the only thing Carchemish could threaten Ugarit with was a trail before the Great King of Hatti, and if this ever happened is unknown (Singer 1999, 724).[15] Thus, when it is claimed that Ugarit sent ships to help in a military venture to retake Alasiya during the last years of the Hittite Empire, from these texts, it seems highly unlikely Ugarit would have sent its ships since it was loath to help the Hittites.

The final years of Ugarit indicate changes were occurring in the city of Ras Shamra. There appears to be an increased focus on the king and his palace, which brought more people in from the countryside to help run his affairs. The city apparently grew in population, perhaps becoming overpopulated, as houses built in the early part of the 13th cent. were renovated and divided into smaller units in order to accommodate a population influx. Goods were still being traded and exchanged, and from the textual information it appears as if the elites of the city were going about their normal business even when fighting was occuring towards the north in Mukis (Yon 1992a, 114 f.; Singer 1999, 726). However, at some point in the last fifty years Ugarit existed, there may have been attacks on the city. In a letter to the king of Alasiya, Ammurapi says:

'My father, behold, the enemy's ships came (here); my cities (?) were burned, and they did evil things in my country. Does not my father know that all my troops and chariots (?) are in the Hittite country, and all my ships are in the land of Lycia? Thus, the country is abandoned to itself. May my father know it: the seven ships of the enemy that came here inflicted much damage upon us' (RS 20.238; Singer 1999, 720).

These seven ships brought perhaps 200 fighting men, and it is not known if they would have been able to do much harm to the city (Yakar 2006, 38; Singer 1999, 720). Exactly who this threat was, though, is unknown and a hotly debated topic, as they are often believed to be the 'Sea Peoples'. Ugarit should have been able to see any enemy attack coming from the sea, as two tall temple towers would have allowed them to see far out into the Mediterranean for any incoming attack. Thus, they should have been able to have been prepared at least somewhat in advance. However, in his letter to the king of Alasiya, Ammurapi clams that his navy is fighting in the Lukka lands and his army is in Hatti leaving his homeland undefended against this threat (Yon 1992a, 119). However, this story is most likely not true, as from the previous occasions in which Ammurapi refused to send military support to the Hittites, it seems unlikely he would send it now in the face of danger, or if he did, that he would not keep the best forces to himself (Singer 1999, 720 f.).

The textual story of the fall ends with these dire pleas, and they were once thought to have been written as the city was under attack, as they were found inside of an oven, which gave them the name of the Oven Tablets. Thus, in a desperate bid for help, the king wrote letters and tried to stave off the attack, but he was unsuccessful and his cries for help were left to bake in the oven. However, this story is not true, as evidenced by the archaeology. The oven, which the tablets were found in, was built by squatters after the city was destroyed. The tablets themselves most likely fell from an upper floor, breaking apart. Some of the tablet fragments from the oven joined with other fragments found several meters away, thus showing the tablets were not present in the oven on the

---

15   See RS 34.143, KTU 2.33; Singer 1999, 723–725.

eve of destruction. However, this brings about its own problem, as the date for the tablets is now less clear and it is not certain when they were written or how long after they were written that the city fell (Singer 1999, 704 f.; Yon 1992a, 119). Moreover, if one believes that Ammurapi sent his men to help the Hittites, this would indicate that the texts were not from the final years of the city. Hattusa was likely already abandoned years before Ugarit was abandoned in ca. 1185 BC. Thus, it may be the case that these letters do not date to the final days of the city, but perhaps some time before (see Knapp/Manning 2016, 118–120).

The real evidence for the city's demise comes from the archaeological excavations at Ras Shamra. Throughout the city there are signs of destruction from burned plaster, fallen roofs, burned brick hardened by fire, heaps of ash, and collapsed walls found in the palace and residential areas (Yon 1992a, 117). There are apparent signs of fighting, as arrowheads were found in the city and not in orderly piles as if they were stocks of weapons. Arrowheads were found in houses and streets, 25 were found in one area, the Centra de la Villa, and another 30 were found in the Ville Sud (Yon 1992a, 117). However, it is not clear if there was only one conflagration, as there is some evidence, which seems to point to multiple events (Luciani 2014, 510). There does seem to be evidence of flight from the city, as in the Villa Sud there was a stash of gold and bronze with the gods El, Baal, and a bull found neatly put away for safe keeping. It is unclear if the people suddenly left leaving their things as they were, or were caught unawares. However, what is clear is that some parts of the city were burned, and it appears it was also looted, as furnishings were found still in place, but nothing of value was left except that which was hidden away (Yon 1992a, 117 f.; Singer 1999, 730). The nearby port town Ras Ibn Hani was also destroyed in a fire, but it appears as if the town was more neatly evacuated than Ras Shamra, perhaps going to the capital for safety or fleeing inland (Yon 1992a, 118).

Many of the theories for the 'collapse' of Ugarit are centred on the 'Sea Peoples' or violent invasions given the final destruction of the city (Yon 1992a, 120). Klengel suggests that an earthquake may have altered the tectonic structure of the region, particularly in the harbour, which would have deprived the city of its livelihood (Klengel 1992, 151). However, there is little evidence to suggest a massive earthquake hit the city before its eventual abandonment (Singer 1999, 730). Dietrich and Loretz too proposed a natural phenomenon for the demise of the city. According to their theory for the flight of the people from Ugarit, on January the 21st of 1192 BC a solar eclipse took place over Ugarit, which the people of Ugarit took as a bad omen of either a disaster or perhaps an attack, causing the people to flee the city (Dietrich/Loretz 2002, 68–72). Nevertheless, it is highly unlikely that a known celestial event would have been able to cause enough panic for the city to be abandoned wholesale, even with a background of political troubles. It is a highly unlikely answer for the end of Ugarit.

Halayqa does not believe that Ugarit fell because of a heavy battle, since only 55 arrowheads were found scattered throughout the entire city and no bodies were found in the city itself. He states that while it is probable that the 'Sea Peoples' invaded the city, he cannot say if they did indeed destroy the city. In his view, Ugarit's political troubles with Hatti were a crucial accelerating factor to Ugarit's demise, and it is possible that the Hittites may have let the 'Sea Peoples' or others attack the city (Halayqa 2010, 325 f.). However, the 'Sea Peoples' as an explanation falls short, which will be clearly examined later in this chapter, as the historical bases for the theory is faulty. Singer, on the other hand, noting that the city was likely destroyed by an invasion of some kind and affected by drought suggests an alternative. He states, 'Ugarit's disappearance from the political scene may simply have been the sudden collapse of the traditional structures of international trade, which were the lifeblood of Ugarit's booming economy in the Bronze Age' (Singer 1999, 733). Unfortunately, the present work cannot answer this suggestion. However, in the coming chapters, the general theme of the trade network will be critically examined.

Recently Sommer, after a lengthy examination of all of these theories, has put forward an alternative view not based on violent conflict. In

his examination, he places the fall of Ugarit on climate change in the region, which caused a subsequent famine. This environmental problem was only made worse by a leadership unable to handle such a problem, the lack of Hittite protection, and some military incursion into the land. Thus, in his view, it is doubtful that any group of 'Sea Peoples' was responsible for the downfall of Ugarit, and if they did attack, they would have found a city already under derris and possibly already largely depopulated because of the famine. The reason, then, Ugarit was abandoned and not repopulated even though it was situated at a strategic point, was because the environment of the region had become too poor to support it (Sommer 2016, 203–218). The theory of climate change will be examined letter in this chapter, and while this forms the main point in Sommer's investigation, there are still several questions to be asked of the validity of the climate change hypothesis (see Knapp/Manning 2016). However, he is likely correct that there were, again, multiple causes and factors which brought about the end of Ugarit.

Who or what caused the destruction and final abandonment is unknown, but what is clear is that the kingdom never recovered. The government disappeared and houses were abandoned (Yon 2006, 22). Ras Shamra never again saw the glory it once had as the capital of the Ugarit kingdom, and was the home to the occasional squatter and to a small settlement for a brief period of time in the Persian period (Caubet 2000, 36). After the destruction of the city, Iron Age people from nearby villages looted tombs from the city, suggesting that there were still local people who had knowledge of the city and that the population was not completely wiped out (Caubet 2000, 36). However, what happened to the people of Ugarit is uncertain, as they might have fled to villages in the mountains, but these villages are unknown archaeologically (Yon 1992a, 119). Ras Ibn Hani enjoyed a brief resettlement after its destruction. There was a mixture between LH IIIC:1b and a continuation of the local ceramic tradition (Singer 1999, 732). However, even this was short lived, and eventually the political and social network died.

2.5.4. Cyprus/Alasiya

One of the first questions to consider with the 'collapse' of Cyprus at the end of the LBA is what is known of the island historically (see *fig. 2.3.*). Cyprus was likely referred to as Alasiya; however, Alasiya and its location have been debated by scholars. Whether it was on the island of Cyprus, in Cilicia on the southern Anatolian coast, or even in northwestern Syria has been up for debate (Goren *et al.* 2003, 233). The name Alasiya is mentioned in texts from the 18th through the 11th cent. BC, with the earliest documents coming from Mari, Babylon, and Alalakh dating to the 18th through the 17th cent. Between the 15th and 12th cent. it is largely known from Egyptian and Hittite sources. From the descriptions given in the texts, Alasiya seems to be an area rich in copper, as the exchanges between the ruler of Alasiya and Egypt mention large amounts of copper in the Amarna Letters, and it may have also held an important political role in the 'Club of the Great Kings'. In the 14th cent. BC the king of Alasiya addressed the king of Egypt as 'brother'; thus, claiming to be equal in status as the great kings like Egypt, the Hittites, Mitanni, Assyria, and Babylon (Steel 2004a, 183–185). However, whether or not Alasiya really was considered by the other Great Kings as an equal is not known.

Recently, this question as to where Alasiya should be located has been analysed by Goren *et al.* Goren examined several of the clay tablets said to have come from Alasiya. He used neutron activation analysis (NAA) on the tablets in an attempt to locate both the larger geographic origin and perhaps the exact region from which the letters were made and sent. Through the NAA analysis, Goren determined that the clay does not match that of Cilicia or that of northwestern Syria, thus likely disproving that Alasiya was located in either of these two regions (Goren *et al.* 2003, 240–243). Goren concluded that the clay used to make the Alasiya tables best matched those on Cyprus and specifically those found in the region Alassa Paliotaverna near the Troodos Mountains (Goren *et al.* 2003, 245). Traditionally, Alasiya has been placed, without any certainty, at Enkomi on the Eastern coast of the island (Karageorghis 1992,
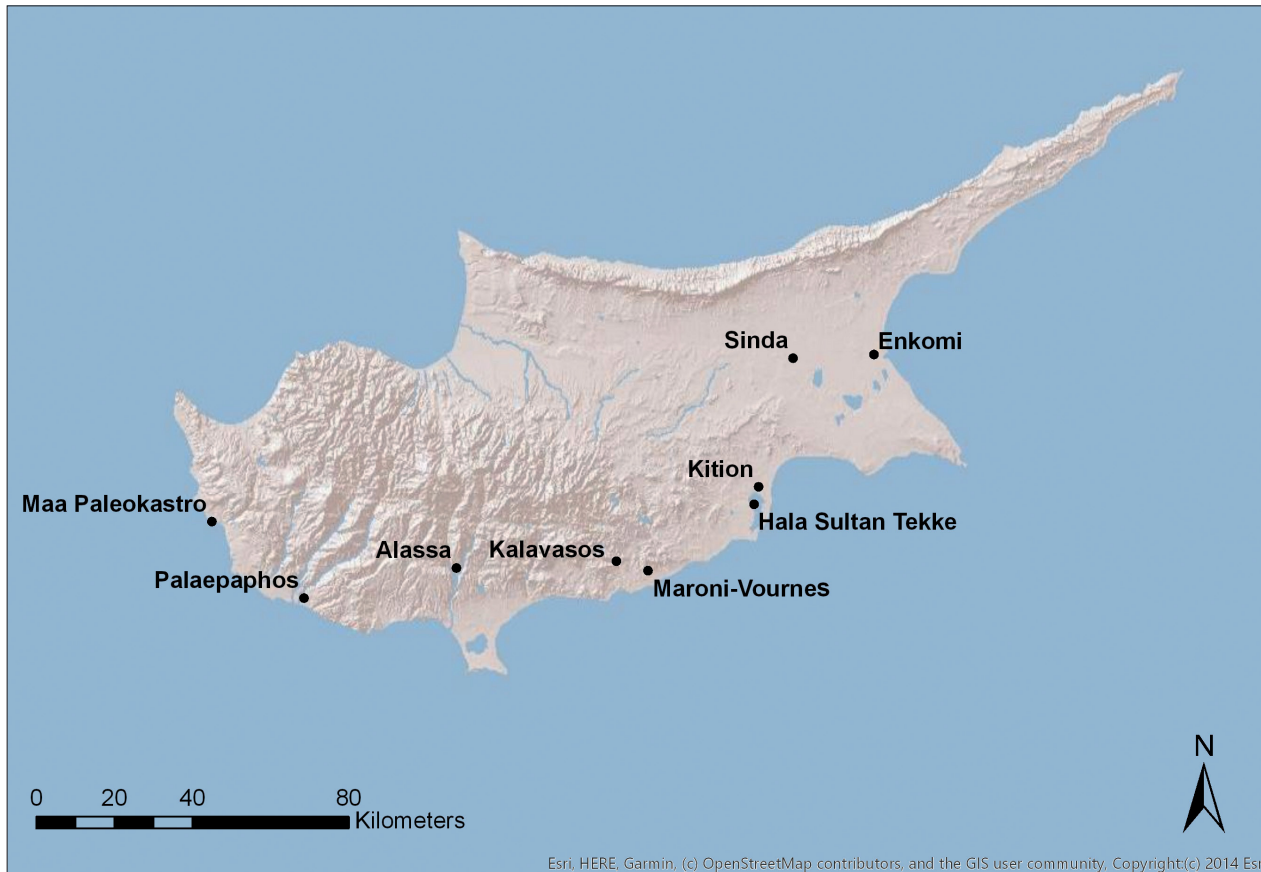
Fig 2.3.   Map of major sites on Cyprus during the LBA.

79; Bunimovitz 1998, 104). However, because the clay used for the tablets comes from the Troodos region and because there is a similarity in the ancient name of Alasiya and the modern name Alassa, Goren places the seat of power in the mountainous inland region Alassa Paliotaverna (Goren *et al.* 2003, 250 f.).[16] This, however, opens another question which cannot be answered about LBA Cyprus, that being: what was the political organisation of the island?

It is generally believed that the political and economic growth of LBA Cyprus stemmed from its exploitation of its copper resources and the growing international trade networks which exploited this copper, with urban centres flourishing on the coast between Enkomi and Palaepaphos (Steel 2004a, 150, 158; Karageorghis 1992, 79). However, how this political system was set up, administered, or even if there was a single state or multiple

states is all up for debate (Steel 2004a, 150). Steel discusses that, while the wealth of the island was in its copper production, the timber for shipbuilding, and its increasing use of maritime trade, the island as a whole was dependent on its own agricultural production. Nonetheless, bronze production sites were placed on poor farming land, suggesting a strong metal industry (Steel 2004a, 158). However, how the bronze production was overseen, or even if there was an agricultural tax as in the other kingdoms at the time, is not known from the archaeological record.

Keswani proposed a theory based on the 'Peer Polity' model, where she believed that during LC IIC there were a number of regional heterarchic powers polities. She divided the island into six independent regions, each controlled by a coastal city such as Enkomi or Hala Sultan Tekke. Cities further inland were secondary to the coastal cities, but they would have acted as collection locations for agricultural tribute (Keswani 1993, 73–83). This would have left Alassa as secondary to Enkomi, in this view. However, because of his

---

16   Though Goren does not state the exact site that would have been the capital of Alasiya.

petrographic analysis, Goren contours this argument, demonstrating that the Alasiya tablets seem to have come from further inland and perhaps even from Alassa, meaning the capital was in a far different place than previously imagined (Goren *et al.* 2003, 250). He also believes that there is no good reason to say Enkomi was in control of the island and simply brought clay from Alassa to use for tablets, because the clay surrounding the Enkomi region is also of good quality for tablet production (Goren *et al.* 2003, 248). He also believes that because of Alassa's proximity to the copper production centres, it would make more sense that Alassa and Kalavasos 'must have controlled the mining, production and transport of copper and served as centres of commercial administration' (Goren *et al.* 2004, 74). However, even with this, there is still no substantial evidence for how the island was administrated, and without this knowledge, our understanding of how the 'collapse' took place on Cyprus is greatly hindered.

The changes that occur between LC IIC, LC IIIA and LC IIIB are in some ways contradictory to those from the rest of the Eastern Mediterranean at the close of the LBA. Traditionally, the transition from LC IIC to LC IIIA is described as a period of site abandonment and destruction correlated with the events at the end of the LBA (Steel 2004a, 185). Karageorghis created the following list which describes what many of the sites on Cyprus went through during the shift from LH IIC to LH IIIA.

At Kalavassos-Ayios Dhimitrios and Maroni-Vournes two urban centres were established in LC IIC: 1, probably for nearby copper mines and the export of copper. In both these centres, impressive 'administrative' buildings were constructed and were then later abandoned at the end of LC IIC.

Morphou-Toumba tou Skouroi, an urban centre which flourished in LC IIC:1, was abandoned at the end of the same period.

Pyla-Kokkinokremos a defensive post established at the end of LC IIC:1, was abandoned abruptly at the end of LC IIC:2 (ca. 1190).

Alassa-Pano Mandilaris a settlement with evidence for industrial copper activity, was built in LC IIC: 1 then abandoned in LC IIC:2.

Major changes took place at Kition, Enkomi, and Athienou at the very end of LC IIC. Enkomi Level IIB was destroyed and rebuilding followed on a large scale; at Kition, major rebuilding was carried out in both excavated Areas I and II, but there is no evidence for violent destruction; on the contrary, we observe a cultural continuity.

At the end of LC IIC, destructions occurred at Hala Sultan Tekke, Palaepaphos, Sinda, Myrtou-Pigadhes, and Apliki-Karamallos.

Maa-Paleokastro a defensive outpost established at the end of the LC IIC period (ca. 1200 BC), was destroyed by fire soon after (ca. 1175 BC). It was quickly rebuilt by its early inhabitants and was finally abandoned before the end of LC IIIA, ca. 1150 BC (Karageorghis 1992, 80).

However, as Karageorghis states, there was no single 'collapse', as all of these events did not happen at the same time; rather, they took place over a period of several decades (Karageorghis 1992, 80).

In her recent review of the crisis years on Cyprus, Georigiou demonstrated that the crisis may not have been so severe. She points out that for a site like Sinda, while the excavators uncovered some evidence of destruction, only a small portion of the site was excavated, and it is unclear if it was completely destroyed or not (A. Georgiou 2015, 132). Iacovou too points out that the only site to have suffered a site-wide destruction was Enkomi (Iacovou 2013, 607; 2014, 664). Moreover, despite some sites being abandoned, several sites maintained prominence or flourished during the transition from LH IIC to LH IIIA. While Enkomi appears to have suffered a destruction, yet the site was rebuilt and maintained a place of prominence until it was abandoned at the end of the 11th cent. BC when its harbour silted. The population likely moved to the neighbouring harbour town of Salamis. A similar story is true of Hala Sultan Tekke, which remained a major site during the 12th cent. BC until its harbour was also silted and the population likely moved to nearby Kition (A. Georgiou 2015, 132). Indeed, both Kition and Palaepaphos seemed to have thrived during the crisis years, as Georgiou states, 'Kition and Palaepaphos, reached an unprecedented level of flourishing and prosperity' (A. Georgiou 2015, 133). Thus, Cyprus is a good representative instance of where change may be bad for some, as certain sites were abandoned, but prove a boon and

hardly a crisis at all for others, depending on the perspective one takes.

There are two general reasons associated with the 'collapse' and changes on Cyprus at the end of LC IIC. The first is the breakdown of the Eastern Mediterranean system entrenched in trade, causing the 'collapse' and changes on the island. However, the evidence for this theory will be examined in the following chapters questioning the validity of this hypothesis. The second is typically associated with migrations of people from the rest of the Eastern Mediterranean coming to Cyprus, destroying it, and colonising it, bringing a Hellenisation to the island. However, how true this scenario is has been called into question. One of the first reasons for the idea that invading forces from the Aegean came to Cyprus comes from the reliefs of Medinet Habu, where Ramesses III speaks of his victory over the 'Sea Peoples'. Within this account, Alasiya is listed as having been destroyed by the 'Sea Peoples' (Voskos/Knapp 2008, 659). This idea leads to such theories as Bunimovitz's, who states that the reason why some city-states on Cyprus were destroyed and others were not depended on if they let the newcomers from the Aegean settle, or not. Thus, those cities who shut their doors to the tide of people were destroyed, and those who opened them were left unharmed (Bunimovitz 1998, 106). Strange believes that Cyprus became a colony of the Mycenaean Empire, taking over the formerly independent Cyprus (Strange 2008, 284). The story of the 'Sea Peoples' based on the Medinet Habu inscription and its questionable historicity will be examined closely later in this chapter. However, there are certain changes in the material culture of Cyprus which would suggest that there was some mixing of ideas from the Aegean with Cypriot, or the movement of some people to the island.

There are a number of elements which have been widely discussed as demonstrating an Aegean influence on Cyprus during the 12th cent. BC. These range from Myc IIIC pottery, also called White Painted Wheel Made III, replacing the traditional Late Cypriot Base Ring and White Slip vessels (Iacovou 2013, 589) to bronze fibulae of Mycenaean origin, or the Mycenaean Naue II type sword and bronzes greaves which have been found in tomb 18 at Enkomi (Karageorghis 2000, 260; 1992 81). There is also the appearance of 'Aegean' style architecture with the introduction of Aegean style hearths and bathtubs (Karageorghis 2000, 266). All of this has been used in the past to argue for an influx of Aegeans to the island.

No matter how one views these changes, whether in the traditional sense of Aegean colonisation or migration to Cyprus,[17] as a hybridisation of the material cultures (Voskos/Knapp 2008), or as a 'Gradual process which occurred over time, within a cultural environment, which, under the light of the above, should be considered as consisting of amalgamated constituents, rather than hybrid' (Voskos/Knapp 2008, 261),[18] the Late Cypriot culture did not disappear at the end of the LBA. Steel points out that the changes at the end of the Bronze Age are not so simple as to say that Mycenaean culture was imposed on the people of Cyprus; rather it seems to demonstrate the cosmopolitan nature of the island as Aegean traits were merged with local Cypriot culture (Steel 2004a, 187). She goes on to say that there are both changes and continuations in the island's culture. The same burial grounds were used as before, though there was a change in burial practices as the shaft grave became more popular than the chamber tomb, and the people abandoned the practice of secondary burial (Steel 2010, 814).

Ceramics also give more of a complicated picture than is often discussed, as many of the designations are modern constructs of the archaeologist, and many of the Aegean forms appeared during LC IIC before the destruction and abandonment of various sites and before the supposed great migration with the downfall of the Mycenaean palaces (Steel 2004a, 193). Åström also demonstrates that there was a cultural continuity in both the practice of cranial deformation, which lasted into the 12th cent. BC but not into the Iron Age, and also the continued use of the Cypro-Minoan script into LCIIIA (Åström 1998, 81). Negbi also notes that the continued use of several urban and rural cultic places in the LC IIIA period demonstrates

---

17 See Voskos/Knapp 2008; Knapp 2013b, 451–465 for a discussion of this topic.
18 For an architectural perspective on the aegeanisation of Cyprus see, Fisher 2007.

they maintained their sanctity (Negbi 2005, 28). As Knapp summaries, 'There are signs of cultural continuity – during the 12th and into the 11th centuries BC – in everything from pottery styles and techniques, architecture and town plans, tomb use and religious practices, to metalworking techniques and industrial intensification' (Knapp 2013b, 451).

The end of the LBA on Cyprus can hardly be called a 'collapse': while some sites were abandoned and other sites may have suffered a destruction, there is a general continuity into the 12th cent. BC. Moreover, beyond continuity, there seems to have even been a flourish at some sites such as Kition and Palaepaphos. As Georgiou summaries:

'Cyprus constitutes a particular case on a Mediterranean-wide level, since the island did not suffer a collapse of socio-political structures, such as that which fell upon the Mycenaean palaces and the Hittite rule. The Mediterranean »crisis« caused upheavals to the island's settlement pattern, but it was by no means devastating. It affected only regional systems, and this is why we see the purposeful abandonment of some settlements. The Cypriot polities that made it through the 12th century exercised the same political and economic functions as in the previous centuries' (A. Georgiou 2015, 138).

Indeed, the Bronze Age does not officially come to a close on Cyprus until 1100 BC. Few sites have a continuation from LC IIIA to LC IIIB period, and where there is, it is mainly kept to the sacred areas such as the Ingot God Sanctuary at Enkomi or the ceremonial area at Kition (Steel 2004a, 211). However, this is also juxtaposed with the reuse of the Cypro-Minoan script mainly on votive and funerary paraphernalia, which indicates writing was not abandoned on Cyprus (Negbi 2005, 28). Moreover, it asks the question if Cyprus ever truly 'collapsed' or if it underwent a two century-long transition, as it does not fit into many of the general definitions or symptoms of collapse. If this is the case, it places it at odds with other parts of the Eastern Mediterranean, and indeed it calls into question the general 'collapse of the Eastern Mediterranean at the end of the LBA'.

2.5.5. 'Collapse', the End of Egyptian Domination, and the Southern Levant

The last region discussed here typically said to have truly felt the effects of the end of the LBA is the Southern Levant (see *fig. 2.4.*). While the information at our disposal for the LBA and the Iron Age I in the Southern Levant is not as sparse as on Cyprus, what happened in this region is no less problematic. The Southern Levant is one of the best studied regions in the Eastern Mediterranean and has had a host of excavations, survives, and other archaeological endeavours both great and small for well over a century. Textual evidence also abounds in the form of the el-Amarna Letters from the 14th cent. BC, detailing the interactions between Egypt and the Southern Levant and, to some extent, what was going on in the region at the time. However, even with all this, exactly what happened during the LBA and Iron I Period is unclear and subject to debate. Often times a great deal of emphasis is placed on the written text over what the actual archaeological record has to say about Canaan and Canaanite[19] society and culture during this period (Bunimovitz 1995, 320).[20] In addition to this, Ahlström states: 'To write the history of Palestine during the fourteenth century based on these texts is next to impossible' (Ahlström 1993, 242). Higginbotham goes further, describing how there is very little textual evidence from the Post-Amarna Period, and even with these texts we must ask how true they are or if they are misleading (Higginbotham 2000, 17).[21] For Transjordan, there is only some scant textual evidence from this time from the Egyptians. In addition, there is also a lack of publications from this period, with only *Tell Dēr ʿAllā*, *el-Baqʿa*, parts of the *Ṭabaqāt Faḥil* (Pella) excavation, and the Ammon Airport Structure being well published, and there are only preliminary publications for other sites, if any exist

---

19 The term 'Canaanite', 'Israelite', 'Philistine', and so forth are not clearly understood through archaeology. For a discussion on this, see Killebrew 2005 and Faust 2006.
20 Such is the case with the end of the LBA in the Southern Levant and the story of the Sea Peoples from Egyptian sources, a topic which will be discussed later on.
21 The problem becomes even more sever after Ramesses's II battle at Kadesh as sources dwindle and their reliability come ever more into question (Redford 2000, 3).

at all (Strange 2008, 281). However, the situation is best summed up by van de Mieroop who said, 'The textual record is suspect, archaeological finds can argue both for abrupt change and continuity, and so many peoples and other factors were involved that it seems impossible to find certainty in the confusion' (van de Mieroop 2010, 240). The Southern Levant during the LBA and Iron I Period were filled with peoples moving through and settling, cultures shifting and adapting to new influences, reacting to or conforming with pressures, and much more. Thus, the newly coined term 'Levantinism' (Killebrew/Steiner 2014, 3)[22] truly fits this period; however, because of this, what unfolded during these 500 years of history becomes only more elusive. This is why, after decades of research, there are still debates over Egyptian influences at the time, the correct chronology, the state of urbanism, and the movement and ethnogenesis of the 'Philistines' and 'Israelites'.

The LBA in the Southern Levant warrants a slightly closer examination. During the LBA, the Southern Levant has often been described as a small land of little importance, typified as the land between two super powers, either Egypt and Mitanni or Egypt and Hatti, with a meagre population when compared to Egypt or Mesopotamia (Liverani 2003a, 3–7). The area was tightly intertwined with Egypt, and the beginning of the LBA is marked by the expulsion of the Hyksos from Egypt by Pharaoh Ahmose around 1550 BC (Panitz-Cohen 2014, 541 f.). However, Egypt's involvement in the affairs of the Southern Levant did not coalesce until the reign of Thutmose III (ca. 1479–1425 BC) (Mazar 1990, 232; Ahlström 1993, 218). Thutmose III expanded the kingdom northward when he faced a coalition between the kings of Megiddo and Kadesh and many other smaller princes who banded together against him. The victory, though, went to Thutmose III, and it is one of the best documented campaigns in Egyptian history, listing the account of the battle and the cities conquered (Weinstein 1981,

11).[23] Megiddo was taken with Thutmose III, describing the event as, 'the capturing of Megiddo is the capturing of a thousand towns' (Weinstein 1981, 11). With his empire taken as far north as Kadesh and having control over the Southern Levant, the situation seemed good for Thutmose III; however, his expansion into Syria also meant Mitanni became an ever-growing threat against the new borders of the Egyptian Empire (Mazar 1990, 232).[24]

As Canaan fell under Egyptian rule, the people now faced taxation, corvée, and military expeditions. Silver, gold, glass, bronze, and other materials were taken from the urban centres in Canaan along with agricultural products which were stored and given to the Egyptian garrisons in Canaan (Redford 1992, 209–211). Bunimovitz states that, 'the LBA social fabric in Palestine was continuously changing due to dialectical relations between Canaanite society and Egyptian government' (Bunimovitz 1995, 320). Thutmose III established military garrisons in both the Southern Levant and also in Southern Syria, along with administrative centres (Weinstein 1981, 12). Military campaigns did not end with Thutmose III, as Amenhotep II (ca. 1427–1401 BC) claimed to have taken 101,812 people from Canaan as slaves and other booty, taking the people and goods back to Egypt after one of his trips to Canaan (Ahlström 1993, 234.).[25] However, with the beginning of LB IIA, the Egyptian military presence in Canaan grew less with the advent of the Amarna period, otherwise known as the Age of Internationalism. The Amarna Period roughly corresponds to the reigns of the Egyptian kings Amenhotep III, Amenhotep IV/Akhenaten, Smenkhkare, Tutankhamun, Ay, and Haremhab, covering about 100 years from 1386–1293 BC or roughly LB IIA (Weinstein 1981, 15).

Much of what we know about LB IIA comes from the Amarna letters, but again caution should be taken when trying to create a narrative about this period from these letters. Amenhotep III (ca. 1391–1353 BC) seems to have taken a more relaxed position with Syro-Palestine, as he did not

---

22 'Levantinism' is defined as, 'To signify a richly stratified historical and cultural past, defined by its predilection for cultural fragmentation, creating multi-layered identities of its inhabitants'.

23 For an account of the battle, see Redford 1992, 156–160.
24 For more details see Redford 1992, 160–166.
25 Ahlström notes that the 101,812 slaves may also have been a population census (Ahlström 1993, 234).
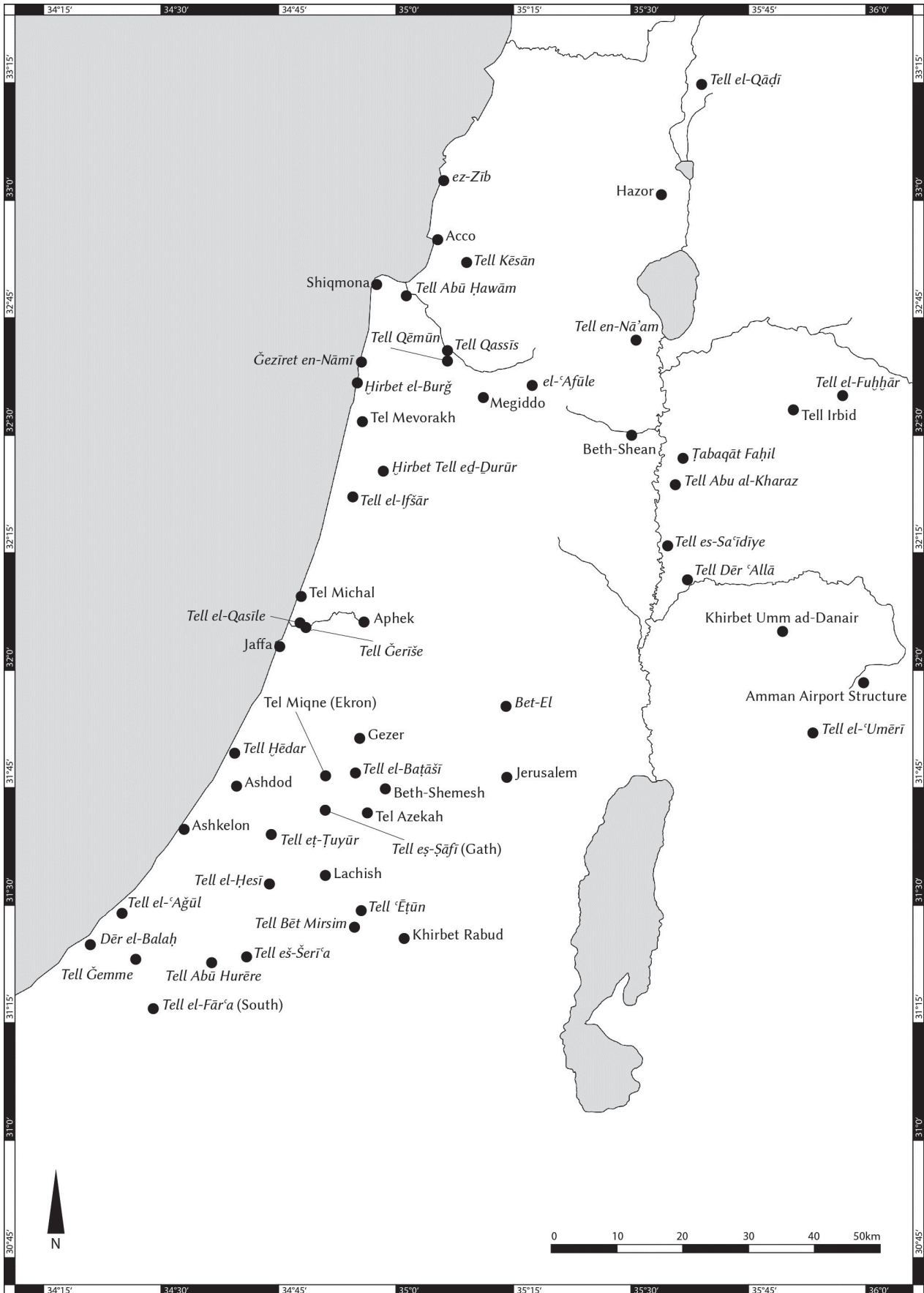
Fig. 2.4. Map of major sites in the Southern Levant during the LBA.

campaign at all in these regions during his reign (Leonard 1989, 17). He relied on his military garrisons staffed by Egyptians and Nubians to handle the situation in Canaan (Weinstein 1981, 15). One such troublesome situation was with the appearance of the Apiru. The Apiru were perhaps robbers, raiders, immigrants, or foreigners who are often cited in the Amarna letters as being the cause of problems for the local rulers. Whether or not they were a distinct ethnic group, or even exactly what the name means, is unclear, as some have claimed them to be related to the Hebrews of the Old Testament, while others say it is not an ethnic term and instead refers to social classes of outcasts, refugees, fugitives, rebels, and slaves as well as mercenaries (Leonard 1989, 19; Ahlström 1993, 235). Nonetheless, the Apiru were the topic of many letters as locals sought help from the pharaoh.

The end of LB IIA is marked by Egypt losing control of much of its territory in Syria to the advances of Suppiluliuma I, and with the death of Akhenaten and the following battle for the throne of Egypt, the country was thrown into political turmoil. It seems that Egypt may have lost some of its effective control over Canaan during this period (Weinstein 1981, 16 f.). This changed, though, in the coming LB IIB, when Egyptian influence and presence in Canaan seems to have grown mainly under the rule of Ramesses II (ca. 1279–1213 BC). However, to fully understand this situation, we must look first at two important areas of debate, those being the urban condition of the Southern Levant during the LBA and the Egyptian influence during the LBA. After examining both of these subjects, then we can move to how the story of the collapse unfolds and what happened in the Iron I Period.

The state of urbanisation and urban decline in the LBA Southern Levant is a mixed picture. One aspect which appears clearly is that it is markedly different than that of the Middle Bronze Age, as there was a lower degree of sociopolitical integration during the LBA creating a cluster of semi-autonomous states which was opposite the conditions in the MBA (Bunimovitz 1995, 323). In her study of the transition from the MBA to the LBA, Gonen found that only 17 of the 77 sites she

examined were occupied uninterrupted from the MBA to the LBA (Gonen 1984, 69).[26] She also noted that there was a decrease in settlements in the 16th and 15th centuries followed by a gradual increase in the number of settlements. However, within this increase in settlement numbers there is a decrease in the size of these sites (Gonen 1984, 63). Urban centres from the MBA which still existed or were rebuilt in the LBA also diminished in size, as these cities mainly focused on the flat upper part of the tell and did not expand much beyond this (Baumgarten 1992, 143; Bunimovitz 1995, 324). While some cities had walls or defensive structures from the MBA, many of these were abandoned throughout the course of the LBA (Gonen 1984, 70; Falconer 1994, 326).[27] The Central Hill Country saw only a few settlements, and there seems to have been a shift to the coastal region, which perhaps was in response to the Via Maris running through it (Bunimovitz 1995, 327). However, all of this is contrasted with finds from the LBA such as large palaces, patrician houses, and temples. Herein lies the problem, as there is a mixed view on whether there was a decline or prosperity.

These counter narratives between decline and prosperity in the LBA Southern Levant stem in part from a series of papers published in succession with each one trying to counteract the other. For the decline of urbanism in the Southern Levant, we turn to Knapp's study of LBA *Ṭabaqāt Faḥil*. From his work at the site near the Jordan River, he concludes that the Egyptian domination of the area took its toll on the local culture over the 300 years of occupation. He states, because of the Egyptian taxation and corvée levied on the people, that, 'there are indications of a decrease in intensity of occupation; architecture and material culture alike become much more parochial by LB II. The

---

26 However, as Gonen states, 'the issue of the strength of urban occupation, for instance, relies heavily on references to settlements that occur in Egyptian documents' (Gonen 1984, 61). Thus, the question still remains as to how reliable those texts are, and then how does that effect our understanding of urbanisation.
27 A clear example of this is the Fosse Temple at Lachish which was built into the MBA fortification signalling that it seems to have gained a different function in the LBA.

emerging picture is one of an increasingly impoverished LBA Canaan and Transjordan, apparently in the throes of cultural collapse' (Knapp 1987, 26). However, contra to this, Liebowitz published a paper the same year. In his paper, Liebowitz examined the ivory objects from LB II contexts in the Southern Levant. He states that while previously LB II had been seen as a time of decline: 'The ivories suggest, to the contrary, that LB II was characterized by elegance and sophistication' (Liebowitz 1987, 16). He goes on to say that these ivories seem to have been produced in Palestine, and that the ivories are not the only evidence for a cultural flourish, as stone sculptures in the round have been found in LB II strata from Hazor and *Tell eṭ-Ṭuyūr* (Tel Sippor) (Liebowitz 1987, 17 f.). Liebowitz goes further, saying the architecture also demonstrates this, as elaborate temples were constructed at Hazor and Lachish along with large palaces at Megiddo, Aphek, and Lachish (Liebowitz 1987, 18). All of this leads him to say that, 'the period between 1400 and 1200 BC. should not be viewed as a period of cultural decline, but rather a high point in the material culture of Palestine' (Liebowitz 1987, 18).

In response to both of these papers, Bienkowski proposes a third position, simply that there was a decline throughout the Southern Levant or a cultural flourish seen in the material culture from the LBA. He noted that much of Liebowitz's evidence came from cities, which were under Egyptian control and that, because of this, 'neither the contexts within the towns nor the towns themselves can be regarded as indicative of the quality of life in Canaan as a whole' (Bienkowski 1989, 59). Bienkowski goes on to say that Knapp largely ignored the evidence for wealth demonstrated by Liebowitz, and that there was a certain amount of prosperity at larger centres where Egyptians were based. He adds to this by saying: 'Architecture and pottery at Jericho, Hazor, and Tell Deir 'Alla show a gradual degeneration, compared to Beth-shan, Lachish, and Tell el-'Aǧūl, which had more luxury, buildings of greater architectural pretension, and rather better pottery' (Bienkowski 1989, 59). Bienkowski's conclusions are that with Egyptian taxation taking place over some 250 years, this gradually took its toll on Canaan. While the amount of tribute asked

from the Southern Levant may seem small in comparison to the taxation levied on Northern Syria by the Hittites, it appears as if the Southern Levant was heavily taxed by Egypt. Bienkowski states that, 'the Egyptians were siphoning off the benefits from exploitation of natural resources and trade, and little or no profit was being fed back into the Palestinian economy' (Bienkowski 1989, 60). However, this was only felt in areas without a strong Egyptian presence. In those places where Egyptian's were stationed, they might have benefited from agricultural products brought and stored in the city for Egyptian uses or from the trade profits facilitated by the Egyptian's trade network. Thus, the overall decline of the economy was felt only in certain areas and perhaps more so in the hill country or in the less populated areas of Cisjordan and Transjordan (Bienkowski 1989, 60 f.).

Knapp responded to this by saying that Bienkowski's view was too limited, focusing only on LB II. However, when examining the 2nd mill. BC as a whole, a different picture emerges which points to decline. In the MBA, villages were able to maintain themselves enough to ensure some wealth and their livelihood; however, with the influx of Egyptian control and taxation, this changed. Villages died off in the LBA as the major centres became the nodes of power, and the only places where wealth and a good livelihood could be found. Even in these urban centres, though, only the most resilient were able to withstand the Egyptian taxation (Knapp 1989, 65). As he states, 'egyptian policy unilaterally and clearly aimed to extract the maximum possible tribute with the minimum effort' (Knapp 1989, 65), which had drastic effects on the local population. Knapp goes on to say that while the archaeological and textual records do seem to indicate that some wealth was focused in the urban centres, this does not take away from the fact that, 'many village sites were abandoned while some urban centres declined or contracted in size' (Knapp 1989, 67), thus concluding that there was still a decline during the LBA which eventually led to collapse. Liebowitz also countered Bienkowski by stating that it would be expected to find elite goods in elite contexts. However, when comparing LB I and LB II ivories, there is a greater degree of sophistication in the

LB II ivories than in LB I. He also points out that sites such as Hazor and *Tell eṭ-Ṭuyūr*, which do not seem to have been under Egyptian hegemony, also produced fine stone sculptures and painted ceramics (Liebowitz 1989, 63 f.).[28] Thus, he stands by his idea of a cultural flourish during LB II.

In addition to this, Bunimovitz notes that wealth in the archaeological record may not demonstrate real wealth. Rather, it may show that rulers and elites wanted to give the appearance they had wealth even if they did not (Bunimovitz 1995, 326). He goes on to say that the real conflict for wealth and goods may not have been between Egypt and Canaan, but between the Canaanite city-states. Each city-state would have had a small pool of resources, including material wealth and population, and that each would have wanted to display their wealth. However, this would have placed a greater and greater strain on the populace as both the elites and the Egyptian drained resources from Canaan. This need for resources would have then created tension between the city-states and would have only made the problem worse (Bunimovitz 1995, 326 f.). The exact answer to this question of prosperity and decline of urban centres is still not answered, and the exact nature of the situation in the LBA remains one of scholarly contention (Panitz-Cohen 2014, 543–547).

Egyptian influence in the Southern Levant was not a single homogenous rule, as it shifted over the course of the LBA and into the Early Iron Age. The exact nature of the Egyptian hegemony is not entirely clear, and there remains a debate over how the Egyptians 'ruled' the people of the Southern Levant and how direct their involvement and presence was in the land. Higginbotham suggested two models for Egypt's involvement in the Southern Levant, being either a **Direct Rule**[29] or **Elite Emulation**.[30] In her view, the Direct Rule model simply states that Egypt would have had direct control over the Southern Levant with administrative centres run by Egyptians, settlements that would be purely Egyptian, and with the control over the territory being in the hands of the Egyptians who stayed in the territory. According to this model, the Egyptian imperialism would have had both military and economic goals; however, in their control over the region, they would neither have sought to complete a full scale colonisation of the region nor to acculturate the entire local populace (Higginbotham 2000, 10–13). This would appear to be the case with the Egyptian New Kingdom's control over Nubia, where large Egyptian temples were built, and many of the settlements had an almost purely Egyptian material culture (Higginbotham 2000, 10–13).[31]

The Elite Emulation model is in some ways more complex, as it is based on the idea of the core-periphery interactions. According to this model, there is no presumed pattern of military or economic domination; rather, both parties would have derived legitimisation in their participation in the imperial system. Thus, for the Southern

---

28 The quality of ceramics and other material culture is one of the main arguments in all of these theories. However, again we are faced with the problem of the emic and etic views. Is what we define as poor or high quality the same as what the people perceived as poor or high quality, and if so, how do we know? This is of course a question we cannot yet answer, if ever, but it is important to note nonetheless. This is pointed out by a suggestion made by McGovern who believes the lower quality ceramics found in the LBA are a result of Canaanite workshops adapting Egyptian techniques New Kingdom pottery techniques such as more tempering and a lower firing temperature, in their own ceramics. This led to a degradation in quality, but it was from a stylistic and manufacturing technique shift rather than a reflection of decline (McGovern 1990, 18). However, this idea has yet to be proven or substantiated.

29 Direct Rule is characterised by: 1. The architecture of pharaonic instillations would be expected to be of Egyptian-style; 2. The corpus of artefacts from Egyptian settlements would be expected to closely resemble that of similar settlements within Egypt; 3. Egyptian material culture would be unevenly distributed at sites in Palestine (Higginbotham 2000, 14).

30 Elite Emulation is characterised by: 1. The corpus of Egyptian-style remains from Palestine would be expected to be much more restricted in its variety than that found in the Nile Valley; 2. The attested types would be expected to be primarily prestige goods rather than domestic artefacts; 3. The attested types would be expected to include hybrid Egypto-Palestinian types, as well as types that can be identified with each cultural sphere; 4. No Egyptian settlements or pure Egyptian contexts would be found outside the border of the Nile Valley; 5. Egyptian-style material would be expected to appear primarily in funerary and ritual contexts; 6. The distribution of Egyptian-style material culture remains would be expected to be relatively even (Higginbotham 2000, 15).

31 For a discussion on Nubian and Egyptian ethnicity during the New Kingdom, see Smith 2003; 'Wretched Kush: Ethnic Identities and Boundaries in Egypt's Nubian Empire.'

Levant, the local princess and kings would have maintained power of their own while under the control of the Egyptians. Within this structure, though, the princess and kings would have seen Egypt as the centre of military and economic power, but also a centre of civilisation. Thus, in order to enhance their status in the eyes of their people and the Egyptians, the princess and kings would have emulated Egyptian culture (Higginbotham 2000, 8 f.). In addition to this, after the conquest of Thutmose III, princes from the Southern Levant were taken to Egypt to be raised, educated, and indoctrinated with Egyptian thinking and culture, and were forced to take an oath to king as a vassal of the pharaoh (Higginbotham 2000; Bryan 1996, 76), thus furthering the emulation process.

Higginbotham has concluded that outside of Beth-Shean, *Dēr el-Balaḥ*, Jaffa, Gaza and Timna, any site in the Southern Levant with Egyptian style material culture or architecture would fall under elite emulation rather than direct rule (Higginbotham 2000, 128 f.). She describes the situation as:

'That domination did not, however, take the form of Direct Rule. A small number of Egyptian military and administrative personnel were resident in perhaps four imperial centres identified so far. Circuit officials and royal envoys were dispatched from Egypt to oversee the region as needed. For the most part, Palestine was governed by local vassal princes on behalf of their Egyptian overlord. Over time, many members of the local elite classes began to emulate Egyptian culture, which would presumably have enhanced their status in the eyes of both their own population and the paranoiac bureaucracy' (Higginbotham 2000, 138).

Contra to this view is that, at many sites, there was indeed an Egyptian presence. At *Tell Ḫēdar* (*Tệl Mōr*), Martin and Barako argue that the site had a direct Egyptian presence seen in the Egyptian style material culture. The locally made Egyptian style pottery at *Tell Ḫēdar*, and at other sites in the Southern Levant with such pottery, consists mainly of coarse household wares and was manufactured with Egyptian techniques (Martin/Barako

2007, 152).[32] They suggest that, because these must have been produced by Egyptian living at the site.

'If Canaanite potters had been emulating Egyptian pottery, then one would expect to find more hybrid forms at sites in Canaan under direct Egyptian control. Moreover, morphological developments over time in Egypt find parallels in Egyptianized assemblages from Canaan, an indication of the close contact that must have existed between the Egyptian homeland and the outlying regions under her hegemony' (Martin/Barako 2007, 152).

Thus, they suggest that at many sites where similar material has been uncovered along with Egyptian style architecture, and in some cases Egyptian inscriptions either hieratic or hieroglyphic, there is evidence to point to a stronger Egyptian presence than Higginbotham suggested (Martin/Barako 2007, 153). While the amount and type of control and presence Egypt had over the Southern Levant is still up for debate, it is likely that after more research, a mixed picture will result. There was likely both the direct presence of Egyptian at sites in the Southern Levant, where there is direct evidence for it, and also where there may not be as strong evidence. Likewise, even at a site like *Tell Ḫēdar* or at Beth-Shean which likely has the strongest evidence of an Egyptian presence in the whole of the Southern Levant (Higginbotham 2000, 128 f.), there was also elite emulation by the local 'Canaanites'.

With all this in mind, we can now turn to the end of the LBA in the Southern Levant. After the troubled Amarna Period and the fight over the throne of Egypt, the 19th Dynasty finally took control and strengthened Egypt's position in the Southern Levant. This was particularly true of the reign of Ramesses II and his push back into Syria against the growing Hittite threat. However, the political unrest of the previous dynasty and the threat of the Hittites led Egypt to change its role in the Southern Levant, as it appears they strengthened their presence in the region (Weinstein 1981, 17; Mumford

32 For a full discussion of Egyptian style pottery in the Southern Levant from the LBA, see Martin 2011a.

2014, 76 f.). Egypt faced not only the threat of the Hittites, but also the local princes, and the nomadic Shasu, Apiru, and the Israelites as mentioned on Merneptah's stela (Weinstein 1981, 17). This led Egypt to strengthen or expand garrisons at Beth-Shean, *Dēr el-Balaḥ*, *Tell Ḫēdar*, Ashkelon, Aphek, and *Tell es-Saʿīdīye* (Mumford 2014, 77). There is also strong evidence of locally made Egyptian style pottery and Egyptian style architecture (Bietak 1993, 294–296; Martin 2005; 2011a). However, no matter what involvement Egypt had, it was only the floundering of an empire that was already losing its control. The long reign of Ramesses II along with the short reign of the already old Merneptah took its toll on the empire, leading to a series of short lived rulers and political unrest in Egypt. This was followed by the last great pharaoh of the New Kingdom, Ramesses III (ca. 1184–1853 BC), but his involvement in the Southern Levant was much weaker than in times previous, and even the exact extent of his power in the Southern Levant is debated (Weinstein 1981, 22).

The exact nature of the events which occurred at the end of the LBA are of course hotly debated, and represent some of the greatest changes to occur in the region and with the most longstanding effects on the next several hundreds and thousands of years. This of course references the rise of Israel in the central hill country and the Philistines in Philistia.[33] That being said, the typical reason given for the fall of the Egyptian empire in the Southern Levant is due to the invasion of the 'Sea Peoples'. Views differ as to whether Ramesses III defeated the oncoming enemies and settled them on the coast of Cisjordan (Leonard 1989, 34; Mumford 2014, 78) or if these new peoples were simply part of the larger problem facing Egypt at the time (Weinstein 1981, 22). While the problems with the story are numerous, as I will describe later in this chapter, there is a change both in the material culture of the coastal region and in the evidence for Egyptian administration. According to Stager, there was a massive migration of some

25,000 people from 1185–1175 BC continuing over the next two to three generations. He believes that these people destroyed the coastal cities, fought Ramesses III, and brought LH IIIC:1b locally made ceramics. In his view, only Egypt could contain this influx of people, and only during the reign of Ramesses III. With his death, they expanded and created the new material culture Philistine bichrome which was a mixture of local traditions and imported ideas (Stager 1995, 332–342). Stern adds to this idea, believing there was group of 'Northern Sea People' who settled at *Ḫirbet el-Burǧ* (Dor) and the surrounding region at the end of the 12th cent. BC, as depicted in the Tale of Wenamun (Stern 2013, 63). However, there are many problems both theoretically and methodologically with this theory of a large group of people settling on the coastland (see also Artzy 2013).

While it is clear there is a break in the ceramic tradition at the end of the LBA (T. Dothan 1998, 148; Mazar 1988, 252 f.), the nature of the changes is often muddled in ethnic labels and an over exaggeration of pottery percentages. Exactly what took place in the five cities of the Philistine Pentapolis is far from clear, though many scholars seem to think otherwise. The name given to Ashkelon, Ashdod, Ekron, Gath, and Gaza is one such problem, as they are called Philistine or the initial 'Sea Peoples' settlements. However, much like all ethnic labels, the label of Philistine or 'Sea Peoples' does not reflect the archaeological findings. It is often noted that local 'Canaanite' material culture is always found at so called 'Philistine' or 'Sea Peoples' sites (Stager 1995, 334). However, as A. Mazar has stated, a site is given the ethnic label of 'Philistine' typically when LH IIIC:1b or Philistine bichrome pottery make up thirty percent of the ceramic assemblage (Mazar 2008a, 94). This would mean a site can have seventy percent of its ceramic being made in the local tradition, but still the name 'Philistine' or 'Sea Peoples' is attributed to the site. This percentage problem, though, is only made worse by typical archaeological practice, as excavators are more likely to collect and catalogue decorated 'Philistine' wares and LH IIIC:1b pottery (Barako 2013, 46). Thus, while scholars such as Stager or Stern would argue for a massive invasion and

---

33   See Killebrew 2005 for a lengthy discussion on the ethnogenesis of both these people groups. See also Faust 2006 for a specific discussion of Israel's ethnogenesis.

influx of people, the archaeological record does not support this idea.[34] Moreover, the archaeological record does not support a violent influx of the 'Sea Peoples', nor do the textual records (Millek 2017).

Aside from the problems with the 'Sea Peoples' invasion of the Southern Levant bringing about the end of the LBA in the area, problems also abound with Egypt's involvement in the region during the Iron I. While some have claimed it was the battle with the 'Sea Peoples' which brought Egypt to its decline (Leonard 1989, 30), the more likely answer comes from the gradual decline of Egypt's power, which only came to a conclusion at the end of Ramesses' III reign during the 20th Dynasty. Ramesses III did seem to recover some power in the Southern Levant, as he re-established the garrison at Beth-Shean and mining activities began again at Timna (Weinstein 1981, 22; Dever 1992, 105). However, the charisma of one leader could not bring about the greatness Egypt had seen in the former years of the New Kingdom. Textual evidence points to a large decrease in offerings sent to Egypt from the Southern Levant (Bietak 1993, 293). While some scarabs of Ramesses III have been found in the coastal region, no scarabs of Ramesses IV and those after him have been found north of the Wadi Gaza (Bietak 1993, 299; Barako 2013, 39). The last possible vestige of Egyptian power would have ended with Ramesses VI (ca. 1143–1136), but how much influence Egypt had over the area could only be classified as marginal (Dever 1992, 105; Weinstein 1981, 23; 1992, 142; Mumford 2014, 81).

Some other notable features of the LBA/Iron Age transition are the 'destructions' which took place throughout the region. However, the exact nature of these destructions has be called into question, as many do not exist, have been miscited, or have been exaggerated (Millek 2017, 118–132).[35] Many new settlements were founded in the Highlands typically associated with the 'Israelites', and along with these new settlements, there was the introduction of new agricultural techniques, and to a large degree the four-room-house (Ahlström 1993, 335–342). Populations seemed to shift as the number of sites in the Shephelah dropped from 104 to 49 in the Iron Age I (Bunimovitz/ Lederman 2008, 27), but the number of sites in the Central Hill Country rose from 29 in the LBA to 254 in the Iron I (Finkelstein 1995, 355). However, many of these new sites did not last more than one hundred years (Nakhai 2008, 130). The urban characteristic of the Southern Levant changed, as the former urban centres that survived are more like large towns compared to the urban cities of the LBA or MBA (Liverani 2003a, 41). Finally, even with all this, Canaanite culture continued on, as local Canaanite wares were found even at 'Philistine' sites such as Ashdod (Mazar 2008a, 89 f.). However, all of this did not happen overnight. This process took many decades both before and after the year 1200 BC.[36]

2.6. The 'Collapse' of the Eastern Mediterranean

2.6.1. 'Sea Peoples': Myth, Fantasy, Reality or None of the Above

'Year 8 under the majesty of (Ramesses III) ... The foreign countries made a conspiracy in their islands. All at once, the lands were removed and scattered in the fray. No land could stand before their arms, from Khatte, Qode, Carchemish,

---

[34] This is further emphasised in a study by Finkelstein who noted that the total built up area during the LBA was 173ha in Philistia. This total built up area only dropped to 155ha in the Iron Age I. This lead Finkelstein to come to a number of only a few thousand migrants at most as the continued local material culture would indicate the local populace was not killed off (Finkelstein 2000, 167–173). Thus, the physical evidence does not support a mass migration into the region.

[35] See also chapter 5 which examines all destruction events at the end of the LBA in the Southern Levant.
[36] While the year 1200 BC is often used as the marker of change, Knauf rightly notes that the year 1200 is meaningless as nothing notable changed in that year. Rather, it is simply a nomenclature to denote a change which took place in different places at different times (Knauf 2008, 74). This of course holds true for every region under discussion in this work.
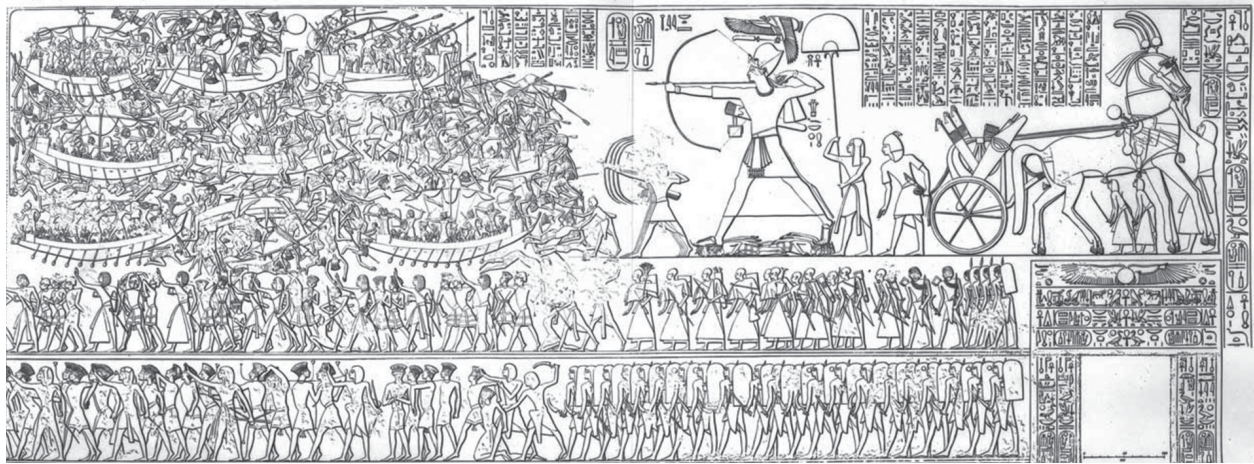
Fig. 2.5. The Sea Battle of Ramesses III Year 8 from Medinet Habu (The Epigraphic Survey 1930, Plate 37; Courtesy of the Oriental Institute of the University of Chicago).

Arzawa, and Alashiya on, being cut off at [one time]. A camp [was set up] in one place in Amor. They desolated its people, and its land was like that which has never come into being. They were coming forward toward Egypt, while the flame was prepared before them. Their confederation was the Philistines, Tjekru, Shekelesh, Denye(n), and Washosh, lands united. They laid their hands upon the lands as far as the circuit of the earth, their hearts confident and trusting: 'Our plans will succeed!'' (Cline/O'Connor 2003, 136).

The opening lines of Ramesses' III Medinet Habu Year 8 reliefs begin the story of the 'Sea Peoples' (see *fig. 2.5.*). It is a story which over the decades has changed, but with the basic tenets that peoples from Italy, Northern Greece, the Aegean, Anatolia, and Syria came together for one reason or another and fought their way to Egypt. In so doing, they brought about an end to the LBA societies, leaving in their wake destruction, death, and collapse. However, within this narrative, there is no more appropriate place to start a discussion on the 'Sea Peoples' than with the Year 8 inscription of Ramesses III from Medinet Habu.[37] Much like all aspects of the 'Sea Peoples' phenomenon, the Medinet Habu reliefs are fraught

with controversy and differing opinions over the meaning and translation of single words. However, the 'Sea Peoples' are brought to life from these inscriptions and the images carved into the walls at Medinet Habu. Thus, their importance to the scholarly research cannot be underestimated. While groups of the 'Sea Peoples' were mentioned before Ramesses III, such as the Lukka in a letter from the king of Alasiya to Egypt (Wachsmann 2000, 103), while the Sherden were said to have served under Ramesses II (O'Connor 2000, 85; Higginbotham 2000, 56), Merneptah fought against a confederation of Libyans who joined forces with the Eqwosh, Teresh, Lukki, Shardana and Shekelesh. The Shardana, Shekelesh and Eqwosh are described as 'of the sea', and all five are described collectively as northerners who came from every land (Cline/O'Connor 2003, 111; Drews 1993, 49). Also, in a correspondence between Hatti and Ammurapi king of Ugarit, Suppiluliuma II asks Ammurapi to send him Ibnadussu who had been captured by the Sikala 'who live on ships' to find out more information about this group of people (Singer 1999, 722; Wachsmann 2000, 104). Thus, the Eqwosh, Teresh, Lukki, Shardana and Shekelesh, along with the Peleset (Philistines), Tjekru, Denye(n), and Washosh make up the nine groups of the 'Sea Peoples' though it should not be forgotten that the term 'Sea Peoples' is not a name given by the ancient Egyptians. Rather, it is a modern invention derived from the French *peuples de la mer*.

The Medinet Habu reliefs with its supporting document the Papyrus Harris I are the two most

---

37 For a full review on Medinet Habu with its dimensions, placement of the texts and images in the building and for full texts, see Ben-Dor Evian 2015; Kahn 2011; Roberts 2006; Cline/O'Connor 2003; Redford 2000; O'Connor 2000; Wachsmann 2000; Bietak 1993; Lesko 1992; Cifola 1988.

important textual sources which helps to give rise to the story of the 'Sea Peoples'. Simply speaking, the text tells the story of Ramesses III fighting an invading force which came from islands. They, in their march toward Egypt, destroyed Anatolia, Northern Syria, Cyprus, and Amurru. In their trek towards Egypt, the 'Sea Peoples' brought their wives and children along in ox-carts. Ramesses III prepared to fight this force at Djahy, a location somewhere in the Southern border of Canaan,[38] and also at the mouth of the Nile. He defeated both sets of enemies, and later settled the Tjekru, Shekelesh, and Peleset tribes in strongholds somewhere in the Southern Levant (Cline/O'Connor 2003, 136–138).[39] Thus, according to this account, the destruction that is seen throughout the end of the LBA was caused by these 'Sea Peoples' who only the godlike Ramesses III could stop. However, the story is not so simple. There are a great variety of opinions on how this monument should be read, how true the monument is, the purpose of the monument, and much more.

O'Connor's understanding of the Medinet Habu reliefs comes from his view on how the monument should be read, with the idea that the central lion hunt scene is the least historical event. The lion hunt scene is to represent Ramesses putting order over chaos. In this case, the chaos was the invading 'Sea Peoples', and according to O'Connor, the fact they chose a lion to represent the enemy must mean they were an especially challenging opponent. He believes that because the lion scene is the most unrealistic of all the depictions, the two flanking scenes concerning the land and sea battles would hold more historical value, even though the battles themselves do not depict the actual conflict. Rather, they show the divinely pre-ordained collapse of the enemy before pharaoh and his might (O'Connor 2000, 94–100). Thus, the monument, while incorporating aspects that are not wholly true, such as representing the battle as a massacre or the

'Sea Peoples' as unorganised, does tell us something of a historical truth. That truth is that this was a real historical event where Ramesses III fought groups of people coming from islands in the north (O'Connor 2003, 100). In addition to this, Cline and O'Connor add that the reason for the monument was to fulfil the cosmological understanding of the Egyptians, with the pharaoh placing *Ma'at* over *Isfet*. Thus, the unrealistic nature of the battle scenes with the enemies simply collapsing before pharaoh were represented this way in order to fulfil this need. However, they still believe the account's historical validity, stating: 'The success of the Sea Peoples' invasion before encountering Egyptian forces suggests that they were militarily effective on land and sea, and that they may well have had some form of centralised leadership' (Cline/O'Connor 2003, 129–131).

Redford takes a more nuanced view of the Medinent Habu texts. He believes that the Medinent Habu text 'is anything but a sober fact-filled record' (Redford 2000, 7). Redford believes that Medinent Habu reflects the trouble ancient states went through when trying to adulate the king while depicting and describing historical events, as the story described and depicted a history of the king, not history itself. Thus scribes, at times, in order to fulfil the need of the king, invented, borrowed, or lapsed into trite formal jargon while writing these texts (Redford 2000, 2, 8). He states that the monument is filled with generic elements and tokenism, that both the Years 5 and 8 inscriptions do not state regional dates, nor to which date Year 8 refers, no casualties are listed, and that the interface between the texts and images is not tight or precise (Redford 2000, 10–12). The sculptors most likely saw prisoners who were paraded in front of Pharaoh, and from these impressions, they created the imagery on the monument. However, much as with his earlier opinion, Redford still does not discount an invasion of 'Sea Peoples', and he believes they came from somewhere in the Aegean archipelago or from Crete. He also correlates the mention of wars in other countries to the destruction found in the archaeological record with the 'Sea Peoples' as a possible cause (Redford 2000, 12 f.; 1992, 250–255). Roberts takes a similar view, that he sees the monument not as a record of invasion, but rather a record of the actions of

---

38   Singer (1985, 109–122) has suggested that Djahy should actually be placed at the northern border of the Egyptian empire. Kahn (2011, 1 f.) agrees with this interpretation. Thus, the location of Djahy is only another aspect of the text which can be debated.
39   See here for the full texts from Medinet Habu and Papyrus Harris I.

the Pharaoh. It would not matter what the people looked like, or who they were, or where they came from, as the importance of the monument was to portray the Egyptian worldview that Ramesses III would put *Ma'at* over *Isfet*. Roberts states that in the Egyptian New Kingdom, it was important for the Pharaoh to be seen defending the realm from invading forces, and all that needed to be done was to insert relevant peoples into a narrative. In this case, it would have been 'Sea Peoples' from the North or Libyans from the West (Roberts 2009, 60 f.).

Cifola further speculates against the historicity of the Medinet Habu reliefs and text. She believes that, because of the lack of detailed information for the Year 8 battles, it cannot be trusted. This is particularly true for the Land Battle, as she sees no evidence for such in the text. She states that there is no record of the dates of the campaign, there is no identification of an enemy confronted on the ground, there is no rhetorical description of Ramesses' power and might in the battle, and no count of either captives, booty seized, and there is no number for how may hands and penises were taken in the battle (Cifola 1988, 294–303). Cifola believes that, because of these problems with the text, the Egyptians did not fight one single land or sea battle. Rather, they fought many small skirmishes with invaders, and these were later all brought together into one single story. These invaders would have been small bands and not part of a united group of people, and they fought small battles against Egyptian forces over several years (Cifola 1988, 294–303).

Lesko goes another step forward, saying the Medinet Habu Year 8 reliefs and text were simply copied from Merneptah. He points out that some of the scenes from Medinet Habu were copied from Ramesses' II Ramesseum, such as scenes where Ramesses III is fighting against Nubian forces. Ramesses III even reused some of the blocks from the Ramesseum for his mortuary temple. This is compounded in Lesko's view by the similarities between Ramesses' III Year 5 campaign and Merneptah's Year 5 campaign, as both were against Libyans who had allies from the sea, both fought them in the same year, and both Libyan chiefs have the same name. Thus, Lesko came to the conclusion that Ramesses' III Year 8 is

actually Merenptah's and that it was copied from Merenptah's nearby, and now largely destroyed, mortuary temple (Lesko 1992, 154 f.). He believes another important clue to say Ramesses' Year 8 monument was not his own, is that in Ramesses' III temple at Karnak, dating to his thirtieth year, there is no account of the 'Sea Peoples', that it only has traditional scenes of Ramesses smiting Libyans and Syrians (Lesko 1992, 154).

Drews goes even further afield in his views on Medinet Habu. He believes that the Sea Battle refers to raiders from Sicily and Greece joined by men from Palestine who had shaved their beards and donned Aegean style helmets. All of these people were seeking the rich wealth in the Nile valley, and only arrived in Egypt after having destroyed many other parts of the Eastern Mediterranean in their raids. However, the Land Battle had nothing to do with these raiders according to Drews (see *fig. 2.6.*). He believes that there is nothing in the texts to say Ramesses fought a land battle, and that the scene depicting women and children in ox carts are either villagers in Palestine or semi-nomadic Shasu who had trespassed on Pharaoh's land or were caught up in his retaliation against the people of Palestine for being part of the raids (Drews 2000, 181–190). Lastly, S. Sherratt believes the 'Sea Peoples' only existed as part of the Hittite and Egyptian military and diplomatic rhetoric. The scenes from Medinet Habu represent the change from a centralised politico-economic order to a decentralised economic order which steadily encroached on the former system. She goes on to say that the relief is not a depiction of a military campaign, but that it was rhetoric against an economic and political threat which was endangering the theocratic state of Egypt (S. Sherratt 1998, 307).

The Medinet Habu reliefs are the most direct evidence for the 'Sea Peoples' in text. Another source generally referred to is the Papyrus Harris I, which is a testimonial document prepared for Ramesses III by his successor on his death. It was meant to be buried with the Pharaoh, and it in part describes the aftermath of the 'Sea Peoples' invasion (Higginbotham 2000, 55). It is in this text where Ramesses III describes how he defeated the five tribes of the 'Sea Peoples' who were 'like the sand of the shore', and after bringing them as captives to Egypt, he placed them in fortresses
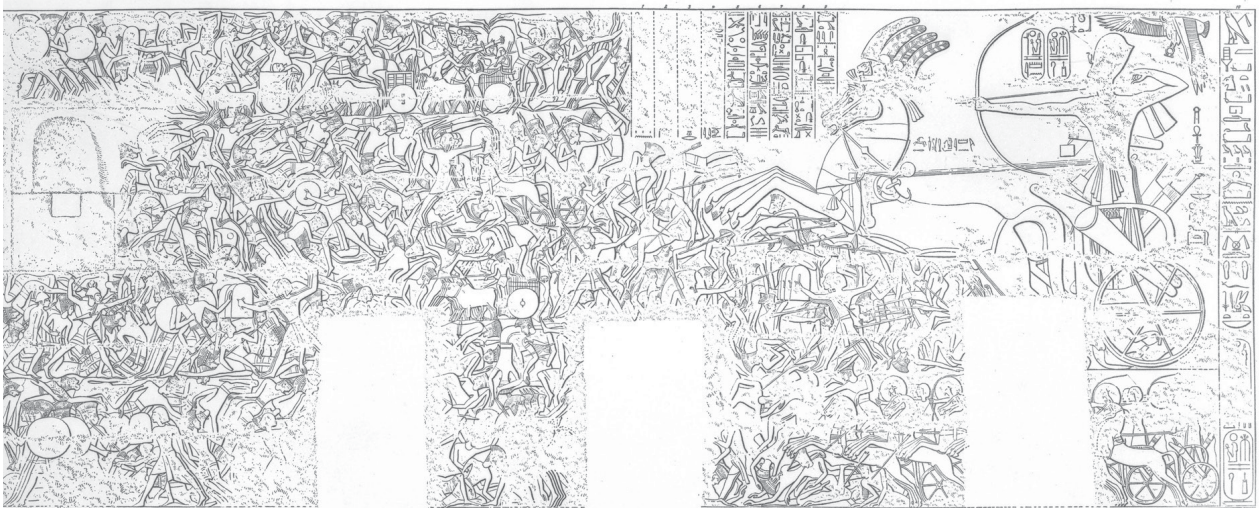
Fig. 2.6. Ramesses III in battle with the land forces of the Sea Peoples (The Epigraphic Survey 1930, Plate 32; Courtesy of the Oriental Institute of the University of Chicago).

at unknown locations (Higginbotham 2000, 55; Cline/O'Connor 2003, 138). Because of this mention, scholars believed that Egypt conscripted some of the defeated 'Sea Peoples' and placed them in Palestine to explain the appearance of the Philistines on the coast of Canaan (Leonard 1989, 34). However, there are problems with this story, as the settlements on the coastal plain in Canaan cannot be categorised as purely 'Philistine', as much of the material culture represents the local 'Canaanite' population. Moreover, it would have been unwise for the Egyptians to place the 'Sea Peoples' in exactly the place they were trying to conquer. If they did indeed place some of the invaders in fortresses, it would be more likely they would be found in Nubia or Egypt proper; however, no archaeological evidence exists for 'Sea Peoples' settlements in either of these areas (Higginbotham 2000, 56). In addition to these problems, Papyrus Harris I suffers from the fact it was written after the death of Ramesses III and thus long after the events it is said to describe. Thus, there are problems even when comparing the text to the Medinet Habu reliefs, as Papyrus Harris I substitutes Shardana mentioned at Medinet Habu with Shekelesh (Cline/O'Connor 2003, 111).

Similar problems are found in the Tale of Wenamun, a much later text from the first half of the 11th cent. BC which mentions one of the tribes of the 'Sea Peoples'. The Tale of Wenamun tracks the journey of Wenamun, a priest of Amun from the temple at Karnak, on his way to Byblos

to obtain cedar wood in 1075 BC. On his way, he stops at *Ḫirbet el-Burǧ* (Dor) and meets Beder the king of Dor who is a Sikil/Tjeker (Ahlström 1993, 300 f.; Stern 2013, 1 f.; Cline/O'Connor 2003, 114; Weinstein 1998, 188). Stern has used this one text to help him create the material culture of the 'Northern Sea Peoples', as he believes it is an accurate narrative of what was going on in the Carmel region during the 'Dark Age'.[40] However, the historical accuracy of the Tale of Wenamun has often been called into question. Lesko believes that the story might be little more than historical fiction or religious propaganda (Lesko 1992, 155). Ahlström doubts whether the story in all its details can be seen as a true reflection of history, and in his opinion, it is a romantic novella (Ahlström 1993, 305). All of this is compounded by the late date of the text,[41] the singular nature of the text, and the fact there is no clear evidence to say a group of 'Northern Sea Peoples' existed, which puts the Tale of Wenamun among the not so helpful sources dealing with the 'Sea Peoples'. Gilboa and Sharon have also detailed how at *Ḫirbet el-Burǧ*, the material culture gradually changes from Canaanite to Phoenician, leaving no room for an invading group of Sikil/Tjeker. They also ask the question: 'If it were not for the serendipity of Mr. Golenischeff acquir-

---

40 Stern 2013, 1–3. See especially the note on pages 2 and 3 where he states why the text can be used.
41 A date which may be much later as Sass 2002 has suggested.

ing a papyrus in Cairo one fine day 120 years ago, would anyone have even suspected that some hitherto unknown peoples inhabited Dor in the Early Iron Age? We say, 'No way'.' (Sharon/Gilboa 2013, 467; see also Bikai 1992).

What I hope to have demonstrated with this short review on the Year 8 inscriptions from Medinet Habu and the other Egyptian texts relating to the 'Sea Peoples' invasion, is that there is by far no consensus on what they mean, how they should be translated, or even their historical accuracy. Yet, it is on these texts that the story of the 'Sea Peoples' is built, and as with any structure, if there is a faulty base, the rest of the building would crumble on top of it. With many different possible meanings for these texts, and the question of the texts historicity, it is impossible to know who is right in this argument and which interpretation is correct. All that can be done is to simply pick a side based on one's own personal beliefs about the 'Sea Peoples' narrative. For this reason, I find the Year 8 inscriptions from Medinet Habu to be, at this time, counterproductive. With eight or more different sides to choose from compounded with the inability to know how much of the monument is copied, propaganda, embellishment, or simply made up, there is no way of knowing which way to use the texts and images in a scholarly context. All we can take away from the monument is that Ramesses said he fought forces coming from somewhere in the north, but even this little information cannot be proven to be true. Any historical facts coming from the Year 8 inscriptions from Medinet Habu do not stem from the monument itself; rather, they come from the minds of the scholars who believe a certain version of how the monument should be understood.[42] Indeed, it may be the case that having these inscriptions may be more of a hindrance to understanding the past and the end of the LBA than a help. Both Roberts (2014) and Middleton

(2015) too find that the inscription cannot be used as the basis for any sort of historical narrative of a mass movement or migration of people (Roberts 2014, 359 f.; Middleton 2015, 49). The same can be said for the Papyrus Harris I and the Tale of Wenamun, as they are fraught with problems and their late dates also make them a challenging tool to use to understand the events at the end of the LBA.[43]

Outside of the dubious historical sources, there are more general theories on the 'Sea Peoples' and their involvement in the collapse of the LBA societies.[44] While these theories include material culture, they are always based on the textual evidence discussed above. Thus, before even beginning, these theories are based on faulty grounds. Nevertheless, in general, the theories concerning 'Sea Peoples' fall under Tainter's 'Poltergeist model' of collapse, where mysterious bands of people come along as a *deus ex machina* sweeping away the declining civilisations of the Eastern Mediterranean at the end of the LBA. Many scholars have claimed that 'Sea Peoples' were part of the reason for the fall of the Hittite Empire,[45] for Ugarit,[46] Cyprus,[47] and the Southern Levant along with Egypt's control over the region.[48] Thus, when taken together, it was the 'Sea Peoples' invasion which brought about the end of the LBA. What will follow here is again only a brief look into this complex subject, which is still an ongoing area of research in many different fields, as no one answer has been found for any question involving the 'Sea Peoples'.

The first of these issues is locating the origins of the 'Sea Peoples', and this has been an

---

42 This is a very critical view of the research on the Year 8 inscriptions from Medinet Habu. However, it is justified as even when authors such as Redford (2000) or O'Connor and Cline (2003) say not enough critical work has been done on the monument, one finds they also fall into the same traps as before. At certain times, one must step back and look at what the monument says or does not say, and in this case, I believe it does not say half as much as many scholars claim it does.

43 For a review of the Ugaritian sources which may discuss 'Sea Peoples', see Knapp/Manning 2016, 118–120.

44 T. Dothan 1982; Sandars 1987; T. Dothan/M. Dothan 1992; Oren (*ed.*) 2000; Yasur-Landau 2010a; Killebrew/Lehmann 2013 amongst many other articles and large sections of books dealing with Egypt, Cyprus, Anatolia, Ugarit, Greece, and the Southern Levant during the LBA/Iron Age transition and the actions of the 'Sea Peoples' in those regions.

45 Singer 2000, 27; Yakar 2006, 39–44; Collins 2008, 77–80; Beal 2011, 595 f.; Sams 2011, 604.

46 Dever 1992, 103; Singer 1999, 721–733; Liverani 2003a, 34–37; Yon 2006, 21; Jung 2010, 177.

47 Sandars 1987, 141; Bunimovitz 1998, 106; Singer 1999, 722; Karageorghis 2000, 274; Steel 2014, 586.

48 Weinstein 1981, 22 f.; Ussishkin 1985, 224; Leonard 1989, 23–34; Mazar 1990, 287 f.; Dever 1992, 103–107; Gonen 1992b, 215; Redford 1992, 244–255; Bietak 1993, 292–301; Falconer 1994, 308; Stager 1995, 332–346; Ussishkin 2008, 206–212; Stern 2013, 5 f.

impossible task, as scholars have tried to rely on the vague textual and material culture, both of which are problematic. Scholars have tried using the names recorded in the Medinet Habu inscriptions to find the place of origin or final place of rest for the 'Sea Peoples', such as the Shekelesh and Tjekel/Sikil coming from the island of Sicily (Drews 2000, 180–182).[49] However, when trying to use the Egyptian names to find places of origins, Cline and O'Connor point out, there is a problem when using their Egyptian spellings, as they do not contain vowels, which makes finding connections to later place names difficult if not impossible (Cline/O'Connor 2003, 109). They go on to say, 'the questions remain: who is giving which names, and on what grounds, to whom in this Egyptian reflection of history?' (Cline/O'Connor 2003, 109). Of the nine 'tribes' of 'Sea Peoples', it is only potentially possible to locate the Lukka, as this name may refer to the people group in southwestern Anatolia by the same name. The Lukka are mentioned in earlier Hittite and Alasiyan texts and are generally located in southwestern Anatolia. However, to date, no material culture has been found which could be associated with the Lukka people, and thus they only exist in texts (Cline/O'Connor 2003, 111).[50] Finally, Voskos and Knapp believe the search for the 'Sea Peoples' origins through their names is a futile effort. They believe the names cannot be connected with any specific ethnicity given the mutable nature of ethnic identity, and thus cannot be connected with an ethnic group or their material culture (Voskos/Knapp 2008, 664).

Outside of the direct textual evidence, Raban used the depictions of the 'Sea Peoples' ships to indicate they might have come from the Aegean, believing that the boats were a modified version of the Aegean lightweight galley (Raban 1988, 264–271). Wachsmann uses the same depictions of boats to connect at least some of the 'Sea Peoples' with the Urnfield culture from central Europe

believing they took part in this mass migration via ship (Wachsmann 2000, 137). Other places of origins for the 'Sea Peoples' are Northern Syria or Western Anatolia as groups of people moved, fled, or attacked as the Hittite Empire crumbled. The dissolution of the Hittite Empire is, according to Sandars, the reason for much of the population movement, though it also would have been combined with groups of people coming from the crumbling Aegean world. Bryce also supports this view of the origins of the 'Sea Peoples', as he believes that marauding groups of people broke free from the crumbling empire. While the 'Sea Peoples' were not the cause of the collapse, according to Bryce, they were a symptom and they may have helped to accelerate the process (Bryce 1998, 372 f.). However, the more traditional view is rooted in the idea that peoples from the Aegean were the true bulk of the 'Sea Peoples' phenomena.

The most recent of these theories was proposed by Yasur-Landau. In Yasur-Landau's view, the people of the Aegean knew about the Southern Levant for many years, as members of their tribes had worked in the armies of pharaoh, traded with other people from the Levant, sought out information about these foreign lands, and some traders might have lived in the region to bring back information (Yasur-Landau 2010a, 205–207, 325–329). At first, only scouts would have been sent, followed by the initial settlers, and then the main migration which would have moved across land and sea, a process which would have taken several decades (Yasur-Landau 2010a, 3171). While Yasur-Landau does not believe there was one great mass migration, he does believe that peoples from the Aegean gradually migrated through Anatolia, the Levant, and Cyprus and came in a multiple step process. However, as the Aegeans were moving through these different lands, other groups of people joined them on their journey, thus creating a mixed multitude. He claims that this mixing of people was mainly men taking women as their wives and he bases some of this on an examination of the female hairstyles at Medinet Habu. The women shown in the carts are claimed to have hairstyles ranging from Nubian, Syrio-Canaan, Anatolian, and one possible example of an Aegean hairstyle, while the men all wear the traditional feather headdress or horned helmet of the 'Sea

---

49 Drews points out that the Shekelesh and Tjekel may have been the same people group who were given different renderings to their name at different times with Sikil being a different spelling for Tjekel. This notion is also supported by Cline/O'Connor (2003, 115).

50 Seven years later, there is still no change as Yasur-Landau believes the etymological evidence is at best unfocused and ambiguous (Yasur-Landau 2010a, 182).

Peoples' (Yasur-Landau 2010a, 173). Their settling in the Southern Levant is what led to the birth of the Philistine material culture, as it represents a mixture of the local Canaanite and Aegean elements which also seems to denote a peaceful migration rather than a forceful one (Yasur-Landau 2010a, 288, 329).

While Yasur-Landau's theory is perhaps a softer version of previous views with 'Sea Peoples' destroying everything in their paths, it is supported by the same evidence. This is of course the material culture with elements connected to foodways being claimed as the strongest evidence towards an Aegean migration. One such aspect is the hearth, which represents a style of cooking where a flat bottom cooking pot or a tripod cooking pot would be placed on the flat surface of the hearth to cook, as was common in the Aegean (Yasur-Landau 2010a, 130, 236–239; Stager 1995, 346; Karageorghis 2000, 266–274; 1998, 276–282). Aegean style hearths have been found on Cyprus and in the Southern Levant. Along with these hearths are new forms of cooking pots, though no tripod cooking pots have been found on Cyprus or in the Southern Levant, along with local Canaanite wares all appearing after the LBA/Iron Age transition (Yasur-Landau 2010a, 123–130, 236–240). Thus, while some aspects of culture would be left behind in a migration, the demands for local foods would not, and what is represented in the material culture record is a mixing of foreign and local foodways. Another typical aspect associated with the appearance of 'Sea Peoples' in the Southern Levant are cylindrical loom weights (Yasur-Landau 2010a, 132 f.; Stern 2013, 62; Maeir 2013, 204). Recently, DNA analysis of pigs from the Southern Levant have been used as evidence of 'Sea Peoples' (Meiri *et al.* 2013). While these material cultural changes have been used as evidence for the 'Sea Peoples', the most ubiquitous and often cited piece of evidence for the 'Sea Peoples' migration is Myc IIIC, Myc IIIC:1b, LH IIIC:1b, or Philistine monochrome pottery.

Locally made LH IIIC:1b pottery is a common element of any argument on 'Sea Peoples'. The appearance of this pottery on the coasts of Anatolia, Cyprus, Syria, and the Southern Levant has been the strongest argument for the appearance of the 'Sea Peoples'. It has often been noted that

there was a break with the previous ceramic traditions practically speaking of the Southern Levant, which would indicate the influx of a new culture (T. Dothan 1998, 148). Pottery from the Aegean was certainly not uncommon in the LBA, as it was a product of interregional exchange. These items were made in the Aegean and then shipped to other parts of the Eastern Mediterranean during the 14th and 13th cent. BC. However, during LC IIC on Cyprus, locally made imitations of Aegean pottery were being made and shipped to the Southern Levant and regions of the Eastern Mediterranean (Killebrew 2008, 56; Yasur-Landau 2010a, 140).

Beginning in the Iron I on the coastal plain of the Southern Levant, locally made LH IIIC:1b pottery was found at Tel Miqne/Ekron, Ashdod, *Tell eṣ-Ṣāfī* (Gath), and Ashkelon among other sites. The pottery was proved to be locally made, as at Ekron it was found in a potter's kiln, and petrographic analysis also demonstrated it was made from local clays (Killebrew 2013, 87; Dothan/Ben-Shlomo 2013, 30). According to Killebrew, this LH IIIC:1b pottery most closely resembles LH IIIC pottery manufactured on Cyprus during LH IIIA (Killebrew 2008, 58). However, Yasur-Landau claims that this LH IIIC:1b pottery from the Southern Levant most closely resembles the pottery from the Aegean, as he claims there are certain Cypriot forms which are not found in Philistia which, if they were from Cyprus, should be included (Yasur-Landau 2010a, 263, 326). Nevertheless, whether they are Aegean or Cypriot forms, the appearance of new cooking jugs, and the motifs which are not like the local motifs, have all suggested the sudden appearance of new peoples in the Southern Levant. However, this process seemed to have occurred more gradually in other areas of the Eastern Mediterranean (Stager 1995, 335; Killebrew 2008, 59 f.; Dothan/Ben-Shlomo 2013, 33). Nonetheless, much like with all parts of the 'Sea Peoples' narrative, the ceramic evidence is mired in problems and definitions.

One problem which has plagued the research of LH IIIC:1b is the origin of the style. Yasur-Landau claims the pottery comes from the Aegean (Yasur-Landau 2010a, 263). However, Rutter has demonstrated that while some of the forms appear to be Aegean, there are many important Aegean forms which are missing. Such features range

from vertical handles which were common in Greece but have not been found in the Southern Levant, and several important cooking forms are not present in the Levant (Rutter 2013, 553–555). Rutter goes on to point out that while the most predominate motif in Philistia was the bird and less so the fish, both of which can be found on the Greek mainland, there were many more motifs which existed but are simply not present in Philistia (Rutter 2013, 556 f.). Yasur-Landau, however, strongly disagrees with these points, as he believes that the pottery of the Southern Levant represents a full assemblage even if they do not have as many types as those found in the Aegean (Yasur-Landau 2010a, 263). He says, 'Claims of the meaningful absence of some LH IIIC types from the Levantine assemblage should be dismissed' (Yasur-Landau 2010a, 263). While Yasur-Landau stakes his claim in Aegean forms, Killebrew focus on the similarities between the White Painted wheel-made III pottery from Cyprus and LH IIIC:1b pottery on the Southern Levant. She claims that, because of the similarities between the two pottery styles, at least some of those found in the Southern Levant may have had origins on Cyprus (Killebrew 2008, 54–65; 2013, 79–95). Stern also claims Cypriot origins for the material culture from Ḫirbet el-Burǧ and other sites in the Carmel region (Stern 2013, 27–41).

More recently, Gilboa and Sharon have claimed the pottery at Ḫirbet el-Burǧ reflects not an invasion of people, but rather a gradual change over time (Sharon/Gilboa 2013, 393–468). Lehmann has made a similar claim about LH IIIC:1b pottery in the Northern Levant, as he believes the Aegeanising pottery in Syria is the result of continued cultural change rather than short term invasion (Lehmann 2013, 265–328). In addition to all this, there remains the problem of definitions. The issue is that at a site like Tel Miqne/Ekron, forty to fifty percent of the pottery is 'Canaanite', and this can be found at all of the five cities of the Philistine Pentapolis (Dothan/Ben-Shlomo 2013, 32; T. Dothan 1997, 100; Stager 1995, 334). Even Stager, who ardently believes in a large influx of 'Sea Peoples', notes that the Philistine Bichrome pottery which appears starting in 1150 BC has influences from the LB I Canaanite Bichrome wares, and that it has certain Egyptian motifs such as floral

patterns. He states the forms of the Philistine Bichrome pottery were influenced by pottery found in Canaan and Cyprus along with those from the Aegean (Stager 1995, 335). However, whether it was the result of hybridisation or something else cannot be said. Overall, the question of where the pottery styles came from along with the other types of material culture still has no answer. Whether it came from the Aegean, Cyprus, or was a hybridisation is still unclear, even after decades of research. LH IIIC:1b pottery has become so ubiquitous in the 'Sea Peoples' arguments that Gilboa and Sharon have gone so far as to call it 'the tyranny of Myc IIIC:1b Early and so forth' (Sharon/Gilboa 2013, 465).

In a recent article, Middleton (2015) has demonstrated that none of the traditionally used markers of Aegean origins for the 'Sea Peoples' conclusively points to a migration event beginning in Greece (Middleton 2015). He states: 'This brief survey suggests that no archaeological evidence, and no category of evidence, alone or in concert, is enough to prove beyond doubt that any Mycenaean or Aegean migration took place, nor that such people 'became' Philistines. Philistine material culture is clearly a bricolage that draws inspiration from a number of sources; it does not reflect in any simple way the ethnicity of its makers/users, the majority of whom seem likely to have been local' (Middleton 2015, 59).

While Middleton doubts any kind of Aegean migration, there are some pieces of evidence outside of material culture which may point to some people arriving in the Southern Levant from the Aegean. A study conducted by Meiri *et al.* found that modern day pigs and boars from Israel have European pig DNA. They went on to analyse pig bones from archaeological excavations, and found that around 900 BC, pigs in the Southern Levant started to have European pig haplotypes in their DNA. From their research, they say there is also some evidence of this process beginning in the Iron I period. The authors of this study suggested that the migrating 'Sea Peoples' brought their pigs with them, and over the course of 250 years, the European pig DNA became more prevalent in the pigs of the Southern Levant and is now prevalent in modern day pigs in Israel. In addition to this, only the pigs from modern day Israel

have the European pig haplotypes, and it is not found in other regions such as Egypt, Syria, Turkey, Armenia, Iraq, and Iran (Meiri *et al.* 2013, 1–6). Moreover, plants from the Aegean begin to appear in the Southern Levant during the 12th cent. BC (Frumin *et al.* 2015, 1–9). This is certainly not conclusive evidence that people from the Aegean arrived *en masse*, though it does leave open the possablity that some people from the Aegean did arrive in the Southern Levant at the end of the Late Bronze Age. At *Tell eṣ-Ṣāfī* (Gath), recent radiocarbon dates place the arrival of the locally made LH IIIC pottery in the 13th cent. BC rather than in the 12th cent. BC though these results have recently been challenged by a separate set of radiocarbon dates derived from Tel Azekah (Asscher *et al.* 2015a, 846–848; Webster *et al.* 2018). Thus, as Hitchcock and Maeir suggest, the arrival of the 'Sea Peoples' would have been a long drawn-out process rather than a single influx (Hitchcock/ Maeir 2014).

What is now hopefully clear are the severe problems with the 'Sea Peoples' narrative and its use as a theory for the end of the LBA. Both the textual and material culture sources are plagued with theoretical issues, unanswered questions, hot debate, and staunch personal opinions. Neither group of evidence is strong nor conclusive by itself; when put together, they only create a theory which cannot stand. Scholars like van de Mieroop state: 'They [the Sea Peoples] did exist and caused trouble, but we no longer regard them as the sole and crucial factor that ended the Late Bronze Age' (van de Mieroop 2010, 246). However, the evidence is still not clear if the 'Sea Peoples' even caused trouble, as destruction layers have often times been used to demonstrate the violent influx of the 'Sea Peoples'. Yet, there is very little evidence of destruction events in the Philistine Pentapolis or elsewhere along the coast and inland of the Southern Levant (Millek 2017, 118–132). While there is a clear phenomenon which occurs across great spans of the Eastern Mediterranean, it is my opinion that we are still far away from understanding this phenomenon. What the texts really mean, where the new material culture styles originated, whether or not there was a hybridisation, whether or not large amounts of people moved, whether or not ideas moved without the

people they originated with, are all problems with no clear answers. However, there is still an even deeper problem with the 'Sea Peoples' theory, and that is its roots in the Victorian Period.

As Silberman so eloquently demonstrated, the influx of Aegean peoples into Egypt and the surrounding area was seen in the Victorian Period in the context of social Darwinism. This view saw superior races moving and replacing the inferior ones for whatever reason they might have had for relocating (Silberman 1998, 269 f.). The concept also fitted well with the idea and belief in European expansion (van de Mieroop 2010, 246). It was believed the Philistines or 'Sea Peoples' were the cultured race coming from Europe who replaced the barbarous 'Canaanites'. However, during the Late Victorian and Early Edwardian Periods and on the eve of World War I, there was a growing fear of invasion, and many books were written on the subject. Thus, this fear of invasion was transferred to the idea of the 'Sea Peoples' who were pictured as a barbarian force with the latest in military technology (Silberman 1998, 270–272). As Middleton describes it: 'The rest is the product of modern interpretation and over a century of accumulated scholarship' (Middleton 2015, 49).

2.6.2. Robert Drews and the Catastrophe of the Late Bronze Age

Robert Drews' book 'The End of the Bronze Age: Changes in Warfare and the Catastrophe ca. 1200 B.C.' details his version of exactly what occurred throughout the Eastern Mediterranean at the end of the LBA. While this theory is rather different than that of the 'Sea Peoples', it does invoke some of the same evidence and ideas, such as 'Sea Peoples' and the previously discussed textual evidence. Drews calls the events beginning in the last quarter of the 13th cent. and ending around 1175 BC 'the catastrophe' (Drews 1993, 4, 7). He describes the events which took place at this time as 'arguably the worst disaster in ancient history, even more calamitous than the collapse of the western Roman Empire' (Drews 1993, 3). The general idea of Drews' narrative revolves around a change in warfare and military technology. He believes that during the LBA, the main fighting force

of any army from the Aegean to Egypt was the chariot. While other scholars would argue that the chariot was the supporting element in an army, Drews disagrees. According to him, there was no large standing army of infantrymen, as foot soldiers would have only been used to fight against small guerilla factions or would have acted as runners during a battle. However, in a fight between the Great Kings, the battles would have taken place on flat lands where two chariot troops from the opposite armies could rush each other, while archers standing on the chariot platforms would fire arrows at the opposing army. If any person fell from a chariot, or if a chariot broke down, then the runners or infantry would come and kill the fallen charioteer. Drews claims this is in general how the Battle of Kadesh played out, and despite the possible 8,000 to 19,000 infantrymen on the Hittite side, they would not have played much of a role in the battle, as it was mainly a place for the charioteers to fight (Drews 1993, 97–148).

Drews claims that this style of warfare lasted throughout the LBA until the closing years. He states that a change in warfare can be seen in Merneptah's battle against the Libyans in his fifth year, Ramesses' III battle against the Libyans in his fifth year, and his battle against the 'Sea Peoples' in his eighth year. According to Drews' interpretations of these battles and their reliefs, he claims that the invading armies were mainly foot soldiers and that both pharaohs fought against large numbers of infantrymen. He uses the number of dead recorded for both year five battles, as Merneptah claimed to have killed around 9,000 invaders and Ramesses III some 12,535 invaders (Drews 1993, 20 f., 158–163). While these invaders might have been a problem before, Drews claims these barbarians and raiders were armed with new forms of military technology such as greaves, corselets, round shields, the Naue Type II sword, and javelins which were well suited for hand-to-hand fighting. Armed with these new weapons, the raiders would have used surprise attacks to catch their enemies off guard. From there, when the chariot troops came out to fight, the raiders would have fought against them with long javelins, killing the horses and leaving the rest to close-range combat. However, empires like Egypt would not have had a standing army to defend against this style of

warfare, and they also would have fallen against the new slashing and thrusting Naue Type II sword which was brought from Northern Italy (Drews 1993, 173–211).[51]

In Drews' view, regular people who had been under the oppression of the great empires of the LBA at some point in time realised they had the weapons in hand to destroy them and to take what they wanted. All they needed to do was to attack *en masse*, as they found the empires chariot based armies could not stand against surprise attacks or their new weapons. From here, Drews claims that it was no single force which brought about the 'catastrophe', rather it was separate groups of raiders and local peoples who brought about the end of their respective regions. Greece fell to attackers from less civilised northern Greece, Troy also fell to attackers from the north, Ugarit fell to raiders who came by sea, as Drews claims several thousand men could have fit into only thirty to forty boats, and these fighters would have continued down through Syria. Parts of the Southern Levant fell to the 'Philistines' who Drews claims were not a foreign group of people. Rather, they were the traditional people who lived in the hinterland surrounding the Pentapolis. The region surrounding *Ḫirbet el-Burǧ* was taken by other groups of raiders such as the Tjekru or the Denye, who Drews believes was the later tribe of Dan. Other cities in the Southern Levant such as Hazor, Lachish, and *Tell Dēr ʿAllā* had fallen to 'Israelites' who, in Drews' mind, were seminomadic tribesmen who scraped by in the hill country flanking the central Jordan Valley (Drews 1993, 209–220). Then, at the end, raiders from Sicily and the 'Philistines' came to attack Egypt as they sought to capture 'cattle, gold, women, and whatever else caught their eye' (Drews 1993, 221). However, Ramesses III was able to improvise, and put his chariot force in a secondary position allowing him to stem the tide of the raiders who had already plundered most of the rest of the Eastern Mediterranean. After this turning point in warfare, chariots were abandoned as the main military force, and hand-to-hand combat featuring the Naue Type II sword first made of

---

51 See also Jung/Mehofer 2009 for a discussion on the origins of the Naue Type II sword.

bronze and then later of iron, was adopted by the surrounding countries (Drews 1993, 221–225).

This theory falls under both Tainter's insufficient response to circumstances and poltergeist models of collapse. The problems which Tainter described for those theories fit very well with Drews' model; however, those are not the only problems which run rampant in this theory. Littauer and Crouwel point out the main weakness of Drews' argument which is his assertion that chariots were the central weapon of war during the LBA. They note that chariots were costly to build and maintain, as was the training of charioteers (Littauer/Crouwel 1996, 298). This problem of cost would have kept them as a minimal part of warfare or hunting. In addition to the cost problem, there is also the issue of how Drews describes chariot warfare as two companies facing each other, rushing each other, turning around, and repeating the process until one line is broken. This style of warfare would have been impossible, as it would have destroyed both one's own chariot and the enemy's. Chariot axles projected out 25cm on either side of the chariot, meaning that, in order to avoid crashing into one another, the chariots would have needed to have been perfectly spaced apart from one another. However, if one chariot fell, the formation would have been broken, causing a pile up of both friendly and enemy chariots. Drews' chariot warfare also would not have been suited for large regions such as in Greece, where rough and broken terrain would not have allowed for this type of warfare to take place; thus leaving only hand to hand combat as an option (Littauer/Crouwel 1996, 298 f.).

Haggis also finds that Drews has compressed time in his narrative of the 'catastrophe'. While Drews finds the change to armed hand-to-hand combat a very rapid change, in reality, according to his own theory, it took place over a 100-year time span, which encompassed many generations of people and which would have been more than enough time for the empires to adapt to changes in warfare (Haggis 1995, 323 f.). Dickinson also asks, if these barbarians did attack, where did they go afterwards, and where is the evidence for their existence in the material culture? Why, if they were the most powerful military force in the Eastern Mediterranean, did they not continue on as a

powerful force for generations to come? Additionally, how can we know that the raiders were the first to adopt this new military technology, and not the empires who Drews claims were crushed by it? (Dickinson 2010, 488 f.). Another problem Drews faces is that his theory does not explain why the empires fell; he does not address the culturally specific variables for each region he discussed, or the socio-political and economic factors which were sure to have played some kind of role in the collapse (Haggis 1995, 324; Littauer/Crouwel 1996, 300). Drews also explains neither how a large group of people were able to obtain the bronze to make massive amounts of swords, armour, and javelins heads, nor how these groups were able to amass this armoury without being noticed by the local rulers.[52]

Outside of these problems, Drews' theory succumbs to many more severe issues. One of these is his reliance on the very few textual sources available, specifically those dealing with the 'Sea Peoples' on which he bases his theory. I have already demonstrated the major problems with these texts, and their laudatory nature. They were not meant to be an accurate depiction of a battle or warfare, rather they were intended to make the Pharaoh appear to be mighty, fitting his position as a god on earth. Drews even acknowledges the problem that the LBA texts do not give a picture of warfare and that his extrapolations are only guesses. While guesses and inferences are an important part of archaeological research, there is also a point in which they go too far, and this is true of Drews. In wanting to prove his theory, he has stretched, selectively picked, and abandoned evidence not based on their merit, rather solely on what he could use to further his theory. One good example of this is his use of the textual evidence. In arguing that the Greeks during the LBA used chariots as their main tactical weapon, Drews claims the writings of Homer are wrong. Homer does not describe the use of chariots in war, which would lead most scholars to believe that if Homer's writing correlate to the LBA in Greece, then the chariot

---

52 Drews does state that some of the barbarians would have been armed by the empire they were employed by, but this does not explain how massive amounts of people could have been furnished with weapons.

was not the main weapon of war. However, Drews believes that Homer was simply ignorant of chariot warfare, as the chariot was no longer important in his time, since the oral tradition of Greece did not keep this information (Drews 1993, 117 f.). Nevertheless, Drews uses poems from India dating to the 1st mill. BC to describe how chariots would have been used in Greece and other parts of the Eastern Mediterranean. He claims that the people in India had a better oral tradition than the people in Greece; however, neither of these claims are based on any real evidence (Drews 1993, 125). To Drews, the people of Greece forgot about chariot warfare as it would further his model, as these assumptions are not based at all on anything remotely factual, there being nothing archaeological to support this claim. Moreover, the same can be said for one of the key pieces of evidence Drews presented for his catastrophe narrative. That is, the widespread destruction events throughout the Eastern Mediterranean.

Drews lists nine sites in the Southern Levant destroyed at the end of the LBA, and more in the text. While he claims that these destructions are not the cause of the 'collapse', he does see them as part of it and a signal for his view of massive warfare (Drews 1993, 4). However, a number of the sites he claims were destroyed have no destruction events, such as Acco, Ashkelon, and *Tell Ğemme*. In the case of *Tell Dēr ʿAllā*, while Drews claims the site was destroyed by the 'Israelites' (Drews 1993, 220), there is clear evidence that the small sanctuary was destroyed by an earthquake.[53] Moreover, Drews has compressed time in his map of destruction. For example, the destruction of Hazor which took place around 1250 BC is listed at the same time as sites like Megiddo and Beth-Shean, whose destructions both occurred around 1130 BC. These events have been artificially compressed together as at least 100 years separates them, meaning not only would all the people involved in any way with the destruction of Hazor be dead, but most likely all of their children would be as well, and even many of their grandchildren. Consequently, the separation between these events is not one

lifetime, but several, and by the time any destruction event occurred at Megiddo or Beth-Shean, the destruction of Hazor was already history. Taking another example, the 701 BC destruction of Lachish (Ussishkin 1982) would not be put together with the 604 BC destruction of Ashkelon (Stager 2011), because the historical sources indicate these destruction events occurred because of different means, empires, and people, even though they are only separated by ca. 97 years, not the possible 120 years between the destruction of Hazor and Megiddo.

To Drews' credit, a large section of his book is devoted to re-examining the theories for the end of the LBA in the Eastern Mediterranean, demonstrating many of the issues inherent in these other theories. However, Drews' narrative too falls to many of the same problems of over estimating evidence, placing weight into an idea that is not supported by the archaeology or simply making inaccurate statements.[54] All in all, while there are many interesting references and a great deal of information about warfare, one cannot know how much of it can be trusted, as it was placed into the book through a heavy set lens, trying to squeeze out an answer which simply does not fit the archaeological or the historical record.

2.6.3. Systems Collapse or the Straw that Broke the Camel's Back

One of the more popular theories for the collapse of the LBA Eastern Mediterranean is systems collapse. While this term is often used, it can have different meanings depending on whether the system collapse came about through a world system or Peer Polity Interaction. Thus, whenever one comes across a theory invoking a system collapse, it should always be noted what the underlying

---

53 For a full description of all of these 'destruction' events, see chapter 5 and Millek 2017.

54 One example of this is when Drews states that Kition was destroyed at the end of the LBA (Drews 1993, 11 f.). In his citation, he lists Karageorghis 1992. However, when looking at the reference, Karageorghis states: 'At Kition, major rebuilding was carried out in both excavated Areas I and II, but there is no evidence for violent destruction; on the contrary, we observe a cultural continuity' (Karageorghis 1992, 80). This is a blatant contradiction and the exact opposite of what Drews has claimed the same with several of the 'destruction' events in the Southern Levant.

theory for this system is. Nevertheless, no matter which theory is invoked, a system collapse is typically defined as 'when a failure in one of the closely interrelated social subsystems of a complex society affects other social and economic institutions, resulting in a domino-like breakdown of the entire system, including patterns of production and established trade networks' (Killebrew 2005, 36). With the mention of the word 'trade', it is clear systems collapse will be important to this overall discussion. Several theories exist which bring about the end of the Bronze Age because of a break in trade which caused a systems collapse. This topic will be a major theme in the coming chapters and will be examined in more detail. However, in this section I will examine some of the tenets for both the world system and Peer Polity Interaction system collapse theories. Additionally, systems collapse is often times combined with other theories, such as the 'Sea Peoples', climate change, earthquakes, raiders, amongst other factors. These theories will combine the system collapse as the secondary part of the theory to explain the collapse, with the prime mover being one of the above which resulted in a system collapse.

World systems theory came about in the 1960s and 1970s as a new method of examining interconnected economic relations within modern day societies. The model became popular in the social sciences as it mixed both systems theory and a Marxist perspective, and it was used to study the development of economic and social relations (Killebrew 2005, 23). This theory was originally used to study capitalist societies, but soon it was applied to pre-capitalist societies, and back to the Bronze Age in the Eastern Mediterranean. The world systems theory is based on the ideas of the **core** and **periphery**, where an economic core exploits peripheral regions, while these peripheral regions are then closely contacted to the economic core. Outside of the **core** and **periphery**, there is also the **semi-periphery** which served as an in-between or middleman between the core and the periphery. Lastly, there is the **external zone**, or those areas which are not contacted to the system (Killebrew 2005; Renfrew 1987, 133 f.). In the case of the LBA world system it is argued that, Egypt, Hittite Anatolia, Assyria, Babylon, and parts of Mycenaean Greece would have acted as cores,

Cyprus, Cilicia, the Dodecanese, and some major city states in the Levant acted as semi-peripheries, and the remaining portions of the Levant, and the marginal areas of Egypt, Anatolia, and the Aegean were the peripheries (Killebrew 2005, 24–31).[55] This view placed the 'Great Kings' at the top of the economic cores, who then exploited the peripheries which they controlled, while the semi-peripheries acted as go-betweens for the cores or for the core and periphery, as the semi-periphery could serve as a buffer between the core and the pressures coming from the peripheries (Killebrew 2005, 23 f.). Killebrew constructed this world system, based on the interregional exchange networks seen in the treaties between the LBA 'Great Kings' (Killebrew 2005, 37–42).

Frank also suggested a world system in the Eastern Mediterranean which he stretches over several thousand years. In his model, there is an economic cycle of ascending and descending phases which took place over the course of hundreds of years. For the case of the LBA, he describes that from 1400 through 1200 BC, the Eastern Mediterranean entered into an economic ascending phase which was abruptly stopped around 1200 BC. This collapse brought the Eastern Mediterranean world system into an economic descending phase which lasted from 1200 to 1000 BC, otherwise known as the 'Dark Age' (Frank 1993, 389–397): Several different causes have been given as to why this world system broke down. Killebrew summarises the possible causes for a system collapse as 'Drought, plague, reduction in arable land, increase in nomadism, the revolt of peasants, the defection of mercenaries, an increase in social problems, overpopulation or depopulation, or a combination of several culprits mentioned above' (Killebrew 2005, 36). All of these suggestions have been used to some extent or another, and here I will only focus on some, as others will be discussed in the remainder of this chapter and in the following chapters.

Betancourt suggested Mycenaean Greece fell because of a disruption of the palace system. This disruption was caused perhaps by invasions or

---

55 Killebrew does not include Mitanni, though it would seem logical that it should be included as a core area at least until it was subdivided between the Hittites and Assyria.

also drought, but once the system failed, it caused people to move and migrate. This would have only made the situation worse in the remaining parts of the Eastern Mediterranean, causing general system collapse (Betancourt 2000, 300 f.). Dever also suggests a system collapse for Palestine, citing problems with subsistence which were coupled with old technology, a corrupt and ill fitted administration, and the movement of peoples, such as the 'Sea Peoples', all brought about a systems collapse (Dever 1992, 107). Frank suggests it was the introduction of iron weapons and tools coupled with the movement of peoples at the end of the LBA which broke the system (Frank 1993, 397–443). Haggis briefly mentions Drews' theory and applies system theory stating that a 'gradual change in the role of the foot soldiers from 1275 to 1176 acted as positive feedback to the equilibrium of the palatial system, ultimately changing the military role, prestige, and power of the nobility and royal elite', which over time could have led to a system collapse (Haggis 1995, 324). Liverani does not point to one single system collapsing. Rather, he believes that each region's system collapsed for region-specific problems. However, in general he believes internal and socio-economic factors were preeminent over external factors such as migrating people (Liverani 1987, 69 f.).

World system theory has a general appeal, so much so it may go unquestioned that a tight interwoven system existed in the LBA Eastern Mediterranean. This is the case in several recent volumes where the LBA system is taken for granted, based on a maximal interpretation of limited evidence (Monroe 2009, 284–298; Cline 2014, 160–163; Knapp/Manning 2016). Yet, there are still many questions which must be answered, as they are crucial for any argument invoking world system theory as a means for collapse. Hall and Chase-Dunn noted that there is the ever-present problem of defining what the key factors of interconnectedness were (Hall/Chase-Dunn 1993, 125). For the LBA, trade and interregional exchange have often been cited as the interconnecting factors between the various regions of the Near East and Eastern Mediterranean. However, this 'connection' is often times based on the maximal interpretation of minimal evidence, or the use of the archaeological adage 'absence of evidence is not evidence of absence'. Thus even when entire sections of evidence are not apparent in either the archaeological or historical records, these gaps are filled in with 'informed imagination' (S. Sherratt 2010, 91). The ideas of contact and connections are often taken as the same process. This, along with historical and archaeological evidence, will be presented in the following chapters to examine in part the idea of this world system based on interregional exchange, which may not be as strong as it is often times assumed to be. Moreover, aside from contact vs. connection, Hall and Chase-Dunn also point out the problem of defining 'Systemness'. They give the example of sweet potatoes reaching Hawaii from Peru which had a large impact on the islands' ability to cultivate large semi-arid regions. However, this could have come about through diffusion and not a world system (Hall/Chase-Dunn 1993, 126).

In response to some of these difficulties, van de Mieroop believes there was no world system during the LBA based on the core and periphery system mentioned above. He states: 'We cannot say that the economies were tied together with a technologically advanced core taking advantage of the periphery exploiting it for its resources and turning production into a supply system … all countries provided raw materials as well as expertise' (van de Mieroop 2010, 230). He goes on to say there was no pre-capitalist world system in the Eastern Mediterranean, but the region acted under Peer Polity Interactions. He believes that each region was in some way equal to each other, whether that was in terms of political and military power, or in their ability to produce specialised crafts, or art. Thus, for each polity to survive, they needed the resources of the other polities. They maintained this through a common worldview and identity, which he says can be seen in any of the political correspondences from the period (van de Mieroop 2010, 230–233). However, this system that the Peer Polity Interactions creates can also suffer from a system collapse. As Renfrew and Cherry note, Peer Polities typically collapse in groups. Single complex entities part of Peer Polity Interaction do not collapse alone, as interconnected economies could cause all to fall if one falls (Renfrew/Cherry 1986, 155). Thus, in van de Mieroop's view, the reason the LBA Peer Polity system did not fall when Mitanni was conquered

was because it was immediately absorbed into the Hittite empire and Assyria, leaving the balance of power with the *status quo* (van de Mieroop 2010, 234). In general, the Peer Polity system can collapse due to similar reasons as a world system; however, the way in which these regions interacted differ depending on which model one uses.

While more issues with system collapse will come up in the course of this discussion, there is one major issue which must be addressed. One of the key components of any system collapse theory is the starting point, the first domino to fall, or the straw that broke the camel's back. However, herein lies one of the greatest unanswered problems: which part of the LBA system fell first. Various scholars would point to the Aegean, to Anatolia, or to Ugarit; however, there is no definitive proof which region was the first to break. Nevertheless, there is no answer to this important question, as the dating methods we have at our disposal cannot determine the exact course of events, as the collapse in each region took place perhaps only years apart. Another problem in this theory is the question of Cyprus. If Cyprus was a major factor in the system, why did it not collapse until about 100 years after the other regions had collapsed? If there was a highly connected economy or system, it would only make sense that Cyprus would have collapsed at the same time. However, the fact it did not means that the 'LBA system' must be reconsidered. Additionally, there are other smaller problems with using system collapse.

One such problem are the general terms core and periphery. These are often used to describe large regions such as Egypt and the Southern Levant; however, Renfrew has also used these terms to describe the interactions between the Mycenaean palaces and their *hinterlands* (Renfrew 1987, 134–136). Thus, the question remains, was each core subdivided into a main core with its own set of peripheries and semi-peripheries? Was each periphery divided into core city states with other regions acting as peripheries in a periphery? If it is true that each region could be subdivided like this, it would only make the situation even more complex. We can start to ask questions such as, how did the actions of the Apiru in the Southern Levant affect Hittite Anatolia? Questions like this are valid in

a world system or in Peer Polity Interaction model, and without solid answers, it becomes difficult to find substantial answers about why the collapse occurred at the end of the LBA. Another theoretical problem comes from Renfrew, who posits that when a system collapse occurs in a world system, there will be a movement of people from the peripheries to the core (Renfrew 1987, 136). However, in the Southern Levant, we have the opposite effect, as large amounts of people moved away from the city-states to the central hill country. Problems like these present severe difficulties, when using systems collapse as a method of explaining the LBA collapse.

2.6.4. Socio-Economic Problems, Debt and Peasant Revolts

One theory which has recently gained in popularity is the economic oppression of the masses by an overburdening administrative system, which eventually led to a peasant revolt. While economic problems are generally a part of LBA collapse theories, this one in particular is based on growing debt during the LBA. Liverani was one of the first to propose this, as he believed Syria during the LBA was much harsher towards its people than in the MBA. He stated that debts were no longer cancelled, slaves were not freed, and people who fled the situation would be returned, which eventually led to a socio-economic crisis and a system collapse (Liverani 1987, 69). More recently, Liverani expanded on this argument for the whole of the Levant and Anatolia, basing his arguments on LBA vassal treaties between Hatti and Ugarit or other textual evidence from the MBA. He states that, from 1900–1600 BC, the king of a given area acted in a 'paternalistic' manner. Thus, if a family became indebted or sold themselves into slavery to pay off a debt, the king would issue the occasional edict for the remission of all debts. This allowed farmers to remain free, and enslaved debtors would be able to go back to their lands. He also states that, during the MBA, land had to stay within a given family unit and could not fall into the hands of a stranger. This meant that families could both keep their lands and their free lives, helping to keep tensions between farmers and the elites at

a minimum (Liverani 2003a, 26). However, with the close of the MBA, this all changed.

At the end of the MBA and the beginning of the LBA, kings lost their 'paternalistic' attitude, taking on a more entrepreneurial approach. No more edicts were issued to forgive debts or free slaves, and even if an edict had been previously passed, clauses were added which stated: 'Even in the event of an edict of remission this person cannot be redeemed' (Liverani 2003a, 26 f.). Thus, the rulers became the major creditors in the land and became the main beneficiary of indebted farmers, who would have to become slaves to the king or sell parts of their family into slavery to pay their debts. Land also slipped out of families as it became more commonplace to sell land to people outside of the family, leaving farmers without land and freedom. This left only one option for these indebted farmers, to flee from their debtors (Liverani 2003a). However, treaties between states and vassals at that time included extradition treaties, making it impossible for farmers to flee to well-populated areas. Instead they had to flee to more marginal areas where their debtors could not find them, and here they joined such bands of people like the Apiru or the Shasu. These groups of wandering nomads and runaway indebted farmers became thorns to local rulers as they attacked cities, made raids, and were an ever-present threat to palace stability. With this, there was an ever-growing fear in the palaces that all the indebted farmers would join these nomads and rise up against them, creating a social unrest making the backdrop for the collapse of the Eastern Mediterranean (Liverani 2003a, 27–29).

Liverani proposes multiple causes which truly brought about the end of the LBA, such as the invading 'Sea Peoples' and climatic factors. However, the reason the empires fell and palaces were never built again was because they had already been weakened by a socio-economic crisis brought about through increased debt and slavery (Liverani 2003a, 32–47). Klengel has also proposed a similar model for Syria and Anatolia, as he uses the same textual data to conclude there was a growing socio-economic crisis. This crisis was made worse by several years of dry weather, which only increased pressures on the local people and which eventually helped to break

down the economy and palace system, leading to the collapse (Klengel 2013, 342 f.). Van de Mieroop also uses similar evidence in his theory of the collapse. In his view, using the Peer Polity Interaction, he sees the great empires at the time in constant competition. Each court had to emulate the other court, whether that was in the grandeur of their buildings, the lavish wealth they flaunted in front of visitors, or the size and power of their armies. This elite emulation competition was an arena which only the richest and most powerful in the society could take part in, and the masses of peasants were the ones who bore the weight of this competition both economically and physically (van de Mieroop 2010, 332 f.). Indebtedness affected the economic situation of the peasant masses, but warfare affected them physically, as able bodied men were removed from farming, forced into battles where they lost life and limb only to return to a lifestyle where they were indebted to their ruler. All of this, along with heavy taxation, corvée, and the heavy thumb of the ruling elites created a situation which led to uprisings throughout the Eastern Mediterranean, bringing about the end of the Peer Polity system as its fundamental characteristics disappeared in the following period (van de Mieroop 2010, 237).[56]

These theories would fall under Tainter's 'Conflict/Contradictions/Mismanagement' theory for collapse, and they do suffer from the faults Tainter listed. If there was a peasant revolt, why did they not establish a new government, one which took over from the old regime and was better suited to the needs of the people? This is not to say that bad governments did not exist at the time or that they could not have oppressed the people, but in general, it does not explain why the LBA societies would have collapsed. Outside of these basic theoretical

---

56 One must give van de Mieroop credit as he states 'My suggestions of what happened and why also – of course – reflect my own prejudices (van de Mieroop 2010, 237). He goes on to state that 'It is impossible to detail an increase in social tension over time or a crisis in internal relations around the year 1200… [And] admittedly, much of this is conjecture. Yet, although social discontent was not the sole cause of the end of the Late Bronze Age, I maintain that it was an important contributing factor' (van de Mieroop 2010, 294). In my opinion, this is the proper way of proposing a theory for the collapse of the LBA. While van de Mieroop would stand by it, he does admit there are problems.

problems, there exist many other problems with this theory. The first is, most of this information about debt, slavery, and so on is based on MBA texts, or Hittite and Syrian texts from the LBA. What this means is, these texts cannot be used to explain the situation in any region outside of Anatolia or parts of Syria. We neither know how debt was handled in the Southern Levant, nor do we know if the situation in Syria was the same. Additionally, we cannot tell if the situation in Syria or Anatolia was as bad as the texts are interpreted to be. Moreover, these theories do not and cannot explain what happed in Mycenaean Greece or on Cyprus. There is no way of knowing how people on Cyprus were ruled or how taxation and debt were administered. Thus, at most, these theories can shed some light on the possible economic situation in parts of Anatolia and parts of Syria, but do nothing to explain the 'collapse' in general.

What these theories demonstrate is the exact problem Silberman discussed, which is that archaeological theories will represent and reflect the current socio-political and economic issues. At the time of this writing, there is a great amount of political debate concerning the rich getting richer and the social inequalities between the ninety-nine percent of the population who are poor and the one percent of the ultra-wealthy. These economic and social inequalities have become a major factor in collapse research, as even the most recent general theory for why all collapses occur in all societies reflects these modern social issues. Motesharrei, Rivas, and Kalnay developed a mathematical model in an attempt to simulate why a society might collapse (Motesharrei/Rivas/Kalnay 2014, 90–102). From their findings, they concluded that economic stratification was an ever-present factor in all collapse throughout history. They believe that wealthy people can continue with 'business as usual' even if there is an economic crisis, as they have enough money and are far-sighted enough to have a buffer against the impending catastrophe. If elites are absent, according to their mathematical model, collapse can be avoided (Motesharrei/Rivas/Kalnay 2014, 99–101). What all of these theories reflect are the growing concerns in our own modern world, where we see the poor and the ultra-rich at opposition, and this must have been true for all past societies.

However, it does not take into account that the rich must know that they gain their wealth from those below them; thus, it is not in their best interest to put too much pressure on them. It also assumes that humans today act in the same manner as they did thousands of years ago in different regions, with different cultures, and different cosmological beliefs. All of this is not to say debt, kinds of slavery, and bad government could not have existed during the LBA, as they most certainly did. However, to what extent they affected the society is left to the scholar to determine. As Cline has recently summarised: 'Many civilizations have successfully survived internal rebellions, often even flourishing under a new regime. Thus, on its own, the hypothesis of internal rebellions is not enough to account for the collapse of the LBA civilizations in the Aegean and Eastern Mediterranean' (Cline 2014, 148).

2.6.5. Climate Change: Cold Spells, Drought, and Famine

Another theory which resounds strongly with modern day concerns is climatic change in the past. While Cline has noted that climate change collapse models for the end of the LBA were proposed several decades ago (Cline 2014, 142), it is most likely not a coincidence that in our modern climate-focused culture, a number of articles have sprung up in the past decade. One of the first theories was proposed by Carpenter, who suggested that the Mycenaean palaces were abandoned not because of an invading force, but because of climatic changes. He suggested that a sudden severe drought fell on the region, which caused the people to migrate away from the hotter and dryer area to regions that were wetter and cooler. This abandonment caused by the drought conditions led to the collapse of the Mycenaean palaces and ended the LBA in Mycenaean Greece (Carpenter 1966, 1–80). This theory was later adopted by Weiss, who proposed that a sudden drought was the cause for the decline and collapse of the entire Eastern Mediterranean at the end of the LBA. He pointed out that from 1420–1260 BC, there was a low level of solar activity which would have led to a more marginal climate. However, this period

ended after 1260 BC, and the Eastern Mediterranean fell into a time of poorer climatic conditions, which would have led to the collapse of the LBA and also the migrations of peoples (Weiss 1982, 183–196). These rather un-nuanced views strongly reflected the idea of climatic determinism, as Weiss himself states: 'From earliest times human habitat has been influenced and controlled by climate' (Weiss 1982, 173). While climatic determinism gradually lost favour in the sight of many archaeologists, recently a neo-climatic determinism has once again been proposed for the collapse of the LBA (Middleton 2012, 268).

Recently, several different studies have been conducted trying to connect climatic data to the events at the end of the LBA.[57] Issar and Zohar proposed an abrupt change to a colder climate at the end of the 2nd mill. BC, beginning around the year 1200 BC and peaking at 1100 BC. In their model, a warm and dry phase began around 1600 BC and lasted until 1400 BC. This was followed by a slightly more humid phase lasting until 1300 BC, until finally the climate started to change, growing ever colder until it hit its lowest temperature in 1100 BC (Issar/Zohar 2007, 163–165). According to Issar and Zohar, the warm and dry phase would have adversely affected the desert margins, while the following cool phase would have adversely affected the monsoon system which in turn affected the inundation of the Nile, and it would have had a negative impact on the highlands of Anatolia and the plains of Eurasia to the Black Sea and the Caucasus. This would have led to harsher farming and herding conditions, which they believe was again the cause of massive migration of people, mainly the 'Sea Peoples' (Issar/Zohar 2007, 166 f.). Gallet *et al.* proposed that geomagnetic conditions might have played a part in this poor climatic situation at the end of the LBA. They proposed that fluxions in the earth's magnetic field may have changed the amount of cosmic radiation entering into the earth's atmosphere, thus affecting cloud nucleation. This again could have led to a severe drought such as the one suggested by Carpenter and Weiss, which would have led to the collapse

of the LBA civilisations and would have been the prime mover in causing the 'Sea Peoples' to migrate and search for better living conditions (Gallet *et al.* 2006, 18–25). Kaniewski *et al.* conducted several studies on a number of sites on the Syrian coast, such as Tell Kazel, Ras Ibn Hani, and Ras el-Bassit, along with examining Cyprus and the general literature on the LBA climate change (Kaniewski *et al.* 2010; 2013; Kaniewski/Guiot/van Campo 2015). In their studies, they too found that a climatic shift took place at the end of the LBA and beginning of the Iron I. They describe this by saying:

'By combining data from coastal Cyprus and coastal Syria, this study shows that the LBA crisis coincided with the onset of a ca. 300-year drought event 3200 years ago. This climate shift caused crop failures, dearth and famine, which precipitated or hastened socio-economic crises and forced regional human migrations at the end of the LBA in the Eastern Mediterranean and southwest Asia. The integration of environmental and archaeological data along the Cypriot and Syrian coasts offers a first comprehensive insight into how and why things may have happened during this chaotic period' (Kaniewski *et al.* 2013, 9).

Caused by this shift in climate, the team relies on the 'Sea Peoples' for the major destruction events and much of the cultural collapse at the end of the LBA (Kaniewski *et al.* 2010, 212 f.; 2013, 6–8; Kaniewski/Guiot/van Campo 2015, 375).

While these theories typically see a rather dramatic change in climate at the end of the LBA, recently, a more nuanced approach has been taken. Drake believes that the short climatic changes proposed by Carpenter or Weiss are too narrow, as they depict the poor climatic conditions as taking place over a short five year period of severe drought. He believes that the evidence points to a longer, centuries-long decline in climatic conditions, as a severe but short drought does not entirely explain the widespread abandonment of sites in Greece, nor in other parts of the Eastern Mediterranean (Drake 2012, 1863–1866). Drake believes that there was a 'gear shift' in the Mediterranean climate caused by a drop in the Mediterranean sea surface temperature, which had been

---

57 For a review of the pro climate change in detail, see Kaniewski/Guiot/van Campo 2015. For the contra see Knapp/Manning 2016, 102–116.

taking place for several centuries before 1190 BC. Because of this gradual drop in sea surface temperatures, there was a gradual change in the amount of precipitation coming from the Mediterranean, which would have caused a steady decline in the amount of rain. This would not have been seen as a crisis, as the stress only became worse over generations, meaning the populace, economy, and food production would have continually become more and more stressed but not in one large event (Drake 2012, 1866). Drake states that these climatic conditions would have placed a large stress on the LBA palatial centres which were highly dependent on reliable agricultural yields to feed their urban civilisation. However, as the situation became worse, there would have been civil unrest and competition over limited resources which eventually evolved into a systems collapse, the loss of trade, and the migrations of peoples from many different regions (Drake 2012, 1868).

Langgut, Finkelstein, and Litt generally agree with this long-term view of climactic change for the end of the LBA. Using core drills from the bed of the Sea of Galilee, they determined that the climatic conditions for the Southern Levant have fluctuated over time, ranging from better climates to worse. In their study, they found that there was a gradual drying of the climate in the LBA, reaching its driest from 1250–1100 BC. This dry spell was the longest recorded in either the LBA or the Iron Age, and they believe that it could have affected regions ranging from Northern Turkey to the Nile Delta (Langgut/Finkelstein/Litt 2013, 149–161). According to Langgut, Finkelstein, and Litt, these dry years would have had devastating effects on the civilisations at the time. They believe that cold spells, droughts, and famines would have caused groups of people in the North to leave their own lands, searching for better climatic conditions in other regions such as in the Southern Levant. These people pillaged as they moved along, causing wholesale destruction of urban centres and disrupting trade networks which eventually led to the collapse of the LBA (Langgut/Finkelstein/Litt 2013, 161–168).

Finally, Yurco proposed that the last blow to the LBA came with the eruption of Mt. Hekla in Iceland sometime between 1159–1140 BC. He believes that the eruption of this volcano caused a decrease in atmospheric temperatures, which led to crop failure in Egypt and other parts of the Eastern Mediterranean. This would have been the proverbial nail in the coffin, as the colder climate caused by this eruption would have outstripped Egypt's grain supplies and would have caused havoc in other areas which depended on dry farming (Yurco 1999, 456–460). With all of these factors taken together, the end of the great civilisations of the LBA fell to poor climatic conditions which the people could not adapt to in time. It has been used as the cause of a systems collapse, the cause of civil unrest, and for the origins of the 'Sea Peoples' and other migrating peoples, all theories I have already discussed.

Most of these theories also rely on textual evidence from the final century of the LBA and the beginning of the Iron Age to bolster their arguments.[58] These texts, mainly concerning the Hittites and Ugarit, speak of the need of grain shipments and the dire straits that the kingdom and people are facing. Such lines as: 'Do not you know, my son, that there was a famine in my lands' (Bo 2810; Halayqa 2010, 302) sent from Hatti to a Hittite subordinate, or to the words of Puduḫepa the wife of Ḫattusili III who says to Ramesses II: 'There is no food/grain in my lands' (KUB 21, 38; Halayqa 2010, 302) which have been used to emphasis the food shortages in Hatti. Other texts too speak of these food shortages, as Merneptah, upon sending grain to Tudhaliya IV, states it was: 'in order to keep this land (of Ḫatti) alive' (KR I IV 5,3; Halayqa 2010, 302). In another letter found in the House of Urtenu in Ugarit written by Banniya from a town outside of the city, he states: 'The gates of the house are sealed, since there is famine in your house, we shall starve to death. If you do not hasten to come, we shall starve to death.' (RS 34.152 [KTU 2,39]; Halayqa 2010, 304). These texts among others have suggested that a severe drought was affecting Anatolia and Northern Syria, which had placed a large burden on both the people of these lands and the rulers, and which would have been a contributing factor to the 'collapse'.

---

58 For a review of these texts, see Halayqa 2010, 302–304; Kaniewski/Guiot/van Campo 2015; Knapp/Manning 2016, 120–123.

Climatic change falls under Tainter's 'catastrophe' or 'insufficient response to circumstances' theories for collapse. However, much as Tainter demonstrates, these theories do not adequately account for all of the variables which can cause a collapse. Governments operate on being able to adapt to changes, and to say the climate became worse causing massive amounts of people to move from their homelands to far flung places is not corroborated by other periods in history. At no other time can it be said that the majority of a country or countries' population moved to a vastly different region because of a famine or drought (Drews 1993, 82). Many of these climate change theories propose to solve the question as to why the 'Sea Peoples' or other people groups moved, but this explanation does not account for many of the problems with these theories. One such problem is, if these moving people groups are used to explain away all or most of the destruction layers found at the end of the LBA, where did they gain the military prowess to conquer great nations? Or, if they were able to do this by sheer number of people, where are these massive amounts of people in the archaeological record? An additional problem with these climate change theories is their dependence on historical mentions of famines in Anatolian or Ugaritic texts. As van de Mieroop states: 'I wonder how grain shipped to a Southern Anatolian port would have relieved a famine in the Hittite capital, some 400 kilometers in. Would humans and animals used in the overland transport not have eaten the entire load?' (van de Mieroop 2010, 247). Thus, how much help such shipments would have been can be called into question. It must also be taken into account that particularly letters written by officials may also be exaggerated, as other 'historical' texts from the period seem to be.[59]

Theories invoking climate change as the prime mover for collapse also suffer from other theoretical problems. As Riehl, Bryson, and Pustovoytov demonstrate, there are a number of problems and assumptions that occur when using certain sets of paleoclimatic data. When using plants as water stress singles, there is the problem that we do not

know at this time the exact nature of the ancient plants' life cycles when compared to modern day examples, which could skew any results gained from examining plant remains. Additionally, we do not know the exact times of the year when plants were planted or harvested (Riehl/Bryson/Pustovoytov 2008, 1012 f.). Thus, when models are created that try to explain when the 'bad' times were during the year for growing, or when it might have been the coldest, it is difficult to know if these suggested 'bad' months correlated with the actual growing seasons in the past. Rosen also notes that the rainfall averages used to explain ancient climates and farming potential simplifies the actual situation. While most studies describing past climates will talk about annual rainfall averages around 300mm per year, this does not mean this actually happened. In modern day investigation into rainfall averages in south central Israel, from 1961–1988, the average rainfall for Kiryat Gat was 420mm. This would typically be described as optimum growing conditions for both wheat and barley. However, when looking at the yearly totals, this average was misleading, as most years fall either well above or well below the average. This would mean that there was never a sure time when crops could be grown, as a good year of rainfall might be followed by a bad year, and the people would have had to have taken this factor into account, knowing water was never certain (Rosen 2007, 7 f.). Additionally, Rambeau states: 'Using palaeoenvironmental evidence collected from the wetter areas to reflect on the climatic and environmental changes in the more arid parts of the Southern Levant may lead to misconceptions.' (Rambeau 2010, 5241). Thus, we must be aware that not all paleoclimatic evidence applies to all areas or at all times.

Knapp and Manning have recently examined many of the studies which place a severe climate change at the end of the LBA as well as their chronological underpinnings. They have noted that, while many of these studies tend to have a high resolution about the date of when the drying period began, these dates are not as clear as they seem to be (Knapp/Manning 2016, 102–116). They state: 'In sum, there is reasonable evidence from several proxies for more arid conditions in the last centuries of the second millennium B.C.E.

---

59   In reference of course to the 'Sea Peoples' texts.

in the Aegean – eastern Mediterranean region, but precise dating, and thus close archaeological and historical association beyond the scale of one century, is currently absent' (Knapp/Manning 2016, 111). Middleton has noted a similar issue with these studies, that each the arid phases last different periods of time, demonstrating that the various methods used to study these past climatic changes do not agree with one another (Middleton 2017, 93).

What all this points to is what Middleton calls 'neodeterminism', as environmental determinism for the growth and death of society has once again become a popular theory.[60] However, while this neodeterminism has begun to play a strong part in archaeological and historical discourse, one must never forget the human element in all of this. Rosen goes to great lengths to show this, as she demonstrates the relationship between humans and the environment and their understanding of it. In most ancient cultures, climatic events, whether good or bad, were often associated with the favour of the gods. If a populace was overcome by poor weather, they would not have simply left it gone unnoticed; rather, they would have responded to the problem in a way which would made sense in their cosmological understanding of the world (Rosen 2007, 10 f.). Thus, how a culture responds to either good or bad weather will be in part determined by their understanding of the world and their surroundings, and did not share in a simple cause and effect relationship with the environment.

Additionally, different parts of society would have reacted to climate and farming differently. Those of the 'high-order regulators', or the elites of the society, might have been more prone to taking risks when planting. They would have needed to make a return off their crops and would have had the capital to back up any failures or poorer than planned yields. However, the 'low-order regulators', or the peasant farmers living off subsistence farming, would have been less prone to take risks. Thus, even if the year previous was plentiful with rain, that was not guaranteed for the following

year, and the farmer would have been more likely to take a smaller but more reliable yield over a larger but more risky yield (Rosen 2007, 8). This means we cannot just assume that if there were better climatic conditions the people would have planted more, leading to the suggested situation where urban sites grew larger from greater farming but fell when bad times hit. However, all of this is not to say that climate could not have been a factor or a stress in the LBA 'collapse', but we must take a more nuanced approach as to how it might have affected the people at the time, and how they might have responded to these stress factors. As Cline has stated, climate by itself would not have been enough to cause the 'collapse' at the end of the LBA (Cline 2014, 147). Knapp and Manning too do not deny climate change, and they state there does appear to have been a cooling period along with increased aridity, generally between the 13th and 10th cent. BC but not in a single catastrophic episode (Knapp/Manning 2016, 137 f.). Indeed, there was likely climate change in this period (see also Olsvig-Whittaker *et al.* 2015), but the extent to which it affected the various regions, ecosystems, and cultures cannot be clearly said. If it was a factor to some, it was only one factor of many, and for others climate change likely did not play a role in the changes which took place from the LBA to the Iron Age.

2.6.6. Earthquake Storms

Earthquakes are another natural factor which some have pointed to as the cause for the LBA collapse. This theory has been recently championed by the geophysicist Amos Nur, who has written on the subject with additional support from Eric Cline. Nur claims that to understand the great amount of destruction which occurred from 1225–1175 BC, we cannot only consider invading forces, but must also think of natural causes such as earthquakes (Nur/Burgess 2008, 1–5). Using the principle of Occam's razor,[61] he believes that earthquakes are a better explanation for the

---

60 Middleton 2012, 268. See for a list of references to recent arguments which support environmental determinism.

61 One should make no more assumptions than the minimum needed.

destruction of many of the cities from the LBA/ Iron I transition, as it can at least be scientifically demonstrated that earthquakes occur in the Eastern Mediterranean, and could have at the end of the LBA (Nur/Burgess 2008, 4–6). He bases this assumption on modern day seismological studies. Nur and Cline examined eighty years of modern day earthquake activity in the Eastern Mediterranean from AD 1900–1980, and from this study, they found that many of the sites of modern day major earthquakes correlate with areas of high destruction in the past. One event which they believe is very telling is the earthquake sequence which took place in Northern Anatolia from AD 1939–1967. Seven large earthquakes occurred one after another in a sequence, where each subsequent earthquake occurred further west on the 1000km fault line than did the previous earthquake. They go on to say that another earthquake took place in AD 1999, which might extend this earthquake sequence by another thirty years (Nur/Cline 2000, 43–46). Nur explains this phenomenon by saying: 'Such an 'earthquake sequence' occurs when the strain on a fault has accumulated gradually over a period of relative inactivity, sometimes lasting a few hundred years. This strain is then released in a series of earthquakes, each one triggering the next, rather than in a single large earthquake.' (Nur/Cline 2001, 32). Nur believes a similar event occurred in the Eastern Mediterranean at the end of the LBA. Beginning in 1225 BC and ending in 1175 BC, Nur claims there was, what he calls, an 'earthquake storm' which wreaked havoc throughout the Eastern Mediterranean, causing many of the destruction layers we see in the archaeological record (Nur/Cline 2001, 32; 2000, 43; Nur/Burgess 2008, 236–242).

Nur states that most archaeologists tend to ignore the evidence for earthquakes or make false assumptions, such as that earthquakes cannot cause fires in a preindustrial city or that no bodies were found crushed under rubble in the archaeological record.[62] However, Nur counters these arguments by demonstrating, firstly, that earthquakes can cause fires in a preindustrial city. He

cites the earthquake that struck Lisbon in AD 1755 which caused a fire that lasted for six days (Nur/ Burgess 2008, 248–259). The city caught fire well before natural gas and electricity were used, and apparently 'combustible material such as thatched roofs, wood and oil caught fire when the Lisbon earthquake struck', which caused the great devastation (Nur/Cline 2001, 35). Nur believes that the exact same circumstances could have taken place in the ancient past as roof beams, thatching, cooking oil, or other combustible materials, which are not preserved in the archaeological record, could have caught fire during an earthquake (Nur/Cline 2001, 35 f.; Nur/Burgess 2008, 139). As for the absences of crushed skeletons, Nur points to several examples such as many crushed skeletons from LH IIIB2 destruction of Tiryns, a skeleton found under rubble at Midea, several crushed skeletons from Mycenae including a crushed young man found under burnt rubble, among others (Nur/ Burgess 2008, 158–161; Nur/Cline 2000, 48–60). He goes on to say: 'No fewer than 16 skeletons have been found in collapsed debris dating to c. 1225–1175 at seven different sites in the Aegean and the Eastern Mediterranean: six skeletons at Mycenae, five at Tiryns and one each at Midea, Thebes, the Menelaion in Sparta, Troy and Karaoglun in Anatolia' (Nur/Cline 2000, 60).

Aside from demonstrating that earthquakes can cause fires and that crushed or buried skeletons do exist in the archaeological record, Nur and Cline also point to other pieces of evidence which lead to the conclusion that earthquakes were a part of the LBA collapse. They believe that evidence for earthquakes is seen in 'collapsed, patched or reinforced walls; crushed skeletons, or bodies found lying under fallen debris; toppled columns lying parallel to one another; slipped keystones in archways and doorways; and walls leaning at impossible angles or offset from their original position' (Nur/Cline 2000, 48).[63] Nur and

---

62 Drews makes these claims as evidence against earthquakes (Drews 1993, 39).

63 The full list includes ,1. Characteristic structural damage and failure of constructions, such as: a. Collapsed walls b. Patched walls c. Offset walls d. Opened vertical joints and horizontally slided parts of walls in dry masonry walls e. Diagonal cracks in rigid walls f. Triangular missing parts in corners of masonry buildings g. Inclined or subvertical cracks in the upper parts of rigid arches, vaults and domes, or their partial collapse along these cracks h. Slipped key-

Cline cite evidence from several sites in the Aegean, Troy, Ugarit, Megiddo, and other sites in the Southern Levant. They point out structural damage which appears to be characteristic of earthquake damage, such as fallen walls, large amounts of rubble, misaligned walls, and quick construction over massive amounts of debris (Nur/Cline 2000, 48–60; Nur/Burgess 2008, 149–246). From this evidence, Nur draws the conclusion that an earthquake storm did indeed take place at the end of the LBA from ca. 1225–1175.

Nur does not claim that all sites in the Eastern Mediterranean were destroyed by earthquakes, and originally, he stated that he and Cline simply pointed out that: 'There is a reasonable statistical possibility that an 'earthquake storm' could have been in part responsible for at least some of the damage seen at a number of these sites in the Aegean and the Eastern Mediterranean at the end of the Late Bronze Age' (Nur/Cline 2000, 61). He went on to say: 'nor would we suggest that earthquakes destroyed entire societies. Indeed, there is good evidence that earthquakes alone did not bring the Late Bronze Age to an end' (Nur/Cline 2000). However, a year later, his opinion changed, as he then stated: 'We believe that an earthquake storm triggered a 'systems collapse'; in which complex, centralized societies broke down under the pressure of economic, physical or demographic catastrophes ... the destruction caused by sequences of earthquakes may have been the first link in a chain of events that led to the collapse of political, social and economic systems in the Aegean and

the eastern Mediterranean, bringing the Bronze Age to a resounding close' (Nur/Cline 2001, 36). More recently, Nur has gone on to say: 'I cannot prove that earthquakes ended the Bronze Age, but evidence in many Bronze Age sites indicate that earthquakes occurred at the appropriate time', and he maintains that earthquakes were indeed a factor in the collapse (Nur/Burgess 2008, 244–247, 275–277). Cline has also recently stated that earthquakes were likely a part of the events at the end of the LBA and could be responsible for some of the damage. However, earthquakes in and of themselves would not have caused the collapse.

Earthquakes fall under Tainter's 'catastrophe' theory of collapse, and much like climate change, earthquakes suffer from similar theoretical problems. One of the major problems which Nur himself admits to is that many of the archaeological indicators for earthquakes can also be attributed to other causes. These range from poor construction techniques, subsiding or slipping of the earth beneath a building, heavy rains, flooding, removal of vegetation, and a multitude of other factors which can create results which appear similar to earthquake damage (Nur/Cline 2000, 48; Nur/Burgess 2008, 94). Skeletons found under rubble are also a highly problematic indicator for earthquakes. Nur claims that if an invading force had come into a city, people would not stay in their houses waiting for them to be torn down by their enemies; thus, people found crushed under rubble would be better explained by an earthquake, as people would have stayed inside until the shaking stopped (Nur/Burgess 2008, 141). However, it is perfectly reasonable that if there was a fight in the streets outside of a person's house, that they would not flee into the fight but would hide in their house. This was likely the case with *Tell el-ʿUmērī* Phase 12, where several skeletons were burned in a building likely destroyed in an act of war.[64] Or, if there was a fire raging outside caused by either enemy forces or natural causes, people may not have been able to escape from their house, and would have been caught under the rubble of their falling house. Nur also claims that one reason why more skeletal material has not been found is because the

---

stones in dry masonry arches and vaults i. Cracks at the base or top of masonry columns and piers j. Displaced drums of dry masonry columns k. Neat rows of parallel fallen columns, frequently with their drums in a domino-style arrangement l. Constructions deformed as if by horizontal forces (e.g. rectangles transformed to parallelograms) 2. Ancient constructions offset by seismic surface faults. 3. Skeletons of people killed and crushed or buried under the debris of fallen buildings. 4. Certain abrupt geomorphological changes, occasionally associated with destructions and/or abandonment of buildings and sites. 5. Pattern of regional destruction. 6. Destruction and quick reconstruction of sites, with the introduction of what can be regarded as 'anti-seismic' building construction techniques, but with no change in their overall cultural character. 7. Well-dated destructions of buildings correlating with historical (including epigraphic) evidence of earthquakes. 8. Damage or destruction of isolated buildings or whole sites, for which an earthquake appears the only reasonable explanation.' (Nur/Cline 2000, 52).

---

64   See chapter 5's discussion on *Tell el-ʿUmērī*.

earthquake happened during the day, when most people would have been outside of their house. If a devastating earthquake struck during the day, there would have also been less damage by fire, as not as many would have been lit (Nur/Burgess 2008, 243 f.). However, this theory would indicate that most of the earthquakes happened in the day during the 50 yearlong earthquake storm, a coincidence which seems unlikely.

Another problem earthquake theorists face is the textual silence, as there are no documents from the 50 year period which describe a devastating earthquake, a plea to the gods concerning earthquakes, or pleas for help from a city which had suffered an earthquake (Drews 1993, 38). It would only make sense that if major earthquakes occurred over 50 years, affecting large regions that someone, somewhere, would have noted it or asked for help. There is also the problem of why these sets of earthquakes caused the collapse around 1200 BC, if the area is prone to earthquakes (Middleton 2012, 284). What factors must have been involved for these sets of earthquakes to cause the collapse? Why could the people not adapt or change to fit the situation? What was their cosmological understanding of the earthquakes, and how could this have affected their response? None of this is to say earthquakes could not or have not occurred in the past or at the end of the LBA. For the Aegean, Dickinson, Shelton, Maran, and others agree that earthquakes could have been the cause for some of the destruction at the end of the LBA (Dickinson 2010, 485, 488; Shelton 2010, 146; Maran 2009, 242 f.; French 1998, 2–4). However, as Maran points out, outside of the Argolid, there is little evidence for earthquakes, and there must have been multiple reasons why and how the palaces were destroyed (Maran 2009, 242 f.). In the Southern Levant, of the 54 cited destruction events, only three were likely caused by earthquakes.[65] At the moment, despite the arguments Nur and Cline have presented, earthquakes do not explain the LBA collapse, nor is it even certain how many devastating earthquakes took place during this period. Moreover, there is

a general problem with this study of earthquakes and many other theories of the LBA. This is the unfortunately under-discussed and researched topic of destruction layers and their formation. I will examine this in more detail later on.[66]

2.7.   Summary: The 'Collapse' of the Late Bronze Age?

This brief survey of both some of the regional and Eastern Mediterranean wide collapse theories is not meant to come to any definitive conclusions about the 'collapse'. Rather, it is to set out the historical narrative of the region, to have the broad view when examining the development of interregional exchange in the Southern Levant. Each of these other regions have been described as being critical to the Southern Levant in one way or another, and thus, the 'collapse' and the reasons behind it would have an effect on the development in the Southern Levant. At least according to traditional world system theory, a suggestion which, for the Southern Levant, will be challenged based on the material cultural and historical evidence. However, this review does bring out several important points on the subject of the LBA 'collapse'.

In two recent studies on the end of the LBA, the first by Cline (2014) and the second by Knapp and Manning (2016), both give a lengthy review of much of the material for the 'collapse'. Cline, writing to a general audience, focused on the broad themes and problems, while Knapp and Manning focused mainly on the climatological studies, some of the textual evidence, and destruction and abandonments throughout the Eastern Mediterranean. In both of these reviews, there is no clear solution for the 'collapse'. Cline notes five possible contributions to the 'collapse' as earthquakes, famine and climate change, migrations, internal rebellion, and the breaking of the international trade routes all affected the region. However, he states that none of these by themselves could cause the 'collapse', rather, he says: 'It looks as though the best solution is to suggest that all of these factors

---

65   Beth-Shean Level VI, *Tell Dēr ʿAllā* Phase E, and *Tell el-ʿUmērī* Phase 14. See chapter 5.

66   See also my discussion of destruction in Millek 2017, 114–118, 135.

together contributed to the collapse of what had been the dominant LBA kingdoms and societies in the region' (Cline 2014, 165). He goes on to say that a system collapse may be too simple to explain this, but it seems to be the likely option. Nevertheless, Cline suggests that complexity theory, which in some ways is similar to systems theory, may best explain the 'collapse'. The complex system of the LBA world was affected by stressors such as the aforementioned earthquakes, climate change, and the breakup of interregional trade (Cline 2014, 167). He summarises by saying: 'The real questions are not so much 'Who did it?' or 'What caused it?' – for there seem to have been any number of elements and people involved – as 'Why did it happen?' and 'How did it happen'?' (Cline 2014, 169). Though, one might also add in 'Did it ever happen?'

Knapp and Manning, too, find no clear solution to the 'crisis' at the end of the LBA. While they largely criticise the climatological evidence, they acknowledge that there does seem to be a consensus that the region became cooler and dryer from the 13th to the 10th cent. BC (Knapp/Manning 2016, 136 f.). However, what effect this might have had is unclear, as it did not happen in one great episode, and they state: 'There is a context for change but not necessarily its only or specific cause.' (Knapp/Manning 2016, 137). They go on to say: 'It is crucial to reemphasize that, even if climatic change (to longer-term arid, unstable, and cooler conditions) was both real and a relevant forcing parameter in the period around the close of the LBA in the eastern Mediterranean, the immediate cause of the destructions and collapse was human' (Knapp/Manning 2016, 136).[67] Knapp and Man-

ning do not give a clear answer to the 'crisis' and 'collapse' at the end of the LBA, though they state that the decline in international trade must have played a role (Knapp/Manning 2016, 137). They summarise by saying:

'Nonetheless, the 'crisis' at the end of the Late Bronze Age witnessed various crucial social and cultural realities – the violence and dislocation of people, economic chaos and decline, the increasing mobility of indeterminable ethnic groups (some specifically named but seldom rigorously identified), the largely seaborne nature of most episodes – that will continue to demand archaeological, historical, and scientific attention and interpretation, but not necessarily a final solution' (Knapp/Manning 2016, 138).

Neither Cline nor Knapp and Manning could find a solution to the 'collapse' other than that it must have been a multifaceted problem, and that no single problem could have brought about the end. However, this should be expected. Both of these studies suffer from the same basic problem, that is, they both search for a reason(s) for the 'collapse' of the Eastern Mediterranean. What is often times missing in these reviews are the individual regional theories for 'collapse'; thus, their inclusion here. The importance of this is, that if there is no single theory to explain reasonably well the 'collapse' of one region, how can we hope to explain the 'collapse' of the whole Eastern Mediterranean? Additionally, not every region 'collapsed', as Cyprus can hardly be called a collapsed society, unless one takes the 150 years or

---

67   However, not all destructions are caused by humans as natural destructions from earthquakes, storms, settling and many other factors would have occurred and have been preserved in the archaeological record. It is certain that there were destructions caused by an intent to destroy from a human hand; however, many likely were not. Even if it is a time of 'crisis' one cannot and should not assume human agency as the cause for all of the destruction events. This is the same as assuming during a war there are no house fires, no accidents, no storms which also would have damaged houses and that all damage is a direct result of the current crisis. The same would have been true of the LBA, as accidental and natural destructions would have continued to occur, and there is indeed little evidence of violent conflict as is true for most of the 'destroyed' sites in the Southern Levant

(see chapter 5) and this is likely true for the other regions of the Eastern Mediterranean. Moreover, taking a modern example, in 2013 in the USA only 4.5% of all house fires and 9.7% of non-residential fires were intentionally set (FEMA 2016, 56, 58). For house fires, nearly 50% of the fires were caused by cooking accidents and another 12% by heating accidents (FEMA 2016, 56). This modern example is certainly not justification to assume that all destruction caused by fire in the Southern Levant or Ancient Near East were caused by cooking mishaps, but it is a note of caution that we must look for a probable cause for destruction and fires outside of intentional human destruction as there would have been accidents and natural destruction outside of earthquakes in the past (Millek 2017, 114–118).

more of transition as 'rapid'[68] collapse. Moreover, the reason to look for a single explanation with multiple causes, or not, is because of the underlying assumption that what happened in one region affected the others, mainly in the form of a decline or breakup of interregional trade and exchange. However, this is an assumption that must be re-examined in light of new archaeological evidence and method. Thus, in the following chapters, as I examine the development of interregional exchange in the LBA to the Early Iron Age in the Southern Levant, this will be a crucial question: if the break up or decline of interregional exchange had an effect on the 'collapse' of the Southern Levant, whether this is because of destruction damaging the trade infrastructure or the privatisation of merchants. This is coupled with a critical re-evaluation of what is actually known about LBA exchange in the Southern Levant. In the end, this study will not and does not try to explain all factors of the transition from the LBA to the Iron Age in the Southern Levant. Rather, it focuses on one topic: interregional exchange and how it developed as resource, and the effect, or lack thereof, of this on the transition to the Iron Age.

---

68 Per Tainter's definition for a collapse 'A society has collapsed when it displays a rapid, significant loss of an established level of sociopolitical complexity' (Tainter 1988, 4 f.).

3. Trade, Exchange, and the Theory of How Objects are moved from Here to There

3.1. Introduction

The break down and eventual collapse of trade networks in the LBA has been argued to have been the cause for the end of the LBA throughout the Eastern Mediterranean. This loss of prestige items and other trade goods such as bulk commodities brought the economic network which the great empires at the time relied upon to a halt, and it is believed that this economic breakdown brought about the collapse. However, as with each theory for the 'collapse' of the Eastern Mediterranean at the end of the LBA, it is of great importance to examine the evidence for such a proposal. This involves not only examining the archaeological evidence which might be indicative of interregional exchange or trade, but also the documentary evidence which depicts the nature of interregional exchange at the time. Nonetheless, before being able to discuss the nature of the LBA economic and interregional exchange system(s), it is first of utmost importance to define what is meant by interregional exchange and trade and to examine some aspects of ancient economics.

It is the goal of this chapter to examine the theoretical framework which the theories for LBA interregional exchange and trade are built upon. To do so, there are several topics which must be examined. The first is the, as of this point, obligatory discussion of Karl Polanyi's theory on ancient economies, trade, and markets along with a look at the substantive and formalist schools of thought. After this it is important to briefly look at the concept of money and how money might have been viewed in the ancient world. Thereafter, turning from economics to types of exchange in an anthropological view point on the subject examining barter, ceremonial exchange, and gift exchange as each of these have been employed in the discussion of the LBA interregional exchange. Following this is a look at the various theories of interregional exchange or trade in archaeology as well as the definitions for these various terms and the definitions purposed in this study. Finally, is to explore the theoretical concepts of resources as presented by the SFB 1070 ResourceCultures which will allow for a new interpretation of the archaeological record from the LBA. With that being said, we turn now to Karl Polanyi and the substantive and formalist schools of thought.

3.2. Karl Polanyi and the Ancient Economy

It is without a doubt that, by this point, discussing Karl Polanyi is obligatory even though many of his ideas have been left aside or revised in the nearly sixty years since one of his most influential works 'The Economy as Instituted Process' was published in 1957. I will give here only a brief review of his work, as others have already well documented this subject matter.[69] Polanyi carried on the debate in ancient economics between those who believed in a primitive economic system which differed from our own and those who believed the modern economic system was applicable to the ancient past (Aubet 2013, 9–26). He made the distinction between two schools of economic thought which he dubbed the formalist and the substantive. Polanyi was on the side of the substantive school which dictates that, in preindustrial times, ancient economies operated differently than the modern economy, as the economy was embedded into the social fabric of the society, while the formalist school holds that modern economic theory can be applied to the ancient past. Polanyi defined the two schools as follows:

'The substantive meaning of economic derives from man's dependence for his living upon nature and his fellow. It refers to the interchange with his natural and social environment, in so far as this results in supplying him with the means of material want satisfaction' (Polanyi 1957a, 243).

---

69 For a full review of the works of Polanyi and the debate it has caused throughout the years see: Hafford 2001; Isaac 2005; Bauer/Agbe-Davis 2011; Aubet 2013.

'The formal meaning of economic derives from the logical character of the means-ends relationship, as apparent in such words as 'economical' or 'economizing'. It refers to a definite situation of choice, namely, that between the different uses of means induced by an insufficiency of those means. If we call the rules governing choice of means logic of rational action, then we may denote this variant of logic, with an improvised term, as formal economics' (Polanyi 1957a, 243).

Put simply, according to the substantive view, when studying ancient economies, one must understand that modern economic theory does not apply, as Polanyi saw that, in ancient economies, the economy was embedded into the social practices and political and religious structures of the group, whereas in modern economics, these two are separated (Polanyi 1957a, 248–250). Thus, in his view, the formalist school saw that such ideas as capitalism, supply and demand and standard prices controlled by a market economy could also have been a part of ancient economies, though this economy would not be embedded into the socio-cultural practices of the people (Polanyi 1957a, 244 f.; Hafford 2001, 12 f.). Or as Hafford has described it: 'The formalist school … holds that current economic theory can be applied to the ancient world, that economic principles are cross-temporal. Formalists believe that it is human nature to maximise assets and minimise risk' (Hafford 2001, 12).

Polanyi went on to expand on his ideas of socially embedded economies by describing three types of economic systems, which are reciprocity, redistribution, and market exchange. He described these three systems as, 'Reciprocity denotes movements between correlative points of symmetrical groupings … Redistribution designates appropriation movements toward a center and out of it again … Exchange refers here to vice-versa movements taking place as between 'hands' under a market system' (Polanyi 1957a, 250). Thus, reciprocity here refers to gift exchange or ceremonial exchange, while redistribution refers to a central palace economy or temple economy where goods from the hinterlands and elsewhere were brought to one central location and then reallocated to other parties and places.

Exchange or market-exchange refers to the modern concept of the market economy or the modern day system which is ruled by the law of supply and demand, price fluctuation, and maximum gain (Aubet 2013, 29). For Polanyi, he believed that ancient economies functioned mainly through reciprocity whereby kinship relations were maintained through ceremonial or gift giving exchanges. At the same time, redistribution could also be in effect, as these goods and others would be pooled into a central location to be sent out again. Thus, for both of these ancient economic systems to operate, there had to have been a background symmetrical relationship between two parties for reciprocity to occur, and there had to be at least to some degree a certain amount of centricity in the group or society for redistribution to occur (Polanyi 1957a, 250). Maria Aubet has summarized Polanyi's views stating: 'Polanyi's thesis is well known: trade in ancient civilizations was an activity administered by the temple/palace, carried out by commercial agents and not by free merchants and it was based on prices fixed in advance, without marketplaces or a market' (Aubet 2013, 144). However, here lies one of the problems Polanyi faced as, originally, he did not separate the two terms marketplace and the market. Thus, a distinction has to be made between the marketplace, and the market, market economy, and the market principle.

The marketplace is a meeting place where buyers and sellers converge to exchange products, goods, or services, whereas the market, and the market principle, are the institution which is controlled by the mechanism of supply and demand (Garraty 2010, 5 f.; Aubet 2013, 30). Kalman Applbaum described the difference between the marketplace and the market as: 'A periodic, peasant or open-air market on the one hand, and the global electronic futures market for soybeans or Eurodollars on the other' (Applbaum 2005, 292). Originally, Polanyi made no distinction between the marketplace and the market, as he tried to argue that there were no marketplaces in ancient Babylon, as no large open market spaces had been uncovered (Polanyi 1957b, 12–26). However, this idea was rejected, as marketplaces need not take place in large open spaces, it being possible that they could occur at or just outside of the city gate or in tight

narrow streets.[70] One need only visit the modern day Old City in Jerusalem to know that marketplaces occur in cramped city streets. However, the general ideas which Polanyi espoused did not preclude the presence of marketplaces, but do maintain the absences of the market economy (Isaac 2005, 16). Additionally, if a marketplace did exist in the past, it would not have been ruled by the laws of modern economic theory, as such aspects as supply and demand or price fluctuation would all have been controlled by the central administration and not by the market itself (Aubet 2013, 30).[71] Thus, Polanyi distinguished between administered and market trade. Administered trade would have existed in premodern times where trade was mainly controlled by a central institution, whether that be a king, palace, temple or as part of a redistributive system. Market trade, however, acts under a standard currency and a market economy which would act much like the modern day market (Polanyi 1957a, 250 f.).

With all that being said, several criticisms have been brought up against Polanyi and the substantive school of thought. This was so even shortly after Polanyi wrote, as McCormicks Adams noted that the distinction between administered and market trade may not have existed in the past and it may not exist in the modern world. As he stated: 'The analytical separation between 'administered' and 'market' trade may, in other words, lack a cognitive or behavioural equivalent' (McCormicks Adams 1974, 239). Additionally, there is evidence that, in the past, market actives existed, and that aspects of the embedded nonmarket actives also exist in modern contexts (Bauer/Agbe-Davis 2011, 35). As Hafford has pointed out, there is generally no single economy acting at the same time, as multiple modes of exchange can be taking place in the same society, which anthropologists have dubbed 'spheres of exchange' (Hafford 2001, 32). As he goes on to say: 'It is most likely that none of these forms of economy has ever existed in its pristine state. There may have been some development

from one to another in very early times, but one form can blur into another without losing some of the qualities of the former. In fact, economies can exist simultaneously, and it is the mixed economy that is the rule rather than the exception' (Hafford 2001, 33). Moreover, even in a modern day context, gift exchange, barter, redistribution, and market exchange act together in different aspects of life. Even such aspects of creating and maintaining relationships exist in a market economy. This is the reason why the large modern corporations expend tremendous amounts of money and capital in an attempt to create a relationship of trust between the consumer and the product/company. If a person has no trust in a company, they will not purchase the product. However, if a trust relationship has been established between the consumer and company, the consumer can remain loyal to said company or product. One has only to look at the present debate between brands and the consumers who are vehemently loyal to their respective product and the manufacture. Thus, a modern version of a kinship relationship has been established between the consumer and the company.

In addition to this discussion of the market economy is the concept of money[72] and standard prices or price equivalencies in the past. Polanyi and others argued that, while something like money might have existed in the past, this 'moneystuff' would have only operated in certain spheres and would not have acted as general purpose money or money which could be used to buy goods and services in any part of the society (Isaac 2005, 16). It has been demonstrated that, for the ancient Near East, money did seemingly exist at certain times and places. This was typically in the form of silver acting as a standard of value with most things being able to be valued in silver, though barley was also usable as a form of money (Hafford 2001, 103 f.; Peyronel 2014). That lists of prices for goods, fines to be paid in specific amounts of silver, and other such evidence from ancient texts exists, certainly suggests that money did exist in

---

70 Hafford 2001, 30; Garraty 2010, 9 f.; Stark/Garraty 2010; Aubet 2013, 144 f. See Stark/Garraty 2010 for a discussion of how archaeology may find the market place or evidence of the market in archaeology.
71 For a different view on this subject, see Garraty 2010.

72 Money here refers not to coinage which is separate from money. Rather money refers to: 'A commodity through which all other commodities are ranked. In this way, all items and services can be indexed in specific value terms or related to one another' (Hafford 2001, 99).

the past in a way which is similar to our modern understanding of money, such as there being price equivalences for items which could be valued in money typically by the weight of a metal or grain (Monroe 2008, 162; Hafford 2001, 104–112; Aubet 2013, 147–155).[73] However, while certain forms of money certainly did exist in the past, whether or not it was universally employed in all forms of life and in all sectors of society, for all the various regions of the ancient Near East and Eastern Mediterranean, and at all times, is unknown. There were spheres of exchange where a standard form or value or money was not used, such as in gift exchange or barter. Moreover, while money is the main form for transactions taking place in modern society, there are also spheres of exchange where money does not operate.

Such is the realm of the interpersonal 'favour' whereby one person can perform a service or give an object to another person with the promise that, in the future, either a service or object can be asked for of an unknown equivalence when compared to the original. Money may never play a role in this, as it is determined by the actors what service or object may be equivalent to the original request. Thus, even in a world where money appears to be king, social relationships still maintain a strong role in the transferences of goods and services. Moreover, while in the past it may seem social relationships where the most important aspect of exchange, certain aspects of modern economics also would have played a role in given spheres of society. Thus, in the general trend of modern thinking concerning the ancient economy, Polanyi's ideas of the socially embedded economy have certainly not been forgotten. However, the new modernist school which follows after the formalists' claims that that price fluctuation, profit seeking, lose and gain calculation are all independent of the state, meaning a market economy certainly existed in the past, seems to have won out over Polanyi (Aubet 2013, 122–125; see also Garraty 2010, 14–17). While I agree that certain aspects of the market economy would have existed in the past, it is difficult to determine exactly what

those aspects are and when or where they existed. As will be seen in the following section on LBA exchange, what we know about this comes from some texts from certain regions at specific times, but not from all at the same time or region. Moreover, while the archaeological evidence can be used to try and prove aspects of a market economy, it will only become painfully clear how difficult a task this actually is.

3.3.   Forms of Exchange in Anthropology

Aside from studies in ancient economies, the forms of exchange are an important aspect in trying to understand how objects moved from one location to another in the past. Often times, the term trade is used when discussing objects of non-local origin found in a location outside of the region of manufacture or geological source. However, as will be seen later, this term trade often subsumes a number of different forms of exchange. Many of the forms of exchange which are generally associated with the term trade stem from anthropology and fall under two main categories: gift/ceremonial exchange, and barter. Each of these forms of exchange have similarities to one another and often crosscut each other, as is seen in the living examples anthropologists have studied throughout the world. One of the most important forms of exchange generally discussed in LBA trade and exchange theories is that of the gift, with gift exchange falling under Polanyi's reciprocity. There is thus no better place to begin than with the idea of the gift, the gift exchange, and the difference between the gift and the commodity.

Marcel Mauss's (1990) 'The Gift' written in 1925, originally in French, has had a great impact on understanding the gift and its role in cultures both modern and ancient. For Mauss, the gift is part of social relationships and obligations, as the gift given is not given without the expectation of reciprocation. Thus, what is essential for the gift is, first, the giving of the gift by the first person or party, the receiving of the gift by the second person or party, and finally, the reciprocation where the second person or party gives a gift back to the first. As Mauss put it so succinctly: 'To give, to receive, to reciprocate' (Mauss 1990, 39). Within

---

73 See these references also for an extended discussion on the topic.

this cycle is the reason behind the gift, which is the establishment and maintenance of social relations by the creation of a cycle of gift giving which does not simply transfer economically valuable materials from one to another, but forms connections between two parties or peoples. Along with establishing socials bonds, Mauss also saw that the gift given was imbued with a sort of spiritual essence of the original owner or the *hau* (Mauss 1990, 11 f.). Thus the acceptance of a gift was also the acceptance of part of the other person or party, which in turn aided in the creation of the social relationships. This idea is similar to that of the partible and permeable nature of individuality, where objects or things take on part of the identity of the person who created it or owned it and, thus, this can be given to another person who can in turn internalise part of the other's identity, creating a social relation (Fowler 2004, 23–25).

One of the works which greatly influenced Mauss's and the general topic of gift and ceremonial exchange was Bronislav Malinowski's book 'The Argonauts of the Western Pacific' (1984), originally written in 1922, in which he described the Trobriand Islands gift exchange called the *kula*. The *kula* exchange was a form of reciprocity where, after an extended period of preparation, a group of Trobriand Islanders would take to their boats and sail to another island. Upon arrival, they would leave semiprecious goods on the beach, called opening gifts, in order to entice partners to take part in the *kula*. Once these gifts were accepted, then the *kula* began, lasting for several days, where the main items of exchange were bracelets and necklaces, with the bracelets moving from east to west and the necklaces travelling west to east (Hénaff 2013, 13; Strathern/Stewert 2005, 231). Once the *kula* was finished, the islanders took back to the sea with gifts to exchange on other islands, while having established and maintained their social relations binding the different groups of islanders together.

One of the important aspects of this gift exchange outside of the creation and maintenance of social bonds is the aspect of prestige. While the bracelets and the necklaces may be made of rare stones or shells, their value does not necessarily lie alone in these aesthetic qualities, as they serve no practical value (Yan 2012, 277). Rather,

it is because these objects are objects of renown. As Hénaff has stated, they are valuable because: '... above all to the fact that they belonged to such-and-such a person; it is due to the memory of the bonds that they carry with them. They constitute a source of prestige for those who keep them, but also for those who have been able to give them' (Hénaff 2013, 14). Prestige which can be defined as: ' ... a reference to the capacity to inspire admiration and esteem amongst the other members of a community' (Aubet 2013, 94) is an aspect which has been theorised to have played a very important role in the trading relationships between the Great Kings of the LBA. This is as prestige can be created in the gift exchange, as the receiver of the gift becomes like a debtor to the giver until a gift is given in return, creating an unequal relationship whereby the giver maintains the higher position and thus gains prestige (Yan 2012, 280).

The *kula* gift exchange is seen as the typical example of either a ceremonial exchange or gift exchange practices. However, as Yan has stated: 'Although gift exchange exists in all human societies, the form it takes varies greatly, depending on the particular culture within which it is rooted' (Yan 2012, 287). Gifts can be either ceremonial or non-ceremonial, and while reciprocity is expected, delayed reciprocity is an important element in the exchange of gifts for the maintenance of prestige, by making the receiver like a debtor to the giver. However, it is also a sign of trust as generally only one party gives gifts at one time, creating an element of faith or obligation that a return gift will be given in the future, which aids in maintaining the established relationship. The length of time before a gift is given back, however, depends on the cultural standards, as waiting too long can cause a strain on the relationship or even hostilities (Strathern/Stewert 2005, 230; Yan 2012, 280). There are additionally three general forms of reciprocity, called generalised, balanced, and negative reciprocity as described by Sahlins (1972, 193–195; cited in Hafford 2001, 22 f.). With general reciprocity, any item which one person needs or wants could be exchanged for any other item which the other party has to give or where exchange though immediate reciprocity of a similar value is not required. Balanced reciprocity, on the other hand, takes value into consideration, and

the item given or exchanged in return should be of the same culturally established value as the first item. Lastly, negative reciprocity is when an item given in return would have to be of greater value than the original gifted or given item. This could be due to the time in returning the gift being too long, or where there is a difference in social status. Another important aspect of the gift is that it must be given and not bought, thus separating gift from commodities (Satlow 2013, 1 f.). While some might argue that the *kula* exchange could be seen as a form of barter in order to gain prestige goods in the guise of a gift exchange, there is a difference between the gift exchange and the exchange or barter for commodities. As Hénaff has stated: 'The nature of the *kula* is not economic. Its essential function is to bond different groups through the network of partners in the exchange. The purpose of celebrations is not for the partners to offer and gain consumer goods, but to give one another tokens and public evidence of their intention to live together' (Hénaff 2013, 18). However, the differences between gift and commodity exchange are not so clear.

Typically, gifts and commodities are separated from each other in the sense that gifts are inalienable objects, which create some kind of interdependence between the gift giver and the gift received, and the objects or services exchanged are alike and are used to create or reinforce a social relationship (D. Bell 1991, 156; Heady 2005, 267). Commodities, on the other hand, are understood as alienable objects which are exchanged through barter or a bought and sold between individuals whose only relation to the other is through the commodity being purchased, and there is no residual obligation or relationship between the parties involved in the exchange (D. Bell 1991, 156). The items or services exchanged are also unlike each other, and are used to obtain material wealth or profit (Heady 2005, 267). Gregory defined commodities in his work as:

'A commodity is defined as a socially desirable thing with a use-value and an exchange-value. The use value of a commodity is an intrinsic property of a thing desired or discovered by society at different stages in its historical evolution … 'Exchange-value', on the other hand, is an extrinsic property, and is the defining characteristic of a commodity. 'Exchange-value' refers to the quantitative proportion in which use-values of one sort are exchanged for those of another sort' (Gregory 1982, 10 f.).

This seemingly radical opposition between gifts and commodities appears to be a construct not of some underlying universal idea, but rather of modern western thought which wants to oppose gift exchange from commodity exchange (Parry/Bloch 1996, 9; Yan 2012, 284). This is an important distinction when examining LBA gift exchange processes, as the question will come up whether the Great Kings exchanged gifts in a gift exchange or if it was, in reality, barter for commodities in the language of a gift exchange.

In order to examine the differences or similarities between gift exchange and commodity exchange, one must also examine barter. Heady has defined barter as:

'A non-technical English term which anthropologists have applied to a range of transactions that share certain characteristics. Barter typically denotes the direct exchange of goods or services for each other without the medium of money. Within this broad class of exchanges, the term is generally restricted to those in which the prime focus of interest for the exchange partners is in the goods and services themselves rather than the social relationships arising from the exchange: where social relations are the prime focus of interest the transaction is usually referred to as gift exchange' (Heady 2005, 262).

Or as Appadurai defined it: 'Barter is the exchange of objects for one another **without** reference to money and **with** maximum feasible reduction of social, cultural, political, or personal transaction costs' (Appadurai 1986, 9). Humphrey and Hugh-Jones have also noted several other aspects of barter. The first being that the objects or services should be different in kind. Second, both actors in the barter are free and equal and can stop the exchange if they please. Third, there is no physical criteria by which it can be judged why two dissimilar objects are equal in value as both actors simply wish to have the object or

service the other person has. They also note that barter rarely happens by chance and then never again. Participants in barter systems need to have a certain knowledge about who they are bartering with, what they are bartering for, and what they need along with what the other party needs. Thus, barter relationships are also established between barterers, as the two parties involved in the exchange are both seeking to keep the other satisfied and treated fairly so as to continue barter relations in the future (Humphrey/Hugh-Jones 1992, 1, 8). Thus, while it is possible to pull out of a barter exchange or try to swindle the other party, this may not be in the best interest of either party. Heady notes this is particularly true when parties from different ethnic or ecological backgrounds come together for barter. Attempting to swindle a non-local trading partner may result in the barter never occurring again or other more severe consequences may transpire. Thus, in this instance, the barter exchange can take on a gift-like form where the barter partners are ritual friends and the exchange must take place within a secure social relationship (Heady 2005, 268). Moreover, this already begins to highlight that while barter and gift exchange seem to be opposed there are certain areas in which they overlap and act similarly.

As Bell has noted, in both gift and commodity exchange, there is an expected balanced reciprocity between the two parties involved in the exchange. This reciprocity of an equal value would be defined by the two parties whether it is in the return of an appropriate gift, or the exchange of two objects that are understood by both parties to be of equal value (D. Bell 1991, 161). Additionally, there is often the establishment of a social relationship between the two parties, whether it be in a gift exchange or in a barter or commodity exchange. The maintenance of these relationships is beneficial for both parties whether it be the kinship ties created in the gift exchange, or the ties of being able to obtain needed or wanted commodities from others in a beneficial manner through barter and commodity exchange. In some cases, gift and commodities can exist or be exchanged within the same context (Yan 2012, 284 f.), and many pre-capitalist societies used the gift exchange as the rule for fair trade in what could be considered barter (D. Bell 1991, 161). Moreover,

even in the *kula* gift exchange, if the return gift was inadequate, the relationship between the exchange partners would be threatened and vile gossip would be spread about the insufficient gift throughout the various islands (D. Bell 1991, 161). As Reinstein has pointed out, commodity exchange can be very similar to gift exchange. If two people continually exchange their commodities week after week with products remaining of the same quality, an understanding is created between the two parties where this exchange will take place in the future (Reinstein 2014, 87 f.). Thus, as he states: 'A repeated 'commercial' exchange sustained by reputation and reciprocation concerns may not be terribly distinct from a repeated 'gift exchange'' (Reinstein 2014, 88). The question thus stands, if there are such similarities between the gift exchange and barter, what if any is the underlying difference?

Heady has noted that all exchanges have two aspects, with the first being the transfer of goods or services, and the second an indicator for the type of relationship between the exchange partners (Heady 2005, 270). He goes on to state: 'Commodity exchanges are those in which the partners' attention is focused on the first aspect, and gift exchanges are those in which attention is focused on the second aspect. In many exchanges, including most barter exchanges but also many monetary exchanges, the partners give some attention to both aspects' (Heady 2005, 270). For Bell, barter is a subtype of gift exchange. He states: 'Barter is a degenerate form of gift exchange in which gifts are alienated from the donor and the value of the good to the receiver is not augmented by the personal attributes of the donor' (D. Bell 1991, 162). Moreover, as Strathern and Stewart have stated: 'Commodity exchange and gift exchange ... do not refer to different societal forms. Moreover, in practice the character of an exchange may include both commodity and gift elements. And specific items of value may enter into chains of transactions in which they are treated alternatively as commodities or gifts' (Strathern/Stewart 2005, 236). Thus, as they go on to say: 'The distinction between trade and gift exchange is blurred, although typically trade involves the immediate exchange of unlike items and gift exchange involves the delayed exchange of like items' (Strathern/Stewart 2005, 235).

Gift exchange and barter, as stated previously, can also occur at the same time. This is even true of the *kula* where, during this gift exchange, another exchange called the *gimwali* also takes place. The *gimwali* occurs at the same time as the *kula* where the visiting members bring other valuable gifts and trade or barter with the local group for consumer goods or commodities (Strathern/ Stewart 2005, 233). Many anthropologists maintain that while the *gimwali* takes place, the *kula* is not simply a political cover for barter between groups which might normally be hostile to one another (Hénaff 2013, 14). Normally it is assumed, the *kula* is a competition for prestige and is a ritualised alternative to physical hostility between the two groups (Strathern/Stewert 2005, 233). Hénaff argues that one of the great distinctions between the *kula* and *gimwali* is that those who are taking part in a barter relationship always choose a different partner than those who are participating in the *kula*. He goes on to say that the consumer goods which are exchanged in the *gimwali* are different from those ceremonial items exchanged in the *kula*, which would indicate that both the *kula* and the *gimwali*, while taking place at the same time, each occur for different reasons and objectives (Hénaff 2013, 14).

For the present argument, it is not important whether or not, in the case of the Trobriand islanders' gift exchange, it occurs solely for prestige and political reasons or if it is a cover for barter. This is a discussion for anthropologists. It is also not entirely vital to create an anthropological differentiation between whether or not barter is trade or not, if it deals with commodities or not, or if gift exchange can be seen as trade or not, as these are distinctions in anthropology. However, in the archaeological literature, these definitions often take on a different meaning. Thus, while in anthropology, calling gift exchange trade may be incorrect, in archaeology it may be the correct use of the term trade. The problem lies in the difference between these two fields in that an anthropologist can ask the living informants questions to try and determine the meaning behind the exchange, whether it be barter, gift exchange, trade, buying and selling of commodities and so on. However, in archaeology we may only ask questions of the artefacts we have and of the texts from

specific regions and from specific times which are interpreted to formulate a theory whether there was a market economy, whether there was commodity exchange, or whether an object arrived in a certain place through gift exchange or barter or by being bought for a specific amount of silver or grain. The problem is, the objects and texts do not tell us exactly what they are or what they mean, and the archaeologist is tasked with interpreting these objects and determining whether or not an object is a gift, a commodity, a bartered object, a piece of loot, or something else, all of which is made by an outside observer making the best assumption based on the available understanding of the period and region. Thus, to make clear this distinction between the anthropological view of exchange and the archaeological view, it is important to briefly examine the theory of trade and exchange in archaeology, and the definitions given for these terms within archaeology itself, to come to a better definition which properly describes the archaeological evidence.

3.4.   Trade and Exchange in Archaeology

The idea of exploring trade in the archaeological past has been a key feature of archaeology for most of its history. Generally, of course, this is in looking at objects found archaeologically which could be considered imports, exotica, non-local material, all of which could have been brought to the location of deposition either through some kind of trade mechanism, diffusion, acculturation, or migration. While theories on how 'imported' objects arrived in a location have been formulated for decades, with some of the beginnings of these theories starting with Kossina and Childe, it is not the intention of this section to examine this entire history. Such ideas as trade being equated to diffusion or that of pots and peoples and trying to track trade through ethnically identified objects have long been discussed and need not be repeated here.[74] What is important for this discussion

---

74   For a review of the history of trade and exchange in archaeological theory see: McCormicks Adams 1974; Renfrew 1975; Oka/Kusimba 2008; Skeates 2009; Bauer/Agbe-Davies 2011.

are the definitions for the words trade and exchange in archaeology, what they mean to different researchers, and how well these definitions or models can accurately describe the archaeological record. It is only with this understanding that we can arrive at definitions which address the actual archaeological material and not only the theories of how to interpret it.

Within any discussion of definitions, there are always the problems of words. Often times in trying to describe a new or different definition for a seemingly well-defined word, other words within that definitions must first be redefined.[75] Seemingly just as important as this are the standard dictionary definitions for the word being redefined and the historical meanings of the word and how the meaning has changed over time. This is exactly the track McCormicks Adams took at the beginning of his innovative review of trade in archaeology. He demonstrates that the Middle English word 'trade' originally meant path or beaten track, which in the 16th century then took on the meaning of a habitual course of action or the practice of an occupation leading to the English word 'tradesman', and finally the modern meaning of the word which connects the word with commerce, the exchange of commodities, barter, and sale (McCormicks Adams 1974, 239). As he states: 'The extent that the practice of trade and commerce now is associated with innovative, risk-taking, profit-motivated, entrepreneurial behavior, the word has swung around until its connotations are almost diametrically opposed to those that were present originally' (McCormicks Adams 1974, 239). These 'diametrically opposed' meanings demonstrate not only the changing meaning of the word trade, but also that for different people at different times, the word trade will have many different connotations. How this word is used in archaeological research, while seemingly innocuous, becomes a complex question of 'what does this word mean to you?' The same can be said of the word 'exchange' which is often times used interchangeably with the word trade, either because the question if there is a difference between the words trade and

exchange is not important, or it is believed that there is no real difference in the meanings of these two words. One example of this is Monroe's examination of 'trade' in the Eastern Mediterranean: on the first page he notes that, for his purposes, there is no difference between trade and exchange, and these two words can be used interchangeably (Monroe 2009, 1). Or, as Burns describes trade in New York, Mycenae, and other great cities, he uses the words trade and exchange interchangeably, both being the factors which brought about the great wealth of those cities (Burns 2010a, 1 f.). However, I believe it is important to separate these two words, as one can accurately describe what is seen in the archaeological record, while the other is better to describe models or historical texts, but both are not equally applicable to every archaeological question.

Trade in archaeology is most simply defined as, 'A two-way exchange' (Aubet 2013, 81). However, the exact meanings archaeologists have given to the word go far beyond this general definition. While a list of definitions for trade in archaeology could go on endlessly if pulled from all fields, periods, and places of archaeology, I will limit the definitions here to those more recent and more reflective of current archaeological thought. Among many of the modern definitions for trade in archaeology is the distinct economic overtones reflecting modern economic thought.[76] One of these economic definitions is Monroe's, who describes trade as: '[Encompassing] a broad spectrum of economic activities, including reciprocal gifting, barter, redistribution, buying and selling, capitalistic or profit-driven trade, mercantilism, and various combinations of these idealized types' (Monroe 2013, 6792). Going along with this general economic theme is Burns's more general approach to trade as being: 'typically defined as the exchange of goods and services within a mercantile or economic framework that may or may not involve currency' (Burns 2010b, 291). Skeates also places trade in an economic system and defines it as: 'a commercial type of transaction, between people and places, involving an exchange of commodities for money or other commodities. It is

---

75 For an example of this, see Polanyi 1957a as he describes and defines the ancient economy.

76 Much as McCormicks Adams noted even in 1974.

undertaken, in part, to counteract the uneven distribution of essential cultural resources' (Skeates 2009, 556). Hafford, while describing trade in economic terms, does not specifically mention such aspects of modern economic thought, as he defines trade as: 'a more specific term indicating a specialized exchange, a habitual transfer of goods that can be an end in itself rather than simply a means to one. Some value is generally gained in the exchange and it is thus normally linked to at least one, sometimes several, standard measurements of value' (Hafford 2001, 10). From these definitions, it is clear that many of the modern definitions for trade in archaeology place a strong focus on the economic aspects of trade as seen through modern economic thought. While some still maintain that political and cultural dynamics may play as strong a role in structuring trade as the economy does (Burns 2010b, 291), it is clear from the use of the term trade that the general modern understanding is rooted in economics. However, this is not true of all modern definitions.

Agbe-Davis and Bauer begin their volume on rethinking trade in archaeology by stating: 'Trade acts as an important mechanism for establishing and maintaining the social bonds that hold societies together' (Agbe-Davies/Bauer 2010, 13). In their approach to trade in archaeology, they are strongly influenced by the anthropological notions of kinship and the social spaces through which goods can travel, and the importance of these social interactions which may take place through trade. For Agbe-Davis and Bauer, trade is one type of exchange relationship which is 'a more specific category of activity in which the exchange is more formalized and market based, both in the individual interaction and on a systematic scale' (Agbe-Davies/Bauer 2010, 15). Their focus is on the actors in the trade and the ritualised or institutionalised practices and spaces in which trade can take place, whether it be at a marketplace or a family gathering. In turn, they note that while traditional archaeological theory concerning trade focuses on the circulation of things, an often forgotten aspect is the intangible movements of traditions, values, and ideas (Agbe-Davies/Bauer 2010, 15–19). Thus, they state: 'Explanations that cast the primary significance of goods in purely economic terms

capture only part of their meaning' (Agbe-Davies/Bauer 2010, 20), removing them from the general trend of modern economic-based thought for the archaeology of trade. Similarly, Sameas and Coenaerts define trade as: 'one aspect of exchange and should be understood as the transaction of goods and services between individuals and/or societies. It implies organized, direct, short-term actions' (Sameas/Coenaerts 2011, 395). They do not specifically place trade in an economic framework, but they place the emphasis on the organised aspect of trade. Within many of these definitions for trade, is the use of the word exchange. Some of the above scholars have made a distinction in how they use the words trade and exchange, and here I will examine the definitions for exchange.

Not all of the above authors make a strong distinction between trade and exchange: as mentioned before, both Monroe and Burns use the term interchangeably (Monroe 2009, 1; Burns 2010a, 1 f.). Additionally, Renfrew also believed the terms to be synonymous (Renfrew 1975, 4). Skeates however, does make a distinction between the two terms, defining exchange as: 'the reciprocal process in which people give and receive something in place of another ... that something can be almost anything from ideas, to marriage partners, prisoners-of-war, food, livestock, raw materials, manufactured goods, broken objects, foreign currency, services, blows, bodily substances, positions, stories, opinions and glances' (Skeates 2009, 556). Skeates goes on to note that one major factor generally separating trade from exchange is that trade is typically regarded as more economic, while exchange has a more social underpinning (Skeates 2009, 556). Likewise, Hafford also distinguishes exchange from trade, defining it as: 'a general term, operating in many modes but always concerning the transfer of goods between individuals or groups. The simplest form of exchange is barter (transfer of two items one for the other), but note that trade and commerce are also forms of exchange' (Hafford 2001, 9). For both of these definitions, exchange takes on a broader meaning, encompassing trade but with the general theme of things, whether they be material or immaterial, passing between two people or groups. In this way, the definition given for exchange by Agbe-Davis and Bauer generally matches these authors even

though their definitions for trade do not. They describe exchange as: 'the transfer of goods from one party to another through a wide range of mechanisms, from ritualized gift exchange to the negotiated transactions of barter and markets and the one-way exchange of coercion and piracy (Agbe-Davies/ Bauer 2010, 15). Finally, Sameas and Coenaerts define exchange as: 'any two-way interaction between people, organized or non-organized actions, direct or indirect, over the short or long term' (Sameas/ Coenaerts 2011, 395) reflecting the general theme for the word exchange.

Herein lies the difficulty with all of these definitions for trade and exchange. While many of them are in part influenced by anthropology, anthropology itself may not agree with how the word is defined. An anthropologist would distinguish between trade, being barter or commodity exchange, and gift exchange falling under ceremonial exchange (Strathern/Stewart 2005, 235). However, Monroe's definition of trade places reciprocal gift exchange under the title of trade. Likewise, Hafford lists barter as the simplest form of exchange, whereas, in anthropology, barter would likely be called trade. Thus, the question then remains, what do either of these two terms mean and for whom, as there seems to be a distinct separation between the general anthropological meaning of the words trade and exchange and the archaeological meaning of the words. Susan Sherratt has made her view on this conflict between the archaeological and anthropological understandings of trade quite clear. She states: 'I offer no apology for using the words 'trade' and 'traders' in their commonly understood vernacular sense, regardless of the type of trading mechanisms involved' (S. Sherratt 2011, 138). Sherratt goes on to say she sees no difference between gift exchange and trade which anthropologists distinguish between, as she, like Agbe-Davis and Bauer, agrees that all of these forms of exchange are embedded in social practices (S. Sherratt 2011, 138). Another difficulty in either of the words is what they describe, as the words often focus on the process of exchange or trade and the actors or the actors' motives. If this is to be the focus of the words, then one should take a more anthropological focus for them, instead of an archaeological one; however, as there

is a difference between these two disciplines, one must look to what archaeology can do with what it has. Anthropology has the living, while archaeology has the things of the dead. This means the focus of the archaeological definitions when speaking of archaeological materials should be on trying to define these terms in reference to the archaeological material culture.

This focus on the material culture has certainly not been ignored, as theories and models of trade have been long worked on in all fields of archaeology; it has long been the focus and the topic of many articles, books, and dissertations. Thus, as Renfrew stated: 'Trade can be studied. The objects of trade, or at least the imperishable ones, can frequently be found, modern analytical techniques allow the determination of the source, and quantitative methods inspired by geography permit generalization about distribution patterns' (Renfrew 1975, 3). Renfrew created ten 'modes of trade and their spatial implications', models which were meant to track trade in the archaeological record through an examination of the material culture record. After the creation of these ten models, Renfrew went on to model the possible statistical implications of the ten forms of trade and how they might manifest themselves in the archaeological record, which could be detected through a statistical and spatial analysis (Renfrew 1975, 40–54). Leemans described trade in two main kinds, long distance and distributive trade. Distributive trade is local trade and plays no role in contacts with other societies as it is the movement of goods within a given cultural or local space. Long distance trade is thus when goods are traded between countries or regions, with the items being either directly taken to the foreign region by traders or by being bought and sold through a chain of intermediaries with each one trading the object over short distances (Leemans 1977, 1). Sugerman has also applied a dendritic model of trade to the Southern Levant, whereby trade objects are seen as entering the country at the coastal ports and traveling inwards via the drainage system carved into the landscape. Thus, trade goods flow downstream to the ports from the producing centres inland, while goods moved upstream, with a decrease of goods as the objects moved further inland (Sugerman

2000, 31–35; 2009, 442 f.). These models, however, are not without their problems.

As Manning and Hulin noted, there are no clear relations between the models of distribution and the fall-off patterns Renfrew predicted (Manning/Hulin 2005, 277). The largest difficulty, though, is of course with the use of the word trade. Generally expressed through the use of the word trade is some sort of profit-driven venture, barter, the buying and selling of goods and other economic factors which are employed, whether the trade is part of a social relationship or not. However, the question must be asked: can we actually describe the archaeological evidence as objects which were in fact traded? Aubet makes this point quite clearly. She states: 'Trade is not the only mechanism for the distribution of goods in centralized economies; the circulation and distribution of goods can also take place by way of taxes, tributes, plunder and illegal trade or piracy, as well as through gift exchange and marriage alliances. It is not easy to identify these different ways of distributing goods in the archaeological record without the aid of written documents, so ceremonial exchange and tribute are often confused with genuine trade' (Aubet 2013, 81). The last sentence is of the utmost importance when trying to understand trade or exchange in light of archaeological material culture.

When looking at a pot, a piece of gold, or whatever other piece of non-local material one is examining in the archaeological record, it is almost impossible to determine the exact method by which it arrived in that depositional context. Thus, as Aubet stated, goods which were tribute, gifts, plunder, or even personal possessions can be confused with objects of economic trade. Additionally, there is the question of the life or the biography of the object. It was most likely the case that often an object did not have one owner and that it was not shipped to one location and deposited there, as it would have passed through different phases of existence (Appadurai 1986; Yasur-Landau/Goren 2004; Steel 2013, 124). Thus, even if an object was initially bought, it could have been later gifted to another person, stolen, taken or given as tribute or transported as a personal possession before being deposited. This would mean that, even if we have objects of non-local origin, unless we know the biography of the object, it is impossible to say how and why it arrived in that location. That is, unless there are texts to help determine whether or not the object might be from trade. However, trying to correlate a text with an archaeological artefact is difficult if not impossible, and even trying to determine the means of 'trade' in the texts is not without problems, as will be seen with the gift exchange or barter between the Great Kings of the LBA. Within the texts, there is both evidence to say these kings and rulers were participating in high level gift exchange or were using the language of gift exchange to cover over their bartering or buying and selling of prestige and precious goods.

With all that being said, what then might be a better solution to this quagmire of definitions, the disjointed meanings and usage between anthropology and archaeology, and the problem of accurately identifying trade objects within the archaeological record? I feel the best method is to define these words in a way which most accurately describes the material which we have at hand. Thus, in this view, exchange is defined as: **The movement of an object from one location to another**. This definition takes into itself the various forms of 'exchange' or 'trade' which have already been described. However, the difference here is that, when examining an artefact, it is nearly impossible to determine by which method of 'exchange' or 'trade' it travelled by, let alone the actors who moved it. The definition describes the movement of the object but not the intent or method, as these are seemingly lost to time. Moreover, it is not the intention of this definition to eliminate either the economic and social aspects of trade or exchange which have been mentioned above. However, these other definitions of trade or exchange are generally only applicable to a historical understanding or to theories which the archaeological material culture cannot substantiate as they apply to history but not necessarily to the material culture itself.

I say this, as even archaeological finds which would seem to catch trade in the act cannot be conclusively proven to be trade and not gift exchange. Such are the cases of the cache of Mycenaean pottery found at el-Amarna which have been

interpreted as either a gift or as being bought, the Egyptian fiancé plaques found at Mycenae which again could be either a gift or were bought, the Mycenaean figures found in the Levant which could have been given as gifts or used in barter for supplies. Perhaps most notably is the case of the Uluburun shipwreck which sunk, freezing in time the movement of a vast amount of goods. However, despite the pristine nature of this find, we still cannot tell with any certainty exactly where it was going, why it was going there, if it was a gift, if it was part of sailor trade, if it was part of a bridal price, or if it was an order for goods needed.[77] Thus, there is nothing wrong with the definitions for trade being a socially embedded practice, with economic interests or exchange being the transference of goods between two parties, as these work perfectly well when describing historical material or when trying to create complex theoretical models. However, they do not function as being able to explain the material culture. This does not mean one cannot theorise that certain objects may have arrived by a certain method or exclude certain methods of trade or exchange. For example, it is not likely that the Mycenaean pottery at the Ammon Airport Structure arrived as plunder or loot from a Canaanite raid against a Mycenaean site, or that the Nile perch found at *Tell el-ʿOrēme* (Tel Chinnereth) arrived by an overland route after being stolen in Egypt. These are highly unlikely; however, taking the same examples, it is not clear if the Mycenaean pottery at the Ammon Airport structure arrived as a single bought shipment, if some were personal positions, tribute gifts and so on. Or for the Nile perch at *Tell el-ʿOrēme*, if they too were bought, gifted and so on. Thus, there are more and less likely means by which a non-local object may have arrived. Nevertheless, the archaeological record does not clarify by which means exactly an object arrived at a given site, and by which method that object arrived will change the interpretation of the significance or meaning of that object.

For the purposes of this work, however, it is also important to further define the term exchange, in this case to separate between intraregional and interregional exchange. Intraregional exchange would be defined as: **The exchange of objects within a specified region**. Interregional exchange can be defined as: **The exchange of objects between two diverse regions**.[78] This exchange can take place either directly i.e. a scarab is made in Egypt and shipped directly to Ugarit, or indirectly i.e. a scarab is made in Egypt then is first shipped to the Southern Levant, and then is later moved to Byblos, and then is later moved to Ugarit having exchanged hands several times. Interregional exchange is thus a broad term to describe the movement of objects; however, when describing the archaeological artefacts, it does not describe the biography of how it arrived in its depositional context. In the case of this work, interregional exchange would be represented by objects which came from outside of the Southern Levant but were found within the region or items which came from the Southern Levant and were found outside of the region. However, as with most definitions, the term region must also be defined. The term region here refers to: **A specific area of land, sea, and water which has been grouped together based on material culture finds and historical documentation**. Thus, the term, 'non-local' would then refer to items which came from outside of a given region, with the region being local. This is an important aspect, as the region will be defined by the archaeologist; thus, what is and is not interregional exchange is defined by the archaeologist as well. An example of this is the region in question, the Southern Levant, as the boundaries are a modern day invention created by an archaeological and historical interpretation of this region's history. To illustrate this point, there is the site of Hazor in Northern Israel.

Hazor is generally placed within the region known as the Southern Levant. However, while it is placed in the area of the Southern Levant, the material culture from Hazor during its history is

---

[77] For all of these examples see the following chapter for an in depth examination.

[78] This separation is similar to that made by Leemans's separation between long distance and distributive trade.

generally more in line with that of the Northern Levant, thus being outside of the Southern Levantine region. This is clearly illustrated by Hesse who states: 'The archaeological material at Hazor reflects to a great extent the materials of the cultures related to the geographical spheres to the north of the city, including the northern Syrian cultures tangent to southern Anatolia and to the NW touching the Mesopotamian culture' (Hesse 2008, 176). Thus, with a strict examination of the material culture, it might seem more reasonable to place Hazor outside of the Southern Levantine region; however, as it has traditionally been placed within the Southern Levant for the purposes of this study, it will be defined as part of the Southern Levant. Yet, this problem can be confusing when trying to determine what items can or should be considered interregional or intraregional, as an item made in Hazor and traded to *Tell Abū Ḥawām* could be seen as either inter- or intra-regional depending on how the region and its borders are defined. Thus, whenever using this term 'interregional exchange' we must acknowledge that it relies on modern day constructions of regions, and that while it depicts the exchange of objects between these constructed regions, it does not tell us the type of trade or type of exchange nor the path of exchange which has been lost to history and is not visible archaeologically. However, this definition is certainly not to argue against using the word trade, as objects could be argued to be objects of trade. Nonetheless, using the term trade in a historical model is different from describing the archaeological material culture where the term is not applicable, as it cannot be proven to be trade over some other kind of exchange.

This definition of interregional exchange also encompasses other items which are often times hard to explain or interpret in a trade model of exchange. These items would include the many types of 'imported' Egyptian goods, which have been uncovered at many sites, and are believed to have had a connection with Egypt or even Egyptians living at the site. The question is, were these Egyptian items traded to the Southern Levant, or where they brought by the 'Egyptians' living there? These items could either be personal possessions and thus not an indicator of trade, or they could be items of trade brought from Egypt to a Canaanite prince who was egyptianised. However, we cannot tell how these artefacts came to be there, whether they are objects of trade, or personal possessions. What we can call these objects though are objects of interregional exchange, as exchange does not have to be reciprocal. In other words, if these Egyptian objects were brought as personal possessions, the objects were exchanged between two regions; however, there was no trade or gifting of the objects and thus no reciprocal exchange i.e. grain was not traded for another object nor need a reciprocal gift be given.

Interregional exchange seen in this light also does not tell us of the life the object has after being exchanged between regions. In this archaeological definition, the object of interregional exchange is interpreted in its context of deposition both in time and space. However, it is likely that many of these objects we discuss which have been called imports had a life after arriving in the Southern Levant, whether that was in a single family, or if the object was re-traded or re-exchanged to several different people or locations before being deposited. This means that the object first brought from another region did not simply stop moving once arriving in the Southern Levant (see for example, Yasur-Landau/Goren 2004). Thus, when we consider interregional exchange patterns, we must take into consideration both the date of manufacture for the object i.e. LH IIIA2 and the date of deposition i.e. LB IIB, as this provides both a *terminus post quem* and a *terminus ante quem.* However, the time between these two dates is the possible time of exchange including both the initial interregional exchange, and the time in which the object could have had a life of its own, either being passed down in a family and moved in that way, or being re-exchanged until its final deposition. However, this can only be if an approximate date of manufacture can be determined, which is not possible for all artefacts which might have arrived in the Southern Levant via interregional exchange, such as precious metals, stones, and things of the like which do not have a definite date of manufacture even if the object is worked, as they could have been reworked, or recycled. With this definition for interregional exchange in place,

the next step is to examine the theoretical backing for the development of this exchange and the development of interregional exchange as a cultural resource.

3.5.   Interregional Exchange as a Resource

One of the important aspects of this study is the investigation of the development of interregional exchange as a resource in the Southern Levant and where and why it might have been considered a resource during the LBA and Iron I. However, before explaining this concept, it is important to define what resource means in this context. The definition for resource comes from the theoretical framework of which this project is a part. This framework is the SFB 1070 RESOURCECULTURES, a multi-disciplinary attempt at examining resources in different ages, places, and with a variety of diverse methods. Thus, under this framework, the term resource has a special definition, and along with this, there are several other key concepts which must be introduced to bring a different understanding of how to perceive interregional exchange in the past (for a full discussion, see: Bartelheim/Hardenberg/Staecker 2014; Bartelheim *et al.* 2015).

The traditional understanding of what a resource is falls under the following definition being: 'Natural raw-materials, needed for economic production or, in a broader sense, to provide support for human existence' (Bartelheim/Hardenberg/Staecker 2014, 16). However, this traditional definition comes short of addressing all of the possible types of resources or their social ramifications or transformative properties. There exist many immaterial things which can be deemed as a resource. In the past as in the present, ideology can be used as a resource in order to gain control, maintain control, or to influence a population. Religion can act in much the same way, as men and women can use religion to motivate or move an entire population, and thus the actors have used this immaterial concept as a resource of power or for social change. Thus, with these thoughts in mind, it has led to a new view of resources. In this view, resources are defined as: 'The basis for or a

means to create, sustain and alter social relations, units and identities within the framework of culturally affected beliefs and practices' (Bartelheim/Hardenberg/Staecker 2014, 17). This understanding of resources thus does not view them simply as things, but as culturally embedded ideas, or things which have a cultural value. In other words, even if a natural resource of copper would normally be listed as a resource, if it is in an area where copper is not in some way culturally significant, then for those people, copper is not a resource so much as it is a green rock. Or, moreover, we would traditionally ascribe the term resource to this same copper because of its metallurgical properties, but in the past, the green copper ore or the metal itself could have been viewed as sacred. Thus, in this case, the use of the metal as metal for tools and so on would not have been the resource but the cultural significance, and its ability to sustain or change the culture would be the resource. In the case of interregional exchange this is also true.

Normally, interregional exchange, as defined here, or trade would be viewed as the mover of resources. For example, pots filled with oil where made in the Argolid of Greece and shipped to Egypt, Cyprus, and the Levant where they were bought and sold in return for other items which were brought back to Greece. Traditionally, it would be the view that the resource in this case would be the oil being bought and sold, or for other examples from the LBA, the copper and tin ingots being shipped on the Uluburun ship, the gold given as gifts from an Egyptian pharaoh to another of the Great Kings and so on would all fall under the traditional idea of the resources being exchanged. However, in light of this new definition of resources, we must examine interregional exchange differently and not as the mover of resources but as the resource itself. Again, within this definition for interregional exchange would be included the various types of trade or gift exchange which have been discussed above, meaning, in a historical model, trade itself should be viewed as a resource. However, in this archaeological view of interregional exchange as a resource, it would be seen that certain areas used this concept or the ability to move and receive goods as a way of creating a cultural identity or changing a

current one, sustaining this identity, all the while affecting the intercultural relations and contacts of this area. It is the use of interregional exchange, the idea, which could be seen as a resource supporting part of their cultural identity. Thus, for the area most commonly associated with interregional exchange in the Levant during the LBA, Ugarit, interregional exchange could be viewed as one of the main resources which sustained and altered the culture of this area. One key point is that, while looking at this question of whether or not interregional exchange was a resource, it must be taken into consideration that asking the question of a broad area such as the Southern Levant would be wrong. Asking if interregional exchange was used as a resource in this entire area would be futile as much as in the modern world there are cities or towns which rely on interregional exchange and some which do not. Thus, the question we must ask is not was interregional exchange important for the Southern Levant during the LBA, but rather, was interregional exchange important for Hazor, or Megiddo, or *Tell Abū Ḥawām*? Why was it important in one area and not another? How did it affect this particular city, and why, at the end of the LBA, for those cities where interregional exchange was viewed as a resource, what changed culturally which made it seem to take on a less culturally important role in the Iron Age?

Resources, however, do not act alone. Even if interregional exchange could act as a resource for a given city or town, an entire complex of peoples and abilities would be needed to maintain interregional exchange as a resource. Thus, in this understanding of resources, they do not exist alone, but rather in a ResourceComplex. A ResourceComplex is defined as a rule: 'Resources do not exist in an isolated way, but in combination with other resources as a ResourceComplex, which frequently consists of a combination of objects, persons, knowledge and practices. Often a specific resource needs other resources for its preservation, distribution or use' (Bartelheim/ Hardenberg/Staecker 2014, 18). Thus in the case of interregional exchange as resource, it would have involved an entire system of peoples, objects, needs both physical and ideological in order to exist as a resource. Moreover, if one of the parts in

the ResourceComplex were to change or cease to exist, it may cause the resource to no longer function as a resource or no longer be important to the culture. This is a key factor which will be a part of the examination of what might have changed in the LBA in the Southern Levant, that if there were places in this region which used interregional exchange as a resource, what might have changed in the ResourceComplex, that would shift the focus away from interregional exchange as a resource to, say, moving to the central highlands. Thus, when taking both the resource and the ResourceComplex into consideration along with the cultures which use them, there is what can be called a RESOURCECULTURE. RESOURCECULTURES 'can be seen as specific dynamic models connecting certain resources, social forms of use, social relations, units and identities in a contingent meaningful way' (Bartelheim/Hardenberg/Staecker 2014, 23). With all of this in mind, it is the goal to examine the development of interregional exchange as a resource and as part of a ResourceComplex within the Southern Levant during the LBA and the claimed disappearance of this resource and ResourceComplex in the Early Iron Age.

One final aspect to take into consideration is the value of interregional exchange in the societies of the Southern Levant and the value of the objects exchanged. The term 'value' here refers to: '... those invisible chains that link relations between things to relations between people' (Gregory 1997, 12). For the purpose here, there are two types of value which are crucial to how the peoples of the Southern Levant valued interregional exchange and the non-local objects transferred in that exchange. The first is use-value which can be defined as: 'an intrinsic property of a thing desired or discovered by society at different stages in its historical evolution' (Gregory 1982, 10). Use-value is the value of the usefulness of the object. For example, a Cypriot pot's use-value could be as a container for a precious liquid, or for representing part of a person's identity for eternity once placed in a grave. On the other hand is exchange value, which is defined as: 'the quantitative proportion in which use-values of one sort are exchanged for those of another sort' (Gregory 1982, 10 f.). In this case, it is the worth of the object in

relation to its worth to another object, be that ten Cypriot pots are worth one stone vessel when empty or two stone vessels when filled with oil. Gregory illustrates the difference with rice as the example, stating: 'Rice, for example, has a number of use-values be it food for a consumer or seed for a producer; its exchange-value, by contrast, is the price it fetches on the market' (Gregory 1997, 126). Whether or not a non-local object was valued for its use or for its exchange value will ultimately affect the interpretation of the importance of these objects, whether they were more so valued in the social sphere because of their use-value or in the economic sphere because of their exchange value. This will be examined more closely in the chapters examining the non-local material culture in the Southern Levant.

3.6.   Summary

The study of ancient economies, trade, and exchange have changed considerably throughout the past decades of study. Many different fields have brought their unique view points from economists, anthropologists, archaeologists studying non-local material culture, to archaeologists, historians and philologists who examined ancient texts which relate to economies and exchange. Within all of this, there is disagreement, as anthropologists use the terms trade and exchange differently than archaeologists mean them, while archaeologists also argue over the economic or embedded and social value of trade, all the while using the terms in a more historic context than one which addresses the material culture. Thus, with this as the starting point, it is time to start again with a new definition of exchange, one which addresses the archaeological material culture, being the movement of an object from one location to another, with interregional exchange being between two defined regions. With this as well is to examine interregional exchange as a resource and as part of ResourceComplex which developed during the LBA but which changed and is said to have stopped acting as a resource during the Early Iron Age. However, before examining the material culture from the Southern Levant, it is important to examine the extensive historical, archaeological, and theoretical background concerning trade and interregional exchange in the LBA throughout the Eastern Mediterranean.

4. Trade and Exchange in the Late Bronze Age Southern Levant: Texts, Archaeology, and Theory

4.1. Introduction

Trade and exchange, in the traditional senses of the words, are believed to have played a major role for the populations throughout the Eastern Mediterranean during the LBA. The corpus of scholarly research which covers this topic is enormous. This includes the detailed translations and examinations of texts found in Greece, Anatolia, the Levant, Babylon, Assyria, and in Egypt to illuminate how the great powers interacted through trade relations to the possible life of the merchant and what role they played in these different societies. Aside from the textual examinations are the iconographic works which have focused on the 'international style', where elements from the Aegean, Anatolia, Cyprus, the Levant, and Egypt intermingled through the sharing of ideas and perhaps even artists from one region to another. Of course, from the archaeological side are the detailed lists of imported objects, whether it be Cline's examination of exotica in the Aegean LBA, Leonard's detailed listing of Mycenaean pottery in the Levant, or Gittlen's catalogue of Cypriot pottery in the southern Levant which, even though it is almost forty years old, still remains a standard work when examining Cypriot pottery in the Southern Levant during the LBA. All of these have been coupled with a vast array of theories concerning the merchant or trader in the LBA, what goods were transported, whether they be archaeologically visible or invisible and in which quantities, to when these connections were important, and eventually what brought these connections to an end and how this all played into the 'collapse' at the end of the LBA. With such a large bulk of scholarly research, it is impossible to present it all in one place; however, here I will attempt to present as much as can be and all information which is relevant to the question whether the cessation of interregional exchange played a role in the 'collapse' at the end of the LBA in the Southern Levant and the role that interregional exchange played as a resource during this time.

The goal of this chapter is to begin by examining the textual evidence for trade in the LBA with both its pros and cons. After this, I will examine the merchant or trader in the LBA and the various theories which have been proposed concerning these men and women as to whether they were free agents or held in a specific office of the king without any individual action. Subsequently, I will look in detail at one of the great questions concerning trade and exchange in the LBA, which is connectivity between the regions with a particular focus on connections with the Aegean and the Southern Levant. With this, I will also examine the objects which were exchanged and how they might have been moved, shipwrecks, and look at quantities of non-local objects in different regions to place it all into perspective. Finally, I will explore the theories which have been proposed where the breakup of trade relations or networks led to the 'collapse' at the end of the LBA, and present an examination of the evidence for the continuation of interregional exchange in the Early Iron Age. The focus will be mainly on the theories suggested by Susan Sherratt and Michal Artzy.

4.2. Gifts and the Great Kings

Gift exchange between the Great Kings and other officials during the LBA is a long and well-studied field of research (see for example Liverani 1990; Bryce 2003b; Podany 2010; Kopanias 2015). Letters between the Great Kings and other officials have been examined, looking at the use of specific terms such as gift or the familial references even though those communicating were not family. However, before beginning with the textual evidence for gift exchange in the historical settings, we must first examine some of the difficulties of using these texts to interpret the entire LBA for the entire Eastern Mediterranean. One of the first problems comes from the believed gift exchange with the Aegean. There is very little textual evidence to support the idea that gift exchange took

place between Greece and the rest of the Eastern Mediterranean. Linear B inscriptions do not provide any evidence of gift exchange or even trade with regions outside of Greece (Palmer 2003, 125, 135; Cline 2013, 32), and beyond Greece, there is only scant evidence to say the region exchanged gifts with other powers at the time. One of the few examples comes from the tomb of Menkheper-esenb, where the Prince of Keftiu, or Crete, is depicted with gifts. The one reliable historical mention of a gift from Greece or Crete comes from the Annals of Thutmose III from his 42nd year, where he mentions that the Prince of Tanaju or mainland Greece brought tribute to Thutmose while he was in Syria (Bryce 1989, 8; Cline 1995a, 146). It is interpreted that this would not have been tribute, but rather was a gift. However, with the exception of one other vague Hittite reference to a gift from Ahhiyawa (Cline 1995a, 146), there is very little textual evidence to support the notion of gift exchange between Greece and the remainder of the Eastern Mediterranean, and none of this evidence comes from Greece itself.

The problems with the textual evidence do not stop there, as moving across the Mediterranean to Cyprus belays similar problems. On Cyprus, with the Cypro-Minoan script still waiting to be deciphered, the island itself remains silent. Texts outside of Cyprus which may lead to some conclusions about their gift exchange practices are also rare. There are only seven letters[79] from the Amarna archive which give any information about the possible gift exchange between Alasiya and Egypt. However, as will be seen, these texts may not depict gift exchange at all. The Amarna Letters play an important role in all studies of gift exchange between the Great Kings during the LBA. Nevertheless, the Amarna Letters cover only a very short period of time during the LBA. The letters range from the 13th year of Amenhotep III through the 3rd year of Tutankhamen, when the city of el-Amarna was abandoned, with the maximum time covered by the archive being 28 years and the minimal time being 17 years ca. 1360–1335/34 BC. Additionally, the archive is incomplete, as we do not

know how many letters were moved from Thebes to Amarna, nor do we know how many letters were taken from the city once it was abandoned (Na'aman 1981, 174; 2005, 148–151; Mumford 2009, 937; Mynářová 2015a, 150). Thus, the main source of information about gift exchange in the LBA comes from an incomplete archive which covers only approximately eight percent of the LBA.

This presents the issue again which affects any study of the Eastern Mediterranean in the LBA, that it is often the case that even though generalisations are made about the period and area as a whole, the information which this information is based on is very regionally and chronologically specific. Just as it is a problem to try and state that there were civil uprisings throughout the Eastern Mediterranean only from some texts from Anatolia and Ugarit, trying to make general or overall statements about gift exchange from the textual sources at hand can be dangerous, misleading, or create conclusions which are not supported by the available evidence. As Liverani stated: 'The written documentation on international trade in the Late Bronze period is not made up of a series of 'data' but rather of a series of interpretations thereof – the original data in their quantitative and factual description being practically lost to us' (Liverani 1990, 205). With that said, it is now an appropriate time to forge ahead into the textual evidence which remains and to deduce from it whether it is gift exchange or some kind of barter or commodity exchange.

Gifts during the LBA went by several different names. In Egypt it was the *inw*, a term which had been in use since the earliest periods of Egyptian history and one which played an important role for the king of Egypt during the New Kingdom (Bleiberg 1996, 3 f., 90). *Inw*, during the New Kingdom acted as part of the kingship outside of the belief that everything belonged to the king. It was to be delivered to the pharaoh directly, or to one of his official representatives, and was then redistributed within the kingdom for specific royal purposes (Bleiberg 1996, 3 f., 90–92). In the Akkadian texts, the gift exchange, or more properly, the greeting gift was called *šulmānu*, or it is sometimes hinted that it is only called a greeting, a *šulmu* (Zaccagnini 2000, 144). These greeting gifts were sent along with messengers to aid in their task and were also

---

79 These are Letters EA 33–39. It is also possible there are eight texts depending if EA 40 is included with EA 39 or not.

met with great pomp upon arrival (Bryce 2003b, 98; Liverani 2003b, 1234). These greeting gifts could range from luxury items such as gold, silver, ivory, and precious stones to animals, slaves, women, sculptors, masons, skilled labourers, physicians sent to provide their medical services, people of certain cults, or even cultic statues which might be sent to help in a time of need (Cline 1995a, 150; Zaccagnini 2000, 144; Bryce 2003b, 98).[80] The gifts could be exchanged between the kings, and gifts were also sent to and from other members of the royal household (Bryce 2003b, 97; Kopanias 2015). Exchanging princesses was also an important part of this exchange, as this not only created a direct relationship with the other participant, but the bridal gift was also an important part of the gift exchange (Zaccagnini 2000, 146; Podany 2010).

As discussed in the previous chapter, one of the main aspects of a gift exchange is the creation and maintenance of kinship relations. Thus, it is no surprise that in the letters dealing with the exchange of gifts in the LBA, the Great Kings refer to each other as brothers, or for relationships where there was a difference in power, the father/son metaphor was used. This was the footing on which the kings of the same rank spoke with each other, as the familial metaphor described the mutual relationship between the two parties even if this relationship only existed in clay (Liverani 1990, 197–201). It was for this reason that the kings, when speaking with each other, spoke in glowing terms, expressing their love and concern for the other. This impacted the language of the letters, but it did not necessarily reflect the actual situation, such as if a messenger was being detained or if a gift which had been sent was of less worth than it ought to have been. The language of love and brotherhood was there to keep an equal footing and to maintain a diplomatic discourse even if one of the kings was not happy with the proceedings (Zaccagnini 2000, 148; Liverani 1990, 198 f.; Bryce 2003b, 3, 97 f.; Mynářová 2015b; Cline/Cline 2015). Greetings gifts, then, were the tangible demonstration of love and kinship between the two parties. Thus, as Liverani described the gift giving between

the Great Kings: 'The fundamental norms are that gifts, like hospitality, cannot be asked for, must be given, must be accepted and appreciated, and must be reciprocated, in an increased amount' (Liverani 2000, 24). Gifts were sent to maintain the kinship relations but also to create and maintain prestige. The giver of a great gift had prestige in being able to give such wealth, and the receiver also had prestige in receiving the gift by being in a relationship with the other Great King (Liverani 1990, 214). However, within this, there were also certain rules which the partakers in this exchange had to abide by.

Gifts were to be sent and not requested. Asking for a gift would be to decrease the king's prestige, as it would symbolise a lack of an item within the country. However, the way around this was to always ask for a gift for a specific situation and in a specific timeframe, meaning that the gift was meant for a task or building project but was not to be seen as the accumulation of personal wealth (Liverani 2000, 24; Bryce 2003b, 99–101). Thus, it was also of great importance that the gifts which were sent all be itemised so that the receiving king could know if the gift were true or not. If a poor gift was received, this not only reflected badly on the sender, but also the receiver, as the gift would be unveiled in ceremony to the public or dignities. A poor gift was a loss of prestige for all. For example, in the case of Burnaburiash king of Babylon, he was to receive 40 minas of gold from Akhenaten. However, when he melted down the gold, he says less than 10 minas came out. It was thus that Burnaburiash accused Akhenaten of sending impure gold, an improper gift for both of the kings. However, there were always problems encountered on the journey taking the gift to another king which took months to years, as embezzlers could tamper with the material being sent, taking out gold and replacing it with impurities or even tampering with the lists sent along with the gifts (Bryce 2003b, 99). In addition to asking for items for a specific purpose, it was also important to ask for items which were commonplace in the other country, as was the case with Egyptian gold. It was often said by the other Great Kings that 'gold is as plentiful as dirt' in Egypt, thus asking for egregious amounts of gold was only asking for a small amount of what pharaoh had, even if these

---

80 See Mumford (2009, 938) for the items mentioned in the Amarna Letters.

amounts were fantasy. Additionally, though, the kings had to give the impression that their country was truly self-sufficient and had no need of any items from any other place. Thus, sending modest quantities of luxury goods from one country with no direct supply of that good to another country who was the supplier of that good was to show that most items of foreign import were already available, and could be sent as a provocative gift to the primary exporting country in hopes that a greater gift was sent back in return (Zaccagnini 2000, 147; Liverani 1990, 226; Bryce 2003b, 101 f.).

Despite these protocols, this did not mean the kings always acted fairly, as messengers or the bearers of the gifts were often times detained in the foreign country for years. One Syrian messenger named Tunip was held in Egypt for 20 years, while a messenger from Babylon was also held in Egypt for six years. The king Burnaburiash complained to the pharaoh as he asked for his messenger back, and as even though during the six year period, Burnaburiash had sent gifts to the pharaoh, none had been sent back to him. Thus, he threatened that if the messenger and the gift were not sent, he would also stop sending gifts to the pharaoh (Bryce 2003b, 67; Zaccagnini 2000, 148). The king of Alasiya also asked the pharaoh to send back his messenger along with requesting a gift of silver (Kassianidou 2009, 48). Detaining a messenger could have been for several reasons, from withholding them as a form of punishment because a return gift had yet to be sent, or because not enough time had passed for the king to bring together the needed goods to send as a gift, or also as a way to increase the amount of time in between gifts given, as economics would have affected how much of any good could be accumulated at one time (Bryce 2003b, 67; Zaccagnini 2000, 148; Liverani 2000, 25). Another way the Great Kings did not seem to play fair was by simply lying. In one letter, Assur-uballit I of Assyria claims that in the past, Egypt had promised his father Eriba-Adad a certain amount of gold, and now that Assur-uballit I was on the throne, he wanted this gold sent to him, as the amount the pharaoh had sent him was not even enough to cover the expenses to send his men to Egypt and back. However, while he makes a claim, it does not appear as if it was actually true (Zaccagnini 2000, 150); thus, as with most of the

things written by the Great Kings, one must always take what is written with a grain of salt and a careful eye.

One of the key aspects when discussing gift exchange in the LBA is the traditional anthropological view of the gift. That is, the gift is an act of creating and maintaining relationships and is not part of an economic system, nor is it a cover up for an economic system. Thus, in Bleiberg's investigation into the gift in Egypt, he states: 'Gifts are defined by social obligations rather than economic criteria. The giving of a gift strengthens and cements a social relationship and requires an affirmation of a participant's place in a social hierarchy ... gift-giving, then, cannot be confused with trade ... the purpose of gift-giving is social whereas trade does not encompass any social obligation' (Bleiberg 1996, 97). Similarly, Liverani maintains that the gift exchange between the Great Kings was not barter, as barter created no prestige for either the giver or the receiver in the political arena. However, this does not mean there were no economic underpinnings. Liverani goes on to say: 'The real concern is with one's own interest, but the rule is to be concerned for the partner's interest; the real concern is to obtain goods, but the rule is to give them ... this contradiction is the basis for an endless bargaining game under the appearance of a competition in generosity' (Liverani 1990, 216). Thus, 'both partners try to get quickly and reciprocate slowly' (Liverani 2000, 25), as they carefully calculated the return gift in order to maintain prestige, but also not give away too much in too short a time. All the while, this would have been maintained as gift exchange. However, the question one must ask, is if this really was a gift exchange or if there is evidence to say it might have been barter or commodity exchange covered over by the language of gift exchange (see for example Liverani 2003b, 123 f.; Bachhuber 2006, 350).

As discussed in the previous chapter, barter, when taking place between potentially hostile parties, can take on the language of gift exchange in order to create an even ground to barter. It is also important to note the typical anthropological definitions for gift exchange and barter, such as that, in gift exchange, the objects should be alike, while in barter, they should be dissimilar. Gifts are

inalienable objects whereas objects of barter are alienable. Likewise, one of the key differences between the *kula* and the *gimwali* are the objects exchanged. The *kula* items have no real use but are valued because of who they were owned by. They are symbols of prestige, whereas the objects bartered in the *gimwali* are more utilitarian: they are things to be used and consumed. With these ideas in mind, it is important, then, to examine the evidence presented in these ancient correspondences to see exactly what type of exchange or trade was going on.

There are several instances in the Amarna Letters where there appears to be a more economic undertone than gift exchange.[81] This is especially true of the correspondence between the king of Alasiya and Pharaoh. In EA 35, the king of Alasiya has sent a greeting gift of copper to Egypt. In return, he asks for much silver, and in return for the silver,[82] he will give the pharaoh whatever he asks for. However, at the end of the letter he states: 'Moreover, my brother, men of my country keep speaking with me about my timber that the king of Egypt receives from. My brother, give me the payment due' (EA 35; Kassianidou 2009, 48). Zaccagnini has already noted that within this letter there are both elements of ceremonial exchange but also commercial aspects such as asking for payment for the timber (Zaccagnini 1987, 63). Similarly, the correspondence between Assur-uballit of Assyria and Egypt also contains a statement which hints more to the economics behind the exchange than simply trying to create

or maintain brotherly love. He states in EA 16: '[Now] I am [the equal] of the king of Hanigalbat, but you have sent more [(only) x talents/minas (?) of] gold, and it is not enough for the pay of my messengers on the journey to and back' (EA 16; Zaccagnini 2000, 150). Here too, there is an economic aspect behind this discussion. If the gold asked for were truly and solely to create and maintain a kinship relation, the expense of traveling to exchange gifts would not be part of the argument about the gift. Certainly, traveling the great distance between any of the great powers would have been costly. Whether it be to pay and feed the messengers, the guards needed to protect both the gifts sent and the messengers, along with paying taxes or other fines along the way, and feeding and keeping any animals or humans which were also being sent (Bryce 2003b, 103 f.).[83]

Another aspect which may help to denote what type of exchange is transpiring is the alienable or inalienable nature of the gift. As mentioned before, sometimes in the gift exchange, small amounts of materials were gifted which were not local to the area of origin, in hopes of receiving a greater return of the same material. An example is the king of Alasiya sending ivory, a non-local material, to the king of Egypt (EA 40; Moran 1992, 113) and then asking for ivory. It may be that he sent material which he received from Egypt, back to Egypt, in hopes of getting more, which Liverani has dubbed as 'irrational trade' (Liverani 1979, 22–24). This occurs throughout the correspondences between the Great Kings; however, it would indicate that the gifts were not necessarily inalienable, as the objects could be sent back to the sender.[84] Moreover, the bulk objects such as gold, silver, copper, and other such materials were not simply objects to be owned to demonstrate prestige. Rather, they were worked, transformed, shipped, given to others, and used as part of the redistributive network. In the case of the copper sent by the king of Alasiya, it would have been mixed with tin,

---

81 See also Cline 1995a, 143–150. However, in his examination of royal gift exchange he states: 'Documents record extensive quantities of goods traded between Egypt, Babylon, Assyria, Cyprus, and Arzawa. The trade is, however, disguised as reciprocal 'gift-exchange' … apparently the statuses of the royal participants precluded 'normal' commercial exchange' (Cline 1995a, 143). Thus, in this view, again the examination takes place with the meaning of the word trade being economic, and with gift exchange as merely a disguise rather than using the anthropological definitions to try and delineate what might be gifts and what might be barter or commercial activates. S. Sherratt and A. Sherratt have made similar statements that gift exchange was more a cover up of commerce rather than gift exchange in the traditional sense: A. Sherratt/S. Sherratt 1991, 365; 1998, 333 f.
82 For a discussion whether the term silver here refers to wealth and price equivalent or to actual silver which was not a natural product of Egypt, see: Zaccagini 2000; Kassianidou 2009; Podany 2010, 253–255.

83 See also EA 8 where Burnaburiash complains to the pharaoh that some of his merchants were killed in: Moran 1992, 16 f.
84 Bachhuber, has claimed that the ivory sent back to Egypt as a 'gift' may represent a true gift as it is economically irrational (Bachhuber 2006, 350). However, a gift given back is a gift returned to sender, and may not be taken as a true gift.

made into bronze, and formed into tools or other objects. This would mean that the original gift no longer existed; in fact, it was destroyed, as the copper could not be taken out of the bronze. The same could be said of other materials which would have been used for other purposes and thus no longer existed as a gift.

Prestige items could be given to others with a noted history of the object. For example, Hattusili III sent a rhyton of pure silver and a rhyton of pure gold possibly to the king of Arzawa; he noted that it had been given to him by the king of Egypt (Cline 1995a, 145). However, in many cases, the item's heritage would be lost as it was used and reused or melted down and cast into something else, where it would no longer be recognisable as having been a gift from a Great King. Therefore, the item would no longer be considered a gift in the true sense of the word, and it would have been known beforehand by both parties that the gift would be turned into utilitarian objects or become something else entirely. In this case, the question can be asked if they were truly gifts or if they were objects of high level barter.

Another aspect of the gift exchange as seen in anthropology is that gifts should be like things while items of barter are unlike. When looking at the items exchanged between these Great Kings, one can ask the simple question if the object being given and the objects asked for are alike or not.[85] Often times the gifts being exchanged are very different from each other, such as the beautiful chariot, two horses, and one date sized stone of genuine lapis lazuli given to the king of Egypt by Assur-uballit I in which he asked for gold in exchange (EA 15, EA 16. Zaccagnini 2000, 149 f.). Or similarly, the king of Alasiya sent copper and horses and asked for a return gift of silver (EA 38; Moran 1992, 113). In both instances, the objects given and the objects asked for in return are, to an outside observer, dissimilar from each other. A horse is not in the same class as gold or silver, nor

is a utilitarian metal like copper the same as silver, which was a means of exchange or could have acted as money (Kassianidou 2009; Peyronel 2014). Therefore, again, it would appear that, if going by the anthropological viewpoint, this would seem to indicate evidence for high level barter rather than for gift exchange.

In another instance, one can again ask if the correspondence in question reflects attempts at maintaining a kinship relation or if it is the complaint of an unhappy customer. Burnaburiash king of Babylon for six years had not received a greeting gift from Akhenaten, and the gold he had received in the past was of very poor quality, looking like ash rather than gold. However, despite this affront of not being sent gold, and with the gold that was given in the past being very poor, still he sends a greeting gift to the pharaoh (EA 10; Moran 1992, 19 f.). Thus, what one must ask is, is this a complaint among brothers and Burnaburiash is simply airing his grievances about the lack of gold, or is this a consumer who has a need for gold in his country as there are no natural deposits, who keeps sending requests for gold along with objects which are not local to Egypt as a form of payment or enticement? The only threat Burnaburiash gives the pharaoh is that he will no longer send any more gifts. However, in the following lines, he lists the greeting gifts he has sent with that message, one being to the daughter of the pharaoh. If this was a purely gift-giving relationship, then one must ask about this contradiction. Small gifts are sent to the pharaoh and to his daughter, yet when discussing the gold, in this instance, negotiations seem to have broken off and no more 'gifts' would be sent. The answer to this problem is, however, not so simple, as all of these questions must be addressed to the actors involved to be able to know what they are actually doing, if it be gift exchange or barter. Unfortunately for historians and archaeologists, the actors and anyone from the civilisations who might be able to act as an informant are all long dead.

The real problem within this discussion of gift exchange or high level barter within the Amarna Letters is not one of whether it is either gift exchange or barter, but rather whether it is possible to distinguish between the two concepts and how

---

85 This question is of course based on an outsiders understanding of what is alike or not. We cannot know if in the past, dissimilar objects were viewed culturally as similar in kind or if even between these different cultures taking part in the gift exchange, if they would have understood this the same.

such a differentiation could be made. A similar problem is between gifts and tribute, as it can be impossible to differentiate between the two in the letters. As Na'aman stated: 'The tribute in the Amarna Letters is hopelessly confused with the gifts, and there is no way to distinguish between them. But since vassals' 'gifts' were usually not less obligatory than tribute in the ancient Near East, this is not a real obstacle to the discussion' (Na'aman 1981, 174). While in some cases it might seem more clear which are gifts and which are payment or tribute, it is still nonetheless a difficult task to try and separate which might be which in the letters. Similarly, even if 'gifts' were being sent by the vassals in Canaan to Egypt as *inw*, or when grain was given to Egyptian temples (see E. F. Morris 2015a), one can still ask if this was really part of a gift exchange, as there is the problem of which gift was reciprocated. Thus, with all that in mind, it is important to realise that, within the Amarna Letters, there is already a lack of information where it is difficult or impossible to differentiate between true gifts and tribute without having insider information, which has been lost.

Similarly, the same would be true of the difference between the true gift exchange meant to secure and maintain relationships, and the more economically-driven barter or commodity exchange. From the available evidence, it would appear that both did take place; however, without some kind of insider information, it may not be possible to differentiate between what was a true gift, and what was being bartered or bought. Thus, within the letters there are most likely a multitude of exchanges going on from gift exchange, to ceremonial bargaining, and ceremonial barter, all of which would be described in the same kind of language but which the actors themselves would be able to differentiate. This would mean that, even if the historical documentation is taken into account, it remains a difficult task to determine if an object was traded or exchanged in the general English anthropological or archaeological terminology. It also remains difficult to correlate any item found in an archaeological context to one of the items listed as a gift. Even when the objects from the near pristine tomb of Tutankhamen were examined in association with some of the Amarna Letters, there is no

way to determine truly if any of the objects came from the gift exchanges mentioned in the letters or if they arrived by some other manner (Cochavi-Rainey/Lilyquist 1999, 211).

4.3. Merchants and Traders in the Late Bronze Age

An important aspect of how objects moved from one place to another is of course the person or persons who transported and delivered them. These are the traders or merchants.[86] The words trader and merchant have not been left out of the semantic debate (see for example Hafford 2001, 10) as to which is the proper term to use to describe the ancient movers of goods. For ease of reading, the term merchant will be used here when referring these actors in the historical texts. The English word merchant has been defined as 'someone who buys, sells, or who does business' (Monroe 2009, 281) or alternatively as 'a specialized term for one engaged in trade or commerce. Such persons are so engaged on a long-term basis. This is a professional designation indicating one who conducts trade as his or her chief form of livelihood' (Hafford 2001, 10) The ancient word which would be associated with the English word merchant during the LBA is the Akkadian *tamkaru,* a public or private individual who traded goods either in the employ of the state or institution or for themselves, and who sometimes acted as messengers or emissaries (Heltzer 1978, 121; Hafford 2001, 52 f.; Bryce 2003b, 73). However, before delving into what is known about the LBA *tamkaru* and other merchants, it needs to be made clear where the information about these men and women during the LBA is extrapolated and from where this information does not exist.

As with the gift exchange, there are no texts from the Aegean which discuss merchants taking part in interregional exchange (Altman 1988, 231; Hafford 2001, 86; Palmer 2003, 125, 135; Cline 2013, 32). Thus, because there is a lack of textual

---

86 For a more extensive overview on this subject see: Klengel 1979, 132–194; Hafford 2001, 157–184; Monroe 2009, 151–206; C. Bell 2012; McGeough 2015.

information, one cannot know what role the merchant played in the Aegean societies. That is, whether they were employed to a palace or if they were freelance, taking on work for themselves and work from the palaces. The same can be said of the Southern Levant, the main region under discussion. Information gleaned from Ugarit and from Egyptian sources have been used to assume the type of merchant men and women who operated in the Southern Levant; however, there is a lack of textual data from within the region and from any specific site which would be able to create a picture of the role these people had in the societies of the Southern Levant, let alone who they worked for and how they went about their business. To make matters more complicated, during the LBA the Southern Levant was under Egyptian Hegemony to greater or lesser degrees, and one question which one then must ask is if the merchants of the Southern Levant acted more in line with those from Ugarit or those from Egypt. The difference between these two types of merchants, as will be seen, would alter the interpretation of the role of the merchant in the Southern Levant, but this question at the moment cannot be answered due to a lack of general information from both Egypt and the Southern Levant.

A similar situation exists for the Hittites. While Hittite merchants are written of in the LBA texts from Ugarit, again, how they operated, who they were employed to, what their function was in society is all but unknown (Monroe 2008, 163; 2009, 192–196). On Cyprus, all that is known of the merchants which operated from the island comes from the few mentions in the eight Amarna Letters from Alasiya, and from some communications between Cyprus and Ugarit. One such aspect of the Alasiya merchant is that, in one text, they seem to have acted as messengers as well as merchants.[87] However, again, exactly what role they had is not clear. Thus, given this, for the LBA, the knowledge of the merchant comes mainly from texts predating the LBA in Babylon, Syria, and Turkey which have been used to extrapolate information about

the LBA,[88] and texts from Ugarit, Babylon, Assyria, and Egypt. However, as with all things, using information from certain times and regions may help to understand the situation in the LBA, but it is certainly not conclusive evidence and it remains difficult to describe what many of the LBA merchants would have been like and who they would have worked for in most of the regions of the Eastern Mediterranean.[89] This then also creates another problem in attempting to define how non-local objects arrived in places like the Southern Levant, as there is little textual information to say who might have brought the objects and under what circumstances. Thus, the definition for interregional exchange is as given in the previous chapter as even the texts are mainly silent.

The *tamkaru* from Ugarit could have fallen into one of two general categories: those who worked for the king and those who were private. However, one *tamkaru* could operate in both roles, working for the king while undertaking private merchant ventures, or by taking on assignments from the king (C. Bell 2012, 181–185).[90] The merchants of Ugarit traded in such items as: slaves, flax, wool, dyed wools, dyes, perfumes, garments, textiles, precious metals, objects made from precious metals, and other smaller items such as glass and lapis-lazuli (Heltzer 1999, 445–447). In return for their work, some of the *tamkaru* received land from the king or royal endowments of silver and grain from the royal stores (Heltzer 1999, 440–443; Monroe 2008, 163). Some of these merchants seem to have been wealthy landowners such as the merchant Sinaranu who was given a tax exemption on his lands and also on the products he had brought from Crete (Heltzer 1978, 133). This would seem to indicate that the merchants of Ugarit such as Sinaranu could hold a high status in the society. Another merchant, Sipit-Ba'al, was the son-in-law of

---

87   EA 39 states: 'My brother, let my messengers go ... These men are my merchants' (Moran 1992, 112).

88   Such as those from the MBA town of Kanesh in modern Turkey where over 15,000 tablets were found most of which describe the merchant families who lived and operated there (see Larsen 2015).

89   For an attempt at trying to understand the Phoenician trader in the Iron Age and how society perceived them see: S. Sherratt 2011, 119–142.

90   See for example Aubet 2013, 155 f., and the example of Sipit-Ba'al who both took jobs for the king and used an agent to carryout private ventures in such places as Egypt, Emar, Tyre, and Cyprus.

Ammurapi III, the last king of Ugarit, thus demonstrating that in Ugarit, the job of merchant could hold prestige and the ability to be part of the upper echelons of society. Merchants from other regions are also known from the texts found at Ugarit. These are the 'Merchants of Ura', which created problems and complaints for and from the people of Ugarit. Hattusili III created a treaty which forbade the merchants of Ura to own houses or spend the winter in the land of Ugarit (Hafford 2001, 169). Thus, it has been assumed that the merchants of Ugarit were able to hold high social status, were able to accumulate personal wealth, and in this case and in the case of Sinaranu's tax exemption, were able to sway politics to their favour. However, in the case of the other merchants known from texts in this period, were they able to achieve a similar status? The answer lies with the merchants of Egypt.

While the merchants of Ugarit seemed to have enjoyed some higher social statues, the same cannot be said of their Egyptian counterparts during the LBA. Mainly working as officials of the temple or palace, merchants in Egypt carried a low status. They mainly acted as purchasing agents for the palace or temple to whom they were attached and they did not act as free actors able to accumulate wealth (Monroe 2008, 165 f.; 2009, 189–192). Bleiberg described the situation as such: 'The Egyptian trader filled orders only for the institutional structure to which he was attached. Egyptian expedition leaders functioned more as organizers who directed the personnel who fetch and deliver goods rather than traders who took a business risk in hopes of realizing a profit' (Bleiberg 1996, 25). With Egypt operating under a system of barter for commercial exchange, for merchants operating under these circumstances, there was no room for commercial gain or profiteering, as they would gain the praise of the king for a successful trading venture (Bleiberg 1996, 26 f.). However, there is also some evidence to say that private Egyptian merchants were able to conduct private trading ventures and to accumulate wealth, but the evidence for this is inconclusive (Castle 1992, 249–253). Like in Ugarit, though, foreign traders were also present in Egypt and worked for temples or for the palace, such as 'foreign traders' who were in the service of the temple of Osiris (Castle 1992,

250). Yet, these foreign merchants most likely held greater wealth and perhaps also social status more so than their native Egyptian counterparts. Thus, when examining these two different regions and their merchants, there is a stark contrast.

When comparing these two examples of LBA merchants, there are some clear differences between the two. In terms of statues, the Egyptian and Ugarit merchants fell into different classes, with the *tamkaru* of Ugarit holding a higher status than that of the Egyptian merchant. Who they worked for and how they operated also stand in contrast with the merchants of Ugarit working for the king, for themselves, or for both in taking on private ventures and ventures for the king. This would have allowed them to build up wealth both in owning land, but also in having goods or precious materials which acted as a kind of money to facilitate further trading ventures. The Egyptian merchants seemingly did not have such luxury, as they typically were employed to a temple or to the king shipping and receiving goods without making a profit. While it is possible there were private merchants who could accumulate wealth, it seems in general that the merchants of Egypt fell also into a different economic class than their Ugaritic counterparts or even the foreign merchants who lived and operated in Egypt. What one can take from this is that, from what is known of the merchants during the LBA, there was a great diversity in their status, rank, wealth, or ability to act freely. Thus, when looking at the Southern Levant, one must ask, what of the merchants there, how did they act, who were they employed to, and what was their status in society?

Unfortunately, little can be said in response, and even taking an example like *Tell Abū Ḥawām*, Ashdod, or Ashkelon, while it is assumed the merchants there acted similarly to those in Ugarit, there is no textual evidence to support this. Therefore, while it has been assumed that merchants might bring with them an air of the exotic or aura of prestige (Steel 2013, 126), if the merchants of the Southern Levant were viewed in the same way as those in Egypt, they may not have been viewed in such a positive manner. Or it is also true that when looking at the area, there is a great diversity of regions, those under more direct Egyptian control, those in the North which appear more like

the Northern Canaanite culture, and the difference between the coastal areas and those inland. Just as burial practices differed between the coast and the interior (Gonen 1992a, 34–40), the role of the merchant may too have been different, and until more textual information is unearthed, the role and statues of the merchant in the Southern Levant will remain in shadow. As Hafford states, speaking of merchants in general: 'Looking at merchants through most of history, there appears to be little middle ground in their social standing. They might be admired for their wealth, but most often were feared and derided for the same reason ... Merchants of typical historical interest are either those who are very powerful or very lowly' (Hafford 2001, 61).

4.4. Ships, Shipping, and Shipwrecks in the Late Bronze Age

For goods to move quickly in the LBA, the best method was by ship. When moving objects and cargo up and down the Levantine coast, the ship would have been the fastest, and perhaps safest route[91] to go by. Thus, when considering exchange in the Eastern Mediterranean whose common connection is the large body of water for which it is named, examining the ships, their possible routes, the archaeologically known shipwrecks and their cargo is a necessary step. This is of course not to underestimate or ignore the land routes which would have been used to move goods and objects. However, unfortunately, land routes do not have such archaeological luxuries as the occasional yet stunning shipwreck which the Mediterranean has provided. Thus, here the focus will be on the sea routes and the ships which traversed them.[92]

The typical route by which the ancient mariners of the LBA sailed is believed to run counterclockwise around the Eastern Mediterranean, generally hugging the coast when possible. If a boat were to leave port from Crete, they may have sailed south to the Libyan coast where Minoan sherds have been found at Marsa Matruh, and if they had sailed during the reign of Ramesses II, they would have sailed past or stopped at Zawiyet Umm el-Rakham, where Mycenaean pottery have been found (Cline 1994, 91; Snape 2003, 63–67). From there, they would sail past Egypt, up the Levantine coast, and depending on their return destination, would have headed for Cyprus and then back to the Aegean or would have ventured along the Southern Anatolian coast (Lambrou-Phillipson 1991, 12 f.; Pulak 2008, 297 f.). A boat could then start anywhere on this route to make a complete circuit. However, the picture is of course more complex than this, as it may also have been possible to make a clockwise trip around the Eastern Mediterranean, or there were various other routes which could have been taken (see for example Cline 1994, 91–94; Manning/Hulin 2005, 283–285; Wachsmann 2008, 295–299).

This trip most likely would have taken place sometime between the months of May to October, or perhaps even between mid-March and November, as sailing during the winter months was fraught with the danger of winter storms and the harsh conditions of the winter months (Lambrou-Phillipson 1991, 12; Knapp 1997, 155). However, avoiding the winter months certainly did not mean sailors would avoid danger, as sudden storms, submerged rocks and reefs, sand barges, and close proximity to land would all have been a danger for the sailor as witnessed by the shipwrecks which have been found dating to the period. Sailing between the Cycladic islands would have proven dangerous because of the proximity to the land, and no matter where one was, finding a good harbour to spend the night when sailing after the sun set meant lower visibility, and the risk of running aground or into a submerged object were higher (H. Georgiou 1993, 360 f.; 1997, 117–121). Thus, finding a harbour and knowing where they would be would have been of utmost importance, and would have required sophisticated navigation skills and foreknowledge of foreign

---

91 Though the risk of being attacked by pirates when ashore, or the risk of sinking were ever present and certainly not forgotten. See Hitchcock/Maeir 2014; Gilan 2013a and Sauvage 2011 on piracy in the LBA.
92 See also Astour 1995, 1401–1420 who discusses the overland routes in ancient Western Asia, and Hoffmeier/Moshier 2013, 485–510, and Stewart/Lemmens/Sala 2015, 198–221 who discuss the most recent archaeological evidence for the 'Way of Horus' and for a second land route out of Egypt running through the Sinai toward Beersheba going north along the central mountain route. See Monroe 2009, 70–82 on transportation by donkey overland.

lands (Wachsmann 2008, 295–301; Raban 1998, 428 f.).

Information about ships and ship construction comes from a variety of sources.[93] The same is true for what goods might have been taken aboard these ships, with evidence coming from texts, archaeological excavations, wall paintings, and a variety of other sources. However, one source which to some degree acts as a time capsule for exchange in action are shipwrecks. There are three shipwrecks dating to the Late Bronze which are typically discussed. The first and perhaps most famous is the Uluburun shipwreck found off the coast of southern Turkey, 9km southwest of Kas and dated to ca. 1330 BC (Pulak 2008, 288; Goren 2013, 54). Secondly, there is the Cape Gelidonya shipwreck found on the western side of the mouth of the Bay of Antalya in southern Turkey dated ca. 1200 BC (Bass 2010, 797). Thirdly, there is the Point Iria wreck found in the gulf of the Argolid dated to ca. 1200 BC.[94] Finally, a fourth wreck has been recently found off the Carmel Coast with the Hishuley Carmel wreck dating to ca. 1300 BC (Galili/Gale/Rosen 2011, 64–73; 2013, 2–23).[95] While the Uluburun shipwreck is the earliest of these four wrecks, this will be left for last, as it has the largest cargo and the most written about it in an attempt to try and interpret those finds, the purpose of the vessel, who owned the contents or who was on board, along with its destination and who the cargo was meant for. Thus, I will begin with the Point Iria wreck and move backwards in time through the known shipwrecks.

Of the four major LBA shipwrecks, the Point Iria wreck is certainly the smallest. The contents of the ship were made up of four partial Cypriot pithoi and one complete Cypriot pithos dating to LC IIC or LC IIIA along with five other Cypriot finds including two jugs, one juglet, and two items

which were most likely basins (Vichos/Lolos 1997, 323 f.; Lolos 2003, 102).[96] There were also several LH IIIB2 objects including one deep bowl krater, one or two deep bowls with painted decoration, two cooking pots, three pithoid jars, and what is most likely a Mycenaean amphora. Finally, there were eight LM IIIB2 transport stirrup-jars bringing the total number of pottery vessels to 26 (Vichos/Lolos 1997, 323 f., 327; Lolos 2003, 102).[97] No metal objects were found in association with this wreck, and there were no vessels originating from Egypt, or from Syro-Palestine (Lolos 2003, 103). Thus, it is believed that this wreck represents the exchange which took place between Cyprus and the Aegean. However, it is not known who was on board this ship, what the destination was, the size of the ship, and if there was any organic cargo (Vichos/Lolos 1997, 330). The proposed route for the ship is that it left a port from Southern side of Cyprus sometime around 1200 BC, sailed to Crete where it picked up the eight stirrup-jars, and from there headed to its final destination or home port which cannot be determined from the wreck (Vichos/Lolos 1997, 328–330; Lolos 2003, 104). While the finds from the Point Iria wreck seem meagre in comparison to other LBA shipwrecks, what this wreck does point to is the exchange of goods between Cyprus and the Aegean even on a small scale, and that this exchange was still taking place, at least to some degree, around 1200 BC, indicating there was still contact between the two regions even during these presumably tumultuous times (Vichos/Lolos 1997, 330). Moreover, while it is often times assumed that pottery could not be the main cargo of a ship, this wreck also indicates that this too was not the case in the LBA.

The Cape Gelidonya wreck most likely sank around 1200 BC ±50 years as it ripped open its sixteen meter long hull by running into the pinnacle of a rock on the southern coast of Turkey. When it sank, it was carrying about 1t of metal mainly in

---

93 For a comprehensive study of ships in the LBA, see: Wachsmann 2008; 2000, 103–143. See also, Emanuel 2015.
94 Vichos/Lolos 1997, 323, 328. See references there in for a complete examination of the wreck.
95 See also for a description of some smaller wrecks found in the same vicinity as the Hishuley Carmel wreck dating from both the MBA and the LBA. See also Golani/Galili 2015 who discusses an assemblage of gold items and hematite weights likely originating from a shipwreck off the coast of Yevneh-Yam.

96 It is possible that the Cypriot juglet was inside one of the pithoi as it was found under a fragment of one of the pithoi.
97 Though because of the fragmentary nature of the finds and the fact this area seemed to have been prone to shipwrecks as many fragments of pottery from later periods were also found in the region, it is not certain if all of these vessel were part of the same wreck such as the one complete Cypriot pithos.

the form of 34 copper ingots each weighing about 25kg. Additionally, there were 20 copper bun ingots each weighing about 3kg, along with some smaller copper slabs. The majority of the copper was found to originate from Cyprus; however, the smaller copper slabs were found to come from Greece. There was also evidence that tin had been part of the ship's cargo; however, over time, it had oxidised into tin oxide which has a toothpaste-like consistency.[98] Several broken bronze tools were also found in the wreck, as this scrap metal was intended for reuse, much like the scrap metal found at *Ğezīret en-Nāmī* (Tel Nami), as it would have been melted down and recast (Bass 2010, 800; Artzy 1997, 9; 2013, 338). Interestingly, while the majority of the bronze came from Cyprus, testing done on the copper tools demonstrated that some of the copper which made up those tools came from copper from Greece, the Taurus Mountains in Anatolia, the mines of Timna, and even from Sardinia (Bass 2010, 802). The weights found on the ship were based on the Near Eastern weights system, and no Mycenaean weights were found at the site. It is believed that the sailors of this ship were either Syrian, Canaanite, Syro-Canaanite, or perhaps Cypriot, though the exact label is not certain, and as Bass states: 'The exact term is not important' (Bass 2010, 801). This Levantine or Cypriot origin for the ship was given because of the Near Eastern weights as well as several other artefacts which proved to be of Syro-Palestinian origin, such as imitated Egyptian scarabs, a razor, two stone hammers, a terracotta oil lamp, and a cylinder seal from Northern Syria carved several centuries previously which was most likely an heirloom (Bass 2010, 800 f.). However, with that said, the point of departure and the point of arrival the ship was heading to are unknown. Again, this wreck demonstrates that exchange, and in this case a larger amount of material, was still occurring even close to or after 1200 BC.

Moving backwards in time and further south to the region of the Carmel coast is the Hishuley Carmel wreck. The wreck, which was most likely of a ship between fifteen and eighteen meters long,

consisted mainly of metal finds. 14 tin ingots were uncovered with a total weight of 206kg. Some of the tin seems to have been cut in antiquity, as several of the ingots appear to have had as much as 75% of their original mass cut off with a hot metal blade. Additionally, some of the tin ingots bear inscriptions or markings (Galili/Gale/Rosen 2013, 6–8). One lead ingot was also uncovered; however, due to corrosion, its original weight is unknown. Two copper oxide ingots weighing a total of 38.5kg, along with three socketed bronze axes, and one bronze hoe were also found in association with the wreck. The bronze hoe most closely resembles Cypriot hoes from the 13th cent. BC (Galili/Gale/Rosen 2013, 8–11). A yellow ore of arsenic, which is most likely orpiment, was also found in association with the wreck. After analysing the metals, it was again found that the copper was most likely brought from Cyprus; however, the origin of the tin is much more elusive. One possible origin for some of the tin is Cornwall, England, though sources in Iran, Central Asia, Western Iberia, Afghanistan, or perhaps even Anatolia may have been where the tin originated (Galili/Gale/Rosen 2013, 21; 2011, 71). One interesting note is that seven of the tin ingots from the Hishuley Carmel wreck match the two groups of tin ingots found in the Uluburun wreck, indicating that the tin found in both wrecks may have come from the same source (Galili/Gale/Rosen 2013, 14). It is possible that the wreck used to have more material, as the ship was likely grounded during a storm, and because of the shallow water either surviving crew or the local people could have salvaged material from the wreck. This wreck, however, is the first direct evidence for the transportation of copper and tin ingots by sea along the coast of the Southern Levant during the LBA, though the owner and operators of this ship are unknown, but it would most likely have originated from the Levant (Galili/Gale/Rosen 2013, 20 f.).

The last LBA shipwreck is the Uluburun wreck. It is most likely the best known LBA shipwreck due to the simple fact of the amazing degree of preservation of the ship and its contents, but also the sheer quantity of the cargo which was being shipped, which has been equated to a king's ransom (Monroe 2010, 28). The amount and diversity of items found in association with the shipwreck

---

98   Bass 2010, 797–800; 2013, 67. See references there in for a complete examination of the wreck.

are far too numerous to present here, and only a summation can be offered.[99] Aboard the approximately fifteen meter long Uluburun ship were 10t of copper ingots, 1t of tin ingots, 1t of cobblestone ballasts, nearly 150 Canaanite storage jars more than half of which were filled with a half ton of terebinth resin, 350kg of glass ingots, along with a wide variety of other material such as beads, wood, ostrich egg shells, ivory, orpiment, murex shells, spices, condiments and foods such as pomegranates, olives, nuts, figs, grapes, wheat and barley. Additionally, there were approximately 155 pieces of Cypriot ceramics ranging from wall brackets to bowls and 51 pilgrim flasks along with personal effects from the crew. It is estimated that the total carrying capacity of the ship was 20t of material (Lin 2003, 162–186; Pulak 2008, 290–296; 2010, 865–867). Monroe has estimated that the total value of the ship would have been roughly 12,000 Ugaritic silver shekels which would have been the value of 350 head of large cattle, or 600 donkeys, to 400 horses, or enough to pay for barley for the city of Ugarit for a year (Monroe 2010, 26–28).[100] Thus, with such a large amount of expensive high-end cargo, the questions remain: who did it belong to, where did it come from, who was transporting it, where was it going, and for what reason?

Some of these questions seem to have been answered; however, many remain a topic of debate. It appears that the ship left from the port at either *Tell Abū Ḥawām, Ḫirbet el-Burǧ*, (Tel Dor), or *Tell es-Samak* (Tel Shiqmona), as 82% of the Canaanite storage jars found on the Uluburun wreck were made from clays of the Carmel coast, with *Tell Abū Ḥawām* being the candidate favoured by

Pulak (2010, 870; Goren 2013, 57–59). However, despite seemingly sailing from *Tell Abū Ḥawām*, it is generally believed that the cargo was sent by an Egyptian king who would have had stores of these materials, and that they were either being shipped by the pharaoh or were pre-purchased from the pharaoh by Aegeans (Goren 2013, 59; Cline/Yasur-Landau 2007, 128–130). However, what is generally agreed upon is that this ship is a representation of elite exchange either of a gift or of purchased goods (Bachhuber 2006, 354–355, 359; Cline/Yasur-Landau 2007, 128–130; Pulak 2010, 870; Goren 2013, 59 f.). Bachhuber has previously pointed out the difficulty in attempting to establish the difference between a gift and a commodity in the archaeological record. Nevertheless, he assumes that the metal aboard the ship was a commodity due to having a value of exchange, and that perhaps all items aboard the Uluburun ship may not be considered a gift under the traditional anthropological definition (Bachhuber 2006, 350). This rationale only follows because Bachhuber has interpreted from the ship's cargo that only some of it was destined for an elite exchange network in the Aegean, while some would be for non-palatial consumers (Bachhuber 2006, 359). However, if the goods were part of a gift exchange or perhaps even as part of a bridal gift to a king in Arzawa in Anatolia, as Goren has suggested (Goren 2013, 60), then the metal finds, and in fact all finds, would be considered a gift. Nonetheless, the answer is most likely in between, as it is highly likely there were some objects on the ship which would fall under the modern day classification of commodities, such as the metals, while some of the finished goods may have been personal gifts. Unfortunately, the material is silent, and we can only know that it was being exchanged but not by which method or for what purpose.

It is assumed that while the material seems to have come from the Carmel area and perhaps even *Tell Abū Ḥawām*, it most certainly did not come from any resident of Canaan, as the area was too poor to gather and send such goods. However, in EA 287 it is recorded that 5,000 shekels of silver were sent to Egypt from Jerusalem, which is only slightly less than the value of all the copper on the Uluburun according to Monroe's estimates, and in EA 270 Milkilu of Gezer sent 2,000 silver

---

99 For an overview of the finds found on the Uluburun see, Lin 2003; Pulak 2008, 289–310; 2010, 862–876.

100 This number should not be taken at face value as there are several issues which may mean that the value of the ship was far less. For one, Monroe has chosen to value the terebinth resin at 5,000 Ugaritic silver shekels. However, this is based on the interpretation of one word from one text which is if the value was given in copper or silver. Thus, the same text could be translated so the total cost of the resin was twenty-five Ugaritic silver shekels. Therefore, while the value given is very large, and no matter would have been very large, one must remember that this valuation is tentative and could change either way being of more or less value with more knowledge from the texts.

shekels (EA 287, EA 270; Na'aman 1981, 175). Or, in EA 301, Shubandu of South Palestine sent 500 cattle which would equal roughly 2,500 shekels (EA 301; Na'aman 1981, 176). Moreover, what is important is that there is no record to say that any of these cities who sent such wealth were bankrupted or placed into financial crisis at the time of the Amarna Letters, though this may have occurred over the next century and a half. Thus, in cases like this, one must ask where did the people of the Southern Levant accumulate such wealth, and the answer could lie in the possibility that the objects were pre-purchased, as suggested by Cline and Yasur-Landau (Cline/Yasur-Landau 2007, 128–130). This is not to say the cargo of the Uluburun ship was bought and sold at *Tell Abū Ḥawām*, as again the material remains silent as to which answer is correct. However, it is also true that all of the materials aboard the ship could have been found at *Tell Abū Ḥawām* (Pulak 2010, 870) and the only reason it is assumed it could not be a shipment from the site itself is because of the assumption it was a poor region.

With the starting point of the ship noted, and the sender still in question along with the reason why it was being sent, it remains to be answered where it was heading and who was transporting it. It has generally been assumed that the ship which was found off the southern coast of Turkey was heading for the Aegean to either mainland Greece or perhaps north to the Aegean Sea, though Arzawa in Turkey has also been suggested.[101] By analysing the 'personal objects' found in the wreck such as weapons, items of personal adornment, seals, pottery for shipboard use, ship's tools, and weights both Syro-Canaanite and Mycenaean, it is believed that the ship was manned by a crew of Syro-Canaanite merchants and sailors along with two members of the Mycenaean elite and perhaps one other who came from Northern Greece (Pulak 2008, 300–302; see also Bachhuber 2006, 345–363). However, as with anything dealing with identifying ancient ethnicities in archaeology, the difficulties are great in truly determining the nature of the crew from

the assemblage (see for example Shennan 1989; Jones 1997; Killebrew 2005; Faust 2006). Thus, as Cline and Yasur-Landau have suggested, the Syro-Canaanite weights do not automatically mean there were Syro-Canaanites aboard the ship, as the weights could have been used by the Aegeans themselves or they could have been part of the cargo (Cline/Yasur-Landau 2007, 129). However, the same could be said of the Aegean material culture also found aboard the ship, which could have been owned by the Syro-Canaanite crew, meaning there is no clear answer as to who was on the ship. The situation for our knowledge of the Uluburun ship has been best summarised by Monroe who stated: 'We know a lot more now about some people we still know very little about' (Monroe 2010, 29).

One final note on the Uluburun wreck is the question of whether this should be considered the standard or the exception. While the cargo from the Uluburun ship certainly demonstrates the range of items along with their amounts which could be shipped, the question is, was this a standard shipment? The answer is, most likely, no. Taking the other three LBA shipwrecks combined, they barely represent the amount of cargo found on the Uluburun ship, having combined about 10% of the copper and 20% of the tin and little of the rest of the cargo is represented in any of the three other shipwrecks. It would seem that from what is known, the loss of the Point Iria wreck, the Cape Gelidonya wreck, and the Hishuley Carmel wreck would have been less of a loss than the Uluburun. Thus, this wreck should be considered the exception and not the rule, as generally most ships likely carried far less cargo than was found on the Uluburun wreck. Because of the wealth of the finds and the general assumption of the great amount of trade occurring at this time, it is easy to imagine that such shipments occurred on a semi-regular basis. The same thinking occurs with the Amarna Letters and the records of the gifts sent and received. Traditionally, such gifts as mentioned in EA 14 from Amenhotep IV to Babylon or in EA 17, 19, 22, and 25 (see Cochavi-Rainey/Lilyquist 1999, 7–162) which record vast amounts of goods being exchanged and received are looked at as the amounts of items which were being moved at the time. However, much like three of

---

101 Bachhuber 2006, 359; Cline/Yasur-Landau 2007, 128–130; Pulak 2008, 300; 2010, 871; Goren 2013, 59.

the four shipwrecks, the average gift sent was far less. Thus, when examining other gifts listed in the Amarna Letters, the amounts are much smaller as seen in the letters EA 5, 7, 8, 9, 10, 15, 16, 20, 21, 29, 35, 37, 40, and 41 (see Cochavi-Rainey/Lilyquist 1999, 165–174). Typically the gifts listed in these letters are small objects, some horses, and 'small' amounts of raw material such as lapis lazuli, and jewellery, with some of the 'larger' gifts including luxury finished goods. Thus, what one must remember is perspective. While the kingly gifts and large cargo of the Uluburun ship are tantalising and while it is easy to assume gifts or cargo like this were moved frequently or semi-frequently, the other archaeological and textual evidence seems to say otherwise.

With all this in mind, we may now turn to where the items shipped originated, to gain a perspective of the possible biography for some of these items, including those not found on any of these shipwrecks but which have been found in other archaeological contexts. First are the metals. Generally, the majority of the copper which was found on these ships originated from Cyprus (Pulak 2008, 291 f., 297).[102] The origin of the tin is, however, not as easy to discern, as metallurgical analysis of the tin found on the shipwrecks and tin deposits have given a wide range of possibilities from Afghanistan, to Central Asia, and even as far flung as Cornwall, England.[103] Nevertheless, for all of these metals to come together at a site like *Tell Abū Ḥawām* requires metals to travel from north, south, east, and west. The same can be said of many of the other precious materials aboard these ships or found in archaeological contexts in the Eastern Mediterranean, with amber coming down from the coasts of Southern Sweden and Denmark on the Baltic Sea (Catacchio 2011, 56 f.), lapis-lazuli originating in Afghanistan and Pakistan (Bajema 2013, 407–409), glass coming from Egypt and Mesopotamia (Liverani 2008, 163), carnelian and agate coming from Iran and India (Liverani 2008,

163), African blackwood coming from East Africa through Nubia (Pulak 2008, 293), cedar coming from Lebanon for both ship construction and architecture (Wachsmann 2008, 312), and ostrich eggshells from Africa or the Near East (Pulak 2008, 294) to list only some of the materials.

There are still many other objects which were exchanged in the LBA; however, many of these fall under the category of archaeologically invisible items, as under normal circumstances they are not preserved or would be indistinguishable from local items, animals, textiles, or people.[104] These items are known from texts such as mentioned in one text from Ugarit, where milk, clothing and fish were brought to Ugarit from 'Ashdod' (Wachsmann 2008, 313).[105] Others are known from the Uluburun shipwreck which preserved many organic goods, or at least some of their remains which normally would not have survived. This includes: '... almonds, acorns, pine nuts, pine cone fragments, wild pistachio nutlets, olives and olive stones, pomegranate and fig seeds and fruit fragments, and grape seeds of two types ... coriander, nigella (black cumin) and sumac seeds' (Haldane 1993, 352; Pulak 2008, 295 f.). Many of these food items could be found throughout the Levant or on Cyprus. The terebinth resin, the largest find of its kind, is also an item typically invisible in the archaeological record and was used in perfumes or perhaps would have been mixed with bee's wax and would have been used in bronze casting (Haldane 1993, 354; Goren 2013, 59). While the resin normally could be found throughout the Levant, the terebinth resin found aboard the Uluburun wreck seems to have originated from the northern Jordan River valley and the Sea of Galilee region (Haldane 1993, 353 f.; Pulak 2008, 295). Another archaeologically invisible item would be textiles which could have been made anywhere in the Eastern Mediterranean (Pulak 2008, 296 f.).

Taking all of this together, it demonstrates not only the wide range of provenance of materials which were exchanged in the LBA: moreover, it

102 See the section on precious metals for a discussion of the possible origins for these in the Southern Levant.
103 Pulak 2008, 292; Liverani 2008, 163; Galili/Gale/Rosen 2013, 21; 2011, 71. See also C. Bell 2006, 26–28 and 2009, 33 f. for an in depth discussion of the problems of finding the origin of tin during the Bronze Age.

104 Such would be the case for slaves that were exchanged, or many animals who cover a wide geographic area and were also exchanged. See also Knapp 1991, 21–68.
105 However, the name Ashdod may be a misnomer and may refer to a site on Cyprus. See, Na'aman 2005, 145–172.

also demonstrates something of the biography of the items, as either the raw materials would have been moved and then worked, or finished items moved from one region to another. Thus, how many hands these objects passed through, how many kilometres they travelled, and how many different people owned them in one form or another are most likely too many to imagine. These objects, both those readily visible in the archaeological record and those that are not, are generally given the attribution of demonstrating the connectedness during the LBA Eastern Mediterranean and the Near East. However, these objects do not in and of themselves dictate contact with foreign peoples, nor connectedness with foreign lands. Thus, the next focus is on non-local materials in regions in which they were not manufactured or did not exist locally, and if this indicates down the line exchange, contact with a foreign group, or connectedness with a particular focus on the Aegean world and the Southern Levant.

4.5.   Contact, Connectivity, and Connectedness in the Late Bronze Age

One has only to glance through the books and articles written about the LBA trade in the Eastern Mediterranean to find the wealth of comments which describe the massive amount of trade and trading ventures occurring at the time, whether that be with Aegeans sailing to and fro from Egypt and the Levant, or Egyptian ventures to the Aegean, the Cypriot trader and the middleman between the Aegean and the rest of the Eastern Mediterranean, or Levantine merchants like Sinaranu who sailed back from Crete with a load of goods. This idea is linked with the world system theory previously discussed, and the result of this idea is that once this connection was broken at the end of the LBA either by warfare, climate change, or some other reason, this helped lead to the collapse and the disappearance of trade (Iakovidis 1993, 318 f.; Singer 1999, 733; Monroe 2009, 294–296; Kelder 2010, 127). These arguments are of course based on non-local materials found within these diverse regions, and the textual evidence is interpreted to show the great powers being connected (see Cline/Cline 2015). However,

do these arguments for connectedness stand on solid ground and can a break in these connections really result in the collapse and a changed cultural view towards interregional exchange and resources? To try and answer this question, I will examine the case study of the connectedness between the Aegean world, particularly Mycenaean Greece, and the rest of the Eastern Mediterranean to see if there is enough evidence to say they were connected or were only in contact. I will focus on textual evidence and the archaeological evidence of non-local material exchanged interregionally. However, I will not discuss the 'International Style', iconographic arguments, or artistic arguments covering finds such as the Aegean style frescos at both Tell ed-Dab'a and Tel Kabri as this would warrant a book or dissertation of its own as it has in the past (see for example Crowley 1989; Feldman 2006).

Before being able to discuss connectivity, connectedness, and contact, these terms must first be defined as they, like the terms trade and exchange, often have an ambiguous definition, or authors will use the same terms to describe different phenomena. Skeates, working from the definition made by Peregrine Horden and Nicholas Purcell (2000) defines connectivity as: 'The social and geographical interdependence of small-scale, locally specific phenomena (including micro-regions, places, peoples, economic strategies, and interactions) with the dynamic network of relations enjoyed by them with the wider world' (Skeates 2009, 557). She goes on to state that these '... broader relationships are based upon mobility, knowledge, power, corporation, allegiance, and dependence' (Skeates 2009, 557). Thus, two powers who share a relationship through connectivity will influence each other, and the events in one region will inadvertently affect those connected to it. Connectedness is thus a similar term in meaning, as it infers that two areas are interdependent with each other or would be affected by the events and situations which occur in each. This however, does not mean that all aspects must be connected, as two regions could be connected economically through trade relations, but not necessarily politically, or they may be connected through land disputes over a certain region both lay claim to, but then not economically. Within both connectivity and connectedness,

there could be the sharing of ideas, the movement of peoples and goods, and the use and incorporation of foreign customs, beliefs, and materials into another culture.

Contact[106] on the other hand, is differentiated from both connectivity and connectedness as it does not infer an interdependent relationship between two parties or regions. An example of contact would be that a trading venture from the Aegean sailed to Egypt, traded with the people there, and left. These two people groups and powers would have been in contact, they might have exchanged goods or services, but if this venture had not taken place, it would not have negative consequences for both regions. Thus, when speaking of contact and connectivity, one should not assume that if there is only contact this then means that ideas, beliefs, or people cannot move from one region to another. Through contact, they can; however, even if this does occur, it does not mean that the two lands are interdependent. Thus, when one argues for contact only and not connectedness, this does not mean one is arguing against the exchange of ideas, art, and religion but rather that the two regions do not need each other to survive or function. If there is no contact in a contact-based relationship, the two areas will continue to survive independent of the other despite what might happen economically or politically in the other.

4.5.1. Texts

To begin with the textual evidence for contact or connectedness, I will start with the Aegean textual materials or the lack thereof. As mentioned previously, there are no direct mentions of interregional exchange in the Linear B archives (Palmer 2003, 125, 135; Cline 2013, 32). The textual evidence of contact is meagre at best and it is seen mainly through loan words and names which might refer to people from outside of the Aegean.[107] There are two possible references to Egypt or Egyp-

tians which were found at Knossos; however, no mentions of Egypt have been found on the Greek mainland (Cline 2003b, 171; 2007, 198; Phillips 2010, 823; Cline 2014, 88 f.). There are some possible mentions of Cyprus, Cypriot goods, and possibly of Minoan goods intended to be shipped to Cyprus, the mention of Western Anatolian ethnic names, and perhaps some mentions of Levantine names such as 'the man from Beruit', 'the Tyrian', and 'Phoenician', though many of these philological arguments are not certain, nor are all of these translations (Cline 1994, 26, 50, 128 f., 131; 2003b, 171 f.; 2007, 199; 2014, 88 f.). The cause of the lack of international texts has been explained away by several reasons: that they were written on perishable materials which would not have survived in the climate of Greece, such as on wood boards;[108] that the international letters were simply reused every year, with the old clay surface being washed away with water; that the activities were not recorded; that we simply have not found the archive as of yet; or that it was destroyed through erosion at Mycenae if it were the capital of Ahhiyawa (Cline 2010, 176; Kelder 2012 48 f.; Cline 2014, 89). However, there are problems with each of these reasons.

The theory that there was great amount of contact and a connection between the Aegean and the rest of the Eastern Mediterranean dictates that there must be an archive, and that it has simply not yet been found or it has been destroyed; however, this is not supported by the evidence that we have. To claim the archive has not been found or was destroyed is an argument from silence and does not provide evidence for connection. Either there was or was not an archive, and as no evidence of such a thing has been found, at the moment we must conclude it does not exist until proof of its existence has been uncovered. To support the idea that, if this archive existed, it would have been written on perishable materials, is also to argue against the current evidence. If the Ahhiyawa letters found in

---

106 For an archaeological view on contact, see Parkinson 2010, 11–34.
107 For a complete overview see: Bertolín Cebrián 1996.

108 This is based on the mention in Hittite texts that wooden boards were used for sending messages or for writing. Kelder has then drawn from this that wooden boards would have been used in the Aegean. While this is possible, the logical leap is not supported by any archaeological evidence nor by any hard textual evidence (Kelder 2012, 48 f.).

Anatolia truly do refer to Mycenaean Greece, with the letter sent from the king of Ahhiyawa written on a clay tablet, this would be evidence for the use of clay as the medium for international communication along with the letters sent from the Hittites to the king of Ahhiyawa AhT 4 (CTH 181), AhT 6 (CTH 183), AhT 9 (CTH 209.16) (Beckman/Bryce/Cline 2011, 101–122, 134–139, 150–152). However, the idea of this archive's existence is strong, as Cline states: 'Although the written records documenting specific contacts continue to elude archaeologists for the moment, the circumstantial evidence indicates, to me at least, that they must exist or that they did exist at some point. It is probably only a matter of time before such records are found' (Cline 2010, 179).

The 26 Ahhiyawa texts are perhaps the best evidence for connectivity at least between the Aegean and Hittite Anatolia. However, many of these texts make only a reference to Ahhiyawa. The name Ahhiyawa appears in Hittite texts first in the late 15th to early 14th cent. BC, and was used until the end of the 13th cent. (Beckman/Bryce/Cline 2011, 1). However, the exact meaning of this term, and to which land it refers to has been disputed, and as of yet, there is still no one answer. The traditional placement for Ahhiyawa is on the Mycenaean mainland, locating its heart at either Mycenae or Thebes (Dickinson 2010, 484; Beckman/Bryce/Cline 2011, 1–6; Kelder 2012, 41).[109] Bryce notes that the name Ahhiyawa could have many possible meanings. It may refer to the Mycenaean world as a whole including both land and sea, a specific place such as Mycenae, or a kingdom with its vassal states. In addition, this term may have been used interchangeably with each of these different meanings (Bryce 2011, 369). However, while the traditional location for Ahhiyawa is in Greece, P. A. Mountjoy places Ahhiyawa at the East Aegean-West Anatolian Interface somewhere in the Cycladic islands. Mountjoy uses the Hittite Tawagalawa Letter of Hattusili III where Hattusili calls the king of Ahhiyawa Great King, and my Brother, terms only used for the rulers of the empires of Hatti, Egypt, Assyria, Babylon, and Mitanni (Mountjoy 1998, 48; Bryce 2003a, 65).

From this reference and others which mention Ahhiyawa's involvement in the affairs of western Anatolia, Mountjoy tentatively places Ahhiyawa on the island of Rhodes, with the possibility that it could also have been located on Seraglio. However, and perhaps more importantly, Mountyjoy claims that the kingdom of Ahhiyawa was not Mycenaean, but a separate culture with its own koine of pottery and material culture which are separate from the Mycenaean mainland (Mountjoy 1998, 60).[110] Whether or not this is true is hard to say, and difficult to support from the archaeological and historical records.

More recently, Cline has suggested that the only possible placement for Ahhiyawa is on the Greek mainland and that the palaces were organised much like the later Delian League, with '... members contributing money, men, and ships to a common cause such as overseas trade or warfare' (Beckman/Bryce/Cline 2011, 5 f.). Thus, while the Hittites only ever mentioned one Great King ruling over Ahhiyawa when there were apparently many ruling in the region with Mycenaean culture, this suggestion would resolve the dilemma, as one king could have acted for all (Beckman/Bryce/Cline 2011, 5 f.). All of the palaces would have acted under one name while maintaining their individuality. However, recently Kelder has challenged this view. Kelder finds problems with the analogy comparing Late Helladic Greece with the Delian League, as this league was essentially based in Athens, having a central administration and eventually a centralised treasury. He also points out that there is nothing in the Linear B texts to support this view that each independent state was somehow politically connected to other states while administratively disconnected (Kelder 2012, 44–46). In Kelder's view, he states that with the king of Ahhiyawa being called a Great King in the Tawagalawa Letter of Hattusili III, we know the administration of Mycenaean Greece was ruled over by one king (Kelder 2012, 42–44). He believes there was a double ruling system with a Great King known as a *wanax* and a local king known as a *lawagetas*. He places the

---

109 Dickinson notes; however, that this placement is far from certain.

110 For a full treatment as to why Mountjoy claims this, see Mountjoy 1998, 48–60.

central city at Mycenae where the Great King would have ruled over his lesser kings, and from there would have had contact with the other great nations of the Eastern Mediterranean (Kelder 2012, 46, 50). However, as even Kelder states: 'None of the scenarios that have been discussed above can, at this point, be conclusively rejected or accepted [but], the growing body of circumstantial evidence for a unified Mycenaean state now seems overwhelming' (Kelder 2012, 50).[111] Or concerning the Linear B documents: 'In sum, the Linear B evidence may not prove the existence of a greater state, but it certainly does not contradict it either' (Kelder 2012, 45). For the purpose here, it will be assumed that Ahhiyawa was somewhere in Myceanean Greece, though if it was a single entity or a conglomeration of several cities cannot be answered by this study.

Of the 26 texts, 22 date to the 13th cent. BC, and they provide some details on the relation between the Hittites and Ahhiyawa along with the western coast of Anatolia where Ahhiyawa appeared to have more sway. Despite the problems with these texts, it appears from the existing record that the Hittites and Ahhiyawa were in diplomatic contact and in this way were perhaps even connected. However, the question which remains is if this contact extended all the way to Greece or if it mainly concerned the events going on, in, and around the area of Milawata, Arzawa, and Lukka in Western Anatolia. There remains also the problem that no Hittite documents have been found in Greece. Hoffner believes that perhaps the letters sent between the two regions were translated at the common border between Ahhiyawa and Hittite territory (Hoffner 2009, 290 f.; cited in Beckman/Bryce/Cline 2011, 139), and thus the argument could be made that the texts were put onto perishable materials. However, again this creates an argument from silence, and until evidence to support such claims appears, it will remain an unsupported theory.

Moving to Ugarit, there is very little textual evidence between the Aegean and Ugarit in the LBA. The first letter is the letter describing the tax

exemption given to Sinaranu son of Siginu whose ship was bringing goods back from Caphtor or Crete at or around 1260 BC (Heltzer 1978, 133; Cline 2003b, 172; Zukerman 2010, 888; Cline 2014, 79). This letter mentions Crete only in passing as the place where Sinaranu's ship has returned from. The second textual evidence comes in the form of two letters RS 94.2530 and RS 94.2523 found in the House of Urtenu. One appears to have been sent by Suppiluliuma II and the second by a high official in the Hittite court both of which were addressed to Ammurapi the last king of Ugarit. Both letters address that a shipment of ingots, perhaps copper, should be sent to 'Hiyawa-man' or 'Hiyawa-men' in Lukka on the south-western coast of Anatolia (Singer 2006, 242–262; Cline 2007, 198; Zukerman 2010, 888; Beckman/Bryce/Cline 2011, 254–262). The exact meaning of this is uncertain as is whether the 'Hiyawa-men' refer to Ahhiyawans. Of great importance, though, is also that these 'Hiyawa-men' are not in Ahhiyawa, but rather in the land of Lukka, a region at one time under the influence of Ahhiyawa, but at this point in time, no longer (Beckman/Bryce/Cline 2011, 262). Thus, in the all of the texts of Ugarit, there is none which directly refers to the land of Ahhiyawa, with only one reference to Crete and with two references to people in the land of Lukka who might have originally come from Ahhiyawa. Recently, an inscription was found at Tiryns written in what is most likely Ugaritic on an ivory rod, being the first time a Semitic language was found on the Greek mainland (Cohen/Maran/Vetters 2010, 1–22; Kelder 2012, 48).

For the next three regions under discussion, Cyprus, Lebanon, and the Southern Levant, there are no direct textual mentions which have been found between these regions and Greece from the LBA. Cyprus remains textually silent, as the five Cypro-Minoan tablets found at Enkomi and the four found in Ugarit remain to be deciphered. The only textual references, then, are the few possible mentions of Cyprus in the Linear B tablets[112]

---

111 For a discussion on the possible administration system in the Cycladic Islands, see Barber 2010.

112 An interesting note is that if there are loan words from other languages which have been found in Linear B, it would stand to reason that if the people of Cyprus where speaking with the people of Greece or Crete that Cypriot loan words would have been introduced also. That is unless the Cypriot people communicated in a Semitic language.

and nothing more. The same is true of Lebanon, as no texts have been found in the region which relate to Mycenaean Greece, and there are only the references in some Linear B tablets which might translate to 'the man from Beruit', 'the Tyrian', 'the man from Arad' and 'Phoenician' (Cline 2014, 89). The Southern Levant also has no textual evidence from the LBA connecting Greece and modern day Israel. There are no mentions in the Linear B texts of any place south of Tyre, and there are no texts in the Southern Levant from the LBA which speak of the Greek mainland as either Ahhiyawa and Tanaju nor are there any mentions of Caphtor/Crete (Yasur-Landau 2010b, 835–848).[113]

The last remaining area from which to examine the textual evidence is Egypt which, outside of Anatolia, provides the most textual references to the Aegean. There are three terms which seem to represent the Aegean world. These are Keftiu which is identified as Crete, Tanaju[114] which is identified as Mycenaean Greece, and 'the Isles in the midst of the Great Green' or simply the Great Green has been identified as the Cycladic islands, perhaps including Crete. References to these place names are found throughout the LBA, though they occur most frequently in the reigns of Thutmoses III, Amenhotep III, Ramesses II and Ramesses III. However, the term Tanaju does not occur before the reign of Thutmoses III (Cline 1994, 32–34; Phillips 2010, 822 f.). The majority of these references, however, are to Keftiu and not to Tanaju. 'Men from Keftiu' appear in eight tomb paintings bringing gifts, and the 'prince' of Keftiu appears on the wall of Menkheperesenb's tomb along with the prince of the Hittites, the prince of Tunip and the prince of Kadesh (Cline 1995a, 146; Panagiotopoulos 2001). However, the same is certainly not true for Tanaju.

Tanaju first appears in the Annals of Thutmoses III in his 42nd regnal year ca. 1437 BC when the Prince of Tanaju brings gifts to Thutmoses while he was campaigning in Syria. These gifts included silver vessels in Keftiuan or Cretan workmanship (Cline 1995a, 146; Kelder 2009, 339; 2010, 125; Phillips 2010, 822). Tanaju also appears in the time of Amenhotep III, with perhaps the most important text concerning Egypt's knowledge of the Aegean coming from Amenhotep's mortuary temple at Kom el-Hetan where, on the base of one statue, the so called Aegean List was uncovered.[115] On the statue base there is a depiction of captured foreigners, in typical Egyptian fashion, and a series of places names which have been correlated with sites or regions on Crete or Greece. These include Amnissos, Knossos, Kydonia, the island of Kythera, Mycenae, Messenia, Nauplion, and Phaestos, though some of these translations are still under contention (Cline/Stannish 2011, 6–10; Phillips 2010, 823). Cline has argued that this is an itinerary of a special expedition sent by Amenhotep III to the Aegean which may not represent an exact itinerary, but an expedition nonetheless.[116] Of importance is that in the list, Tanaju is placed after Keftiu, suggesting that the Egyptian at least vaguely knew that, relative to Egypt, the Greek mainland came after Crete. This also represents that from the known sources, Tanaju represents the edge of Egyptian knowledge of the world to the northwest of Egypt (Kelder 2010, 126). However, aside from this, references to the Aegean are sparse.

There is no mention of either Tanaju or Keftiu in the Amarna Letters; there are barely any references to either region during the reigns of Amenhotep II and Thutmoses IV, and moreover, the references from the Ramesside era are generally considered to be copies. The references made by Ramesses II are generally believed to have been copied from earlier lists, and later references to peoples or places believed to be Aegean come

---

113 There are two Linear A inscriptions which have been found in the Southern Levant. The first was found at Tell Abū Hurēre (Tel Haror) in Area K from the Middle Bronze III or 17th or early 16th cent. The second was found in Lachish Level VI dating to the early part of the 12th cent. though it is not certain if this had come from a previous stratum (Rendsburg 1998, 289 f.). There is also the reference that the Philistines came from the land of Caphtor (Crete) in both Jeremiah 47:4 and Amos 9:7, but these references of course postdate the LBA.
114 Also spelled Tanaja.

115 For an in-depth discussion of the Aegean list including some of the problems with the text and its reconstruction, see Cline/Stannish 2011, 6–16.
116 Most recently in Cline 2013, 31. The pros and cons of this argument will be discussed after the material cultural evidence for contact or connectivity has been presented.

from Merneptah and Ramesses III in dealing with the two groups of the Sea Peoples called the Ekwesh and the Denyen. However, as discussed before, the identification of these groups with people from the Aegean is far from certain and stands on shaky ground (Cline 1994, 34; Kelder 2009, 340; 2010, 126; Cline 2007, 197 f.). Thus, as Kelder has stated: 'The Greek mainland in effect only appears in Egyptian written sources in the period between Thutmose III (ca. 1479–1425 B.C.E.) and Amenhotep III (ca. 1390–1352 B.C.E.)' (Kelder 2009, 340). What is also of interest is that the words the Egyptian used for both Crete and mainland Greece seem to have no relevant counterpart within Linear B, and there are only two possible references to Egyptians in Linear B which were found at Knossos; however, no mentions of Egypt have been found on the Greek mainland (Merrillees 1998, 150; Cline 2003b, 171; 2007, 198; Phillips 2010, 823; Cline 2014, 88 f.). This is the textual evidence which has been used to create the theory of connectedness in the LBA between the Aegean and the rest of the Eastern Mediterranean. However, before looking at what it might mean, I will now present the second half of this picture which is the non-local material culture found in the Aegean from the rest of the Eastern Mediterranean and the material evidence from Crete and mainland Greece found in the Eastern Mediterranean. With this, it will be possible to see what the evidence dictates, either connectedness or contact.

4.5.2. Non-Local Material Culture

Again, I will begin with the Aegean. This information is mainly gleaned from Eric Cline's book, 'Sailing the Wine-Dark Sea' published in 1994, which documented some 1118 artefacts of non-local origin in the Aegean, and as of recently there have only been a few more artefacts added to this list.[117]

However, as Manning and Hulin have pointed out, 257 of these objects are taken from the Uluburun and Cape Gelidonya shipwrecks (Manning/Hulin 2005, 288), which, as discussed above, are not certain to have been heading toward Greece or to western Anatolia. The rest of these items were found throughout the Greek mainland, Crete, and the Cycladic islands and are from a 600 year period (Cline 1994, 1–7; 2010, 161–180). In total, 258 non-local objects were found on the Greek mainland with some 251 objects found on Crete (Cline 2007, 191). Nearly 10% of these artefacts were found at Mycenae, totalling 82 objects, and during LH IIIB, 92% of all non-local objects were found at Mycenae, Tiryns, and Boeotian Thebes or 107 of 116 objects. The two periods with the highest amount of non-local objects are LH/LM IIIA and IIIB. However, during LH/LM IIIA, 107 objects were found on Crete, while only 18 were found on the Greek mainland. This trend shifts during LH/LM IIIB where 116 non-local objects were found on the Greek mainland while only seven were found on Crete (Cline 1994, 87, 91 f.; 1995b, 91–93; 2007, 191).

Objects of clear Anatolian origin account for only a handful, as 12 in total have been found throughout the LH/LM I–III period with only four coming from the Greek mainland, three of which were found at Mycenae (Cline 1994, 68; 1995b, 91; 2007, 195). 176 Cypriot objects have been found in LH/LM I–IIIC with 104 being milk bowls, which is the second most common non-local object, Canaanite jars being the most common. Of these 176 objects, 40 were found on the Greek mainland, and the LH IIIB contained the most Cypriot objects with a total of 23 coming from this period, 12 from Tiryns and eleven from Thebes (Cline 1994, 54, 61; 2007, 195). For objects from the Levant, it is impossible to tell if they came from Syria, Lebanon, or the Southern Levant; thus, they have been lumped together. 181 objects were found throughout the LH/LM I–IIIC periods, 99 found on the Greek mainland representing more than half of all objects found on land, with another 71 found

---

117 Cline 2010, 167 f.: 'In the nearly 15 years that have elapsed since the publication of SWDS, there have been almost no new relevant discoveries in either the Aegean or the Eastern Mediterranean to help further the discussions. Very little in the way of new data has been introduced during the past two decades ... The field is at a standstill in terms of acquiring new artefactual data and has essentially been so for at least a decade. The number of new Orientalia in the LBA Aegean found since 1994 can be counted on one hand. The number of new Mycenaean, Minoan, and Cycladic imports found in Egypt and the Eastern Mediterranean during this same period is similarly limited'

on Crete. During LH/LM IIIA, 81% of Levantine objects were found on Crete, or 43 of 53 objects. In the LH/LM IIIB period this trend reverses, as 98% of these objects were found on mainland Greece, or 54 out of 55 objects. 27 were found at Mycenae, 13 at Tiryns, and eight at Thebes (Cline 1994, 49; 2007, 194).[118]

Lastly, 236 Egyptian objects were found throughout LH/LM I–IIIC with 75 found on the Greek mainland. During LH/LM I–II, 76% of Egyptian objects were found on Crete, or 62 of 82 objects. 46 Egyptian objects have been found during LH/LM IIIA; only eight were found in the Greek mainland. However, during LH/LM IIIB, 18 of 22 Egyptian objects were found in the Greek mainland and during LH/LM IIIC, 25 of 37 Egyptian objects were found in the mainland of Greece (Cline 1994, 32–38; 2007, 193 f.). Some Egyptian objects requiring special attention were found at Mycenae. These objects are inscribed with either the cartouche of Amenhotep III or Queen Tiy found on two scarabs, one vase, and from six to eleven fiancé plaques.[119] The fiancé plaques have been debated as to their meaning, function, and why and how they arrived at Mycenae and again represent that even with spectacular finds such as these, determining whether or not they were gifted or traded, even their region of origin, is impossible to determine.[120] Helck believed that these plaques might represent an Egyptian embassy or Egyptian room at Mycenae (Helck 1979, 79). Hankey believed that they might have been brought by an Egyptian expedition during the Amarna period as part of a greeting gift to help establish diplomatic ties, and who in return later brought back Mycenaean pottery to Egypt as a greeting gift to Amenhotep III (Hankey 1981a, 45 f.).[121]

Cline has correlated this find with the Aegean List at Kom el-Hetan, which he has stated might refer to the voyage which sent these plaques to the Aegean. This voyage was either to help woo the Mycenaeans into a diplomatic and trading relationship or to help maintain a pre-existing one (Cline 1995b, 93 f.; 2007, 194; 2013, 26, 28). However, the origins of the plaques, let alone their meaning, are up for debate. The fragments of the plaques were found on the slope of the citadel at Mycenae, most in fill layers which might have originated from the citadel dating to LH IIIB. However, one recent fragment has been found in the Petsas House dating to LH IIIA, meaning the plaques were in use for at least a hundred years. This would indicate that their use and meaning would have changed as Burns has already noted (Burns 2010a, 21–23; Kelder 2010, 128 f.). Moreover, there are no clear origins for these plaques, as there are no direct Egyptian parallels. Thus, it is possible these objects were made outside of Egypt and could be of either Levantine or Mycenaean origin (Lilyquist 1999, 303–306; Phillips 2007, 489; Kelder 2010, 129). As Lilyquist says: 'Let us be cautious in assuming the Egyptian origin of the Mycenae fragments and in promoting a meaning for them until Egyptian parallels are found' (Lilyquist 1999, 306).

Moving across the Aegean Sea to Anatolia, I will mainly deal with the lack of Mycenaean material in the land of the Hittites and will not deal extensively with the material from the western coast of Anatolia.[122] However, along the western Anatolian coast there are several sites which yielded substantial amounts of Mycenaean pottery. The main sites are Troy in the North, Miletus, the area around Ephesus, and Müsgebi. At Troy, LH IIIA–B represents nearly 70% of all Mycenaean finds at the site, with 9% found dating to LH IIIA1, 40% to LH IIIA2, and 20% to LH IIIB (Mee 1978, 147; Kelder 2006, 55). Miletus represents the greatest amount of Mycenaean material culture, which Kelder has noted is not surprising, as it is believed to be a permanent Mycenaean settlement along

---

118 This number differs from the number given by Cline as he lists 259. However, of these 259 objects, 77 were found on the Uluburun ship, and one was found on the Cape Gelidonya ship.

119 Hankey (1981a) originally believed there were four plaques, Cline (1995b) later reported six to nine while Kelder (2010) reports that the eleven fragments of the plaques represent at least eleven plaques.

120 See: Helck 1979, 79; Hankey 1981a, 38–49; Cline 1995b, 91–115; Lilyquist 1999, 303–308; Cline 2007, 194; Phillips 2007; Burns 2010a, 21–23; Kelder 2010, 128 f.; Cline 2013, 26, 28 and references there in.

121 This pottery will be discussed in turn in the coming pages.

122 For an in depth discussion of the Aegean material culture found in Western Anatolia, see: Mee 1978, 121–156; 1998, 137–148; Kelder 2006, 49–81.

with Müsgebi and Iasos which also produced Mycenaean material culture. Ephesus also produced a fair amount of Mycenaean pottery, but only during the 14th cent. BC or during LH IIIA2, as both LH IIIB and LH IIIC pottery are not present at Ephesus. Moreover, for all of the Western Anatolian sites, the time which produces the greatest frequency of Mycenaean material culture is LH IIIA2–B1, and during LH IIIB2 the number of sites with Mycenaean material culture decreases (Mee 1998, 137–141; Kelder 2006, 64, 68, 70 f., 77). However, the picture is quite different in Central Anatolia, where only a handful of Aegean finds have been uncovered (Bryce 2003a, 59 f.).[123] A Type B sword was found at Bogazköy, yet no pottery. Some fragments of LH IIIB stirrup jars and flasks were found at Maşat; however, these number at the most ten finds (see Mee 1998, 141 for a full list of these handful of finds).

Several reasons have been given for this dearth of both Mycenaean finds in Central Anatolia or Hittite finds in the Aegean, moreover in mainland Greece. These range from trade in invisible goods such as slaves, metals or horses (Bryce 1989, 13 f.), or that perhaps there was a trade embargo against the Ahhiyawans (Cline 1994, 71–74; Beckman/Bryce/Cline 2011, 269; Cline 2014, 71), that the Mycenaean containers did not prove safe for a long overland journey, that the Aegean wine was decanted into leather pouches being invisible to archaeology (Bryce 2003a, 61; Beckman/Bryce/Cline 2011, 269), or that the land routes were too treacherous, both geographically but also fraught with bandits and hostile groups which traders would not wish to deal with, and if they had wished for goods they would have obtained them through Cilicia via Ugarit (Bryce 2003a, 62 f.). The only other solution is that the Hittites did not trade with the Aegean, and all of these possibilities will be examined at the end of this review of material.

Aegean material culture, in particular ceramics, has been intensely studied in the Levant. Thus, I will not go in any great depth into the use or meaning of Aegean pottery.[124] For the Levant and Cyprus, the number of sites with Aegean material culture is based on van Wijngaarden (2002).[125] The Levant as a whole has produced 111 sites where LH I–LH IIIB pottery has been found. However, the majority of these sites yielded less than ten sherds of Aegean ceramics from a 400 year period. In total, of these 111 Levantine sites with Aegean ceramics, only 34 had more than ten sherds (van Wijngaarden 2002, 312 f.).[126] In the Northern Levant, there are only four sites[127] which produced more than ten sherds: Ras Shamra (Ugarit), its port Minet el-Beida, Tell Sukas, and Qadesh (van Wijngaarden 2002, 313, 325 f.).[128] Ras Shamra and Minet el-Beida certainly produced the most Aegean ceramics in the Northern Levant: when taken as a city and its port, they yielded the most in the entire Levant. Jan van Wijngaarden reported 554 sherds, though since then, ca. 440 more sherds have been published, bringing the total number of sherds and vessels closer to 1,000.[129] Of those described by van Wijngaarden, only eight sherds are dated before the LH IIIA2 period, 98 are dated to LH IIIA2, 81 are placed in the category of LH IIIA2–IIIB which cannot be definitively placed in either LH IIIA2 or LH IIIB, and 344 are dated to LH IIIB (van Wijngaarden 2002, 43–46). Of the

---

123 For an illustrative map, see: van Wijngaarden 2002, 318, 323; Kozal 2007, 142.

124 For a starting point on this subject, see: Hankey 1993, 91–99; Leonard 1994; van Wijngaarden 2002; Papadimitriou 2013, 92–136.

125 For the sake of constancy, the Aegean pottery from the Southern Levant presented here will be based on van Wijngaarden 2002. An updated though not entirely different view will be presented in Chapter 6.

126 This of course depends on the history and accessibility of archaeological research in the Levant. When looking at the maps made by Wijngaarden, there is a clear concentration in the Southern Levant, however, as he notes, this largely depends on how much archaeology has been done, and or has been published (van Wijngaarden 2002, 16 f.). Or as C. Bell has also noted, it largely depends on how much of a site has been excavated (C. Bell 2006, 31).

127 This of course depends on what one considers the Northern Levant, and as Lebanon has generally been treated differently to this point, this statement does not include sites in Lebanon.

128 However, Tell Sukas yielded between 50 and 100 sherds spanning from the LH IIIA2–LH IIIC, and Qadesh yielded only between ten and 50 sherds from the LH IIIA2–LH IIIB.

129 Van Wijngaarden 2002, 41; Yon 2003, 44; Routledge/McGeough 2009, 26; Papadimitriou 2013, 107. See Papadimitriou 2013, 107 for a list of sites from the Levant which have produced more Aegean ceramics since the publication of van Wijngaarden 2002.

newly published 440 sherds, only a few can be dated to LH I–LH IIIA1, with the remainder dating to LH IIIA2–LH IIIB (Papadimitriou 2013, 107). Six sites from Lebanon yielded more than ten Aegean sherds; however, four of these had only between ten and 50, two produced between 50 and 100, and only Sarepta produced more than 100 sherds. At Sarepta, the greatest frequency of Mycenaean pottery was during LH IIIA2–LH IIIB. Or, according to the site chronology, after 1350 BC, the frequency of Mycenaean sherds rose and peaked in the LH IIIA2 period and started to decline again in LH IIIB (C. Bell 2006, 43 f.). This differs from Ugarit to the north, which had its peak of Mycenaean pottery during LH IIIB.

Within the Eastern Mediterranean, Cyprus undoubtedly has the most Aegean pottery, as the island has given up more Mycenaean pottery than the entirety of the Levant. The numbers vary between how many sherds or whole vessels have been found on Cyprus; however, there are at least 4,000 vessels from the Cypriot LBA (Cline 2007, 196).[130] At Enkomi, 1,466 sherds or whole pots were found, with 973 of these being found in funerary contexts, a trend which is generally true for Mycenaean pottery on Cyprus, as the majority has been found in tombs (Cadogan 1993, 94; van Wijngaarden 2002, 134 f.; Papadimitriou 2013, 108).[131] Moreover, Sherratt states that at Hala Sultan Tekke, there were more than 4,300 pieces of Mycenaean pottery (S. Sherratt 1999, 170). There was little Mycenaean pottery being brought to Cyprus during LH I–LH IIIA1, though Mycenaean pottery did begin to increase in frequency starting in LH IIB and through LH IIIA1. During LH IIIA2 there was a so called 'flood' of Mycenaean pottery, which then began to regress during LH IIIB, which has been found at more than 70 sites (Åström 1973, 122; van Wijngaarden 2002, 122–124, 126; Steel 2004b, 70; Papadimitriou 2013, 108). However, Mycenaean pottery rarely moved inland to the

Cypriot hinterland and has generally been found at the large coastal sites (Steel 2004b, 71).

Based on van Wijngaarden, the Southern Levant has 73 sites with pottery from the Aegean from LH I–LH IIIB. 19 have more than ten sherds; however, of these, eleven sites have only between ten and 50 sherds, four have between 50 and 100 sherds, four have between 100 and 500, and is the only site in the Levant other than Ugarit to have more than 500 with about 700 hundred Mycenaean finds and 37 Minoan (van Wijngaarden 2002, 109, 312 f., 326 f.). The majority of the Aegean finds at *Tell Abū Ḥawām* are from the LH IIIA2–LH IIIB1 period, and according to NAA studies done on the pottery, the majority was made in the north-eastern Peloponnese, specifically the Argolid, and perhaps near Mycenae.[132] According to the NAA samples from Northern Israel, these too follow a similar trend coming mainly from the Argolid region or from the greater north-eastern Peloponnese region (Zuckerman *et al.* 2010, 410–414). Much like in the rest of the Eastern Mediterranean, before LH IIIA2, Aegean ceramics were not as common in the Southern Levant. However, with the onset of LH IIIA2, and as Papadimitriou notes, specifically after LH IIIA2 late, was when there was the great increase in the frequency of Mycenaean pottery in the Southern Levant (van Wijngaarden 2002, 21 f.; C. Bell 2006, 46; Papadimitriou 2013, 108). This again begins to decline in LH IIIB, and virtually halts in LH IIIC.[133]

Finally, there is Egypt. There are in Egypt and Nubia 52 sites with Aegean pottery and some 30 sites have LH IIIA2–LH IIIB pottery, though there are only eight sites with more than ten Mycenaean finds. Again, before the LH IIIA2, the appearance of Aegean material culture in Egypt is minimal, and it is only in LH IIIA2 that there is a greater influx of Mycenaean pottery which continues into LH IIIB, though to a lesser extent (van Wijngaarden 2002, 17–21; Cline 2007, 196; Papadimitriou 2013, 106). The largest find of Mycenaean pottery in Egypt was uncovered at Amarna. Approximately 2,000 sherds all dating to LH IIIA2

---

130 In 1973, Åström noted that there were at that time 3,445 vessels or sherds of Mycenaean pottery found on Cyprus (Åström 1973, 122). See also Gilmour 1992, 113–128.
131 Though as Steel notes, this pattern is changing with more excavations as more sherds have been uncovered in stratified contexts (Steel 2004b, 78 f.).

132 Van Wijngaarden 2002, 13; Artzy 2006b, 52; 2007, 364; Zuckerman *et al.* 2010, 410 f.; Artzy/Zagorski 2012, 1 f.
133 This pottery will be examined in greater detail in Chapter 6.

were found at Amarna, 1,300 of which were found in a rubbish heap east of the police barracks and the offices of the royal scribes. These 2,000 sherds are believed to represent some 600 hundred vessels, though Hankey has put forth a lower number of 200–300 (Cline 2007, 196; Kelder 2010, 130 note 20; Papadimitriou 2013, 106). Nonetheless, the majority of these vessels were closed shapes, such as pilgrim flasks and stirrup jars, which are believed to have carried olive oil, perfume, or wine (Kelder 2010, 130).[134] In order to try and explain this large number of Mycenaean pots found in one location, all coming from the same chronological period, it has been proposed that this represents a gift sent to Egypt from the Mycenaeans (Kelder 2009, 347; 2010, 133). This gift was either brought by Mycenaeans, or was sent back with Egyptians after having gone on the supposed diplomatic voyage which Cline and Kelder claim is inscribed at Kom el-Hetan. However, as previously discussed, knowing if this was a gift or not is not so simple.

4.5.3.   Arguments for Connection

The question that now stands is what does all of this evidence mean? Does it show connectedness as some would claim, contact, or less? The answer of course will depend on who is asked and whether their view is minimal or maximal. I have presented in general many view points of the maximalists and will present several more; however, my interpretation of this material will be biased, as I am certainly a minimalist, following in the same vein as Cherry (2010, 107–140). Wiener has already stated the danger of a minimalist's approach being at least as great as that of overestimating the state of ancient exchange in the Eastern Mediterranean (Wiener 1991, 326), yet as Cline has stated: 'Scholars can profess abstruse and abstract theories as much as they like, but archaeological theory will never replace hard data' (Cline 2010, 168). This is as good a starting point to an enquiry as any; I will attempt to stay with the hard textual and archaeological data which we have

uncovered and not that which has not been found, is believed to exist, or believed to have existed in true minimalist fashion.

To begin with are two theories which have been proposed by Cline and Kelder. Both have claimed strong contacts and connections between the Egyptians and the Mycenaeans. Kelder has claimed that there were three separate diplomatic missions between Egypt and the Mycenaean court. The first, he claims, is documented by Thutmoses III and the gift brought by the prince of Tanaju. Secondly, he claims, much like Cline, that Amenhotep III sent an expedition to Tanaju who took along the faience plaques found at Mycenae and which was recorded at Kom el-Hetan. Finally, he believes that the cache of sherds found at Amarna represent a gift sent back to Egypt after this visitation (Kelder 2009, 347; 2010, 133–137). He also believes that despite the lack of textual evidence and with a general lack of Mycenaean imports after the Amarna period, there would still have been diplomatic contact. Moreover, he claims, even though there is a paucity of archaeological and textual evidence,[135] that there were connections between Egypt and Mycenae before LH IIIA2 which would be archaeologically invisible, as pottery was not important at that time and metal objects were the items being sent (Kelder 2009, 347; 2010, 133–137). Thus, from this he states: 'Connections between New Kingdom Egypt and Mycenae, in sum, appear to have been of a rather close nature, involving not only the exchange of goods, but also the exchange of men, and of ideas' (Kelder 2010, 137). However, the question is, how much of this is borne out by the known evidence?

First, there is the mention by Thutmoses III of a gift brought by the prince of Tanaju, and of all the claims, this could be considered a diplomatic contact; however, the question that must be asked is, was this a direct diplomatic mission to meet the pharaoh, or was it something else? How would the prince of Tanaju know that Thutmoses III would be in Syria, and did this actually cement any kind of connection or was it a point of contact? From what we know archaeologically, it was a contact. There is limited evidence of Mycenaean objects

---

[134] See Kelder 2009, for his argument that these vessels would have contained oil.

[135] Other than the textual mentions from Thutmoses III.

in Egypt from the time of Thutmoses III, and from this same period in the Aegean only 15 Egyptian artefacts were found on the Greek mainland while 67 were found on Crete (Cline 2007, 193; Papadimitriou 2013, 99, 104 f.). However, as Keftiu and Tanaju are separated in the Egyptian recorded, there is more archaeological evidence to suggest contact between Crete and Egypt during this time than with the Greek mainland, let alone connection. Kelder has pointed to metal objects, as these are what were brought as gifts to Thutmoses III (Kelder 2010, 133), however, this is an argument from silence, as these objects have not been uncovered. It is true, as Weiner has pointed out, that metal would have been used, reused, and reformed making it generally archaeologically invisible (Wiener 1991, 326); however, given the body of evidence, there is not enough to suggest a connection during the reign of Thutmoses III.

Second is the diplomatic mission sent by Amenhotep III to Mycenae which brought the faience plaques to Greece. However, as already described, the plaques have no clear match in Egypt; it is not certain if they were made in Egypt, and it can also not be said for sure if they all arrived in a group or over a period of time. Moreover, the list at Kom el-Hetan details only a group of names which have been interpreted as a voyage, yet there is no textual information other than this list of names to suggest this mission ever took place. Finally, there are the LH IIIA2 vessels found at Amarna, but there is, again, no proof that this is a gift, as it could have been a shipment from the Aegean, it could have been a gift, or it could have been brought by others who were not from the Aegean. Moreover, there is a double standard in place here. This large cache is believed to be a gift brought at one time because of the superb condition in which Amarna was abandoned, yet with assemblages found in other parts of the Eastern Mediterranean it is considered evidence of constant trade rather than a single shipment, even though the amount of LH IIIA2 or LH IIIB pottery is less than that found at Amarna! If we are also to try and find connections between the Aegean and Egypt during the time of Ramesses II and after, there is little archaeological evidence and no real textual evidence to support this. That is, unless one points to the as yet non-existent foreign archive

on Greece of which no evidence has been found. Even in the texts from Greece, there are only two possible mentions of Egyptians. Thus, from the evidence that we have at hand, there is only enough to support contact between the Aegean and Egypt, but there is no hard evidence to state they were in any way connected.

As previously described, Cline has made the claim that the Kom el-Hetan list describes a voyage sent by Amenhotep III to Greece. However, his theory concerning this voyage goes further and has included an explanation for why there is little to no Aegean material culture in the Hittite homeland, and *vice versa*. As stated before, Cline has argued that this lack of exchange was due to an embargo placed on Ahhiyawa by the Hittites. This is based on a single text in which Tudhalia IV says to the king of Amurru: 'You shall not allow any ship of Ahhiyawa to go to him (that is, the king of Assyria)' (AhT2 [CTH 105]; Beckman/Bryce/Cline 2011, 63). From this he states that: 'The hostility and lack of trade between the Mycenaeans and Hittites might well have been the result of an anti-Hittite treaty signed between Egypt and the Aegean during the reign of Amenhotep III' (Cline 2014, 71). However, there are several difficulties with this interpretation of the textual and material evidence.

First, there is the statement made by Tudhalia IV. As Bryce has already noted, this 'embargo' is not against Ahhiyawa but rather against Assyria.[136] Ships from Ahhiyawa are not be allowed to go to Assyria because of the political problems between the Hittites and Assyria; however, nowhere does it state anything about Ahhiyawan ships not being allowed to go to Amurru, Ugarit, or to the Hittites. Moreover, texts used to prove the relations between Ugarit and Ahhiyawa would argue against a Hittite embargo against them. The two letters RS 94.2530 and RS 94.2523 found in the House of Urtenu, both of which were sent from the Hittite court to Ammurapi the last king of Ugarit during the reign of Suppululiuma II, give direct instructions to ship ingots to 'Hiyawa-man' or 'Hiyawa-men' in Lukka. This is certainly not an embargo, as the Hittites are documented as having

---

136 Bryce 2003a, 71. See this whole article for other considerations against a Hittite embargo.

given direct orders for goods to be sent to these men from Ahhiyawa. The only arguments against this would be to say that the political situation between the Hittites and the Ahhiyawa became surprisingly better in the short time between Tudhalia IV and Suppiluliuma II, of which there is no supporting evidence, or that these men of Ahhiyawa are not directly related to Ahhiyawa as they are stationed in the land of Lukka. However, if we cannot be certain that these men of Ahhiyawa are not really related to Ahhiyawa, then the same critic must be placed on the statement made by Tudhalia IV, and that we cannot know if the ships of Ahhiyawa then really do refer to ships from Ahhiyawa or from some region or people group related to Ahhiyawa. Moreover, a letter most likely sent to Hattusili III describes that a gift should be sent to Ahhiyawa; it was unknown by the official who wrote this text whether a gift was sent by the Ahhiyawans to the Hittite king, and if so, what the nature of this gift was (AhT 8 [CTH 209.12]; Beckman/Bryce/Cline 2011, 144–149). Meaning, that on either side of Tudhalia IV, there is textual evidence to suggest that the Hittites at least sent some goods to the Ahhiyawans.

Moving backwards in time to Amenhotep III, there is even less convincing evidence to support this embargo and, moreover, no evidence to support the idea that Amenhotep III signed an anti-Hittite treaty with the Mycenaeans. Firstly, again, is the supposed voyage sent by Amenhotep III, believed to be recorded at Kom el-Hetan and found in the archaeological record in the faience plaques at Mycenae. As already argued above, there is little actual evidence to support that this voyage took place and that the plaques were brought by Egyptians. Thus, there is no certainty that the Egyptians sent a voyage to Greece, and if they did, there is no evidence to say what might have come from it. The statement that Amenhotep III signed an anti-Hittite treaty seems to be tenuous. At this time, we have neither textual evidence nor a textual precedent from the period that would support this claim. Thus, at this time, there is no proof that such a treaty was ever drafted or signed, or that a political alliance was created between the Egyptians and the Mycenaeans. Moreover, this solution would only tackle the problem of little to no interregional exchange

between Greece and the Hittite heartland for the period after Amenhotep III, as it says nothing of the time before the reign of Amenhotep III, there still being little archaeological evidence of exchange between these two regions.

The case of the Hittites is actually the only one where there is enough evidence to suggest that they were connected to a degree with Mycenaean Greece, despite the lack of archaeological material culture. This is, however, because of the false assumption that if two parties are connected, they are connected in every sphere. Yet, this is not the case. Two regions can be politically connected, but this does not mean that they need to be economically connected, nor do they need to be connected through an exchange network of goods and services. From what we know in the Ahhiyawa texts, the Hittites and the Ahhiyawans were connected in the sense that they had a shared border in Western Anatolia, and this shared border created political and power struggles for both parties. The action of the Hittites in the west would have affected the Ahhiyawans there, and *vice versa*, the actions or inactions of the Ahhiyawans and how they treated the Hittites, helping or not helping would create effects that would influence both regions. However, there is little evidence to say that this 'connection' went beyond this. Bryce has already listed the number of reasons why these two groups would not have exchanged with each other as: the materials that the Mycenaeans might have wanted from the Hittites were already available in Western Anatolia; there were no good trade routes into the Hittite heartland; or that the journey would simply have been too dangerous (Bryce 2003a, 61–65, 70 f.). Steel has also noted that it is most likely that Hittites took part in a different network of exchange, focusing on Mesopotamia and Syria rather than Greece in the west (Steel 2013, 131). Moreover, as Genz has noted, there is little evidence of Hittite material in the regions outside of the Hittite heartland and there is also little non-local material in the Hittite heartland (Genz 2011, 322 f.). Thus, there generally seems to be a lack of large-scale interregional exchange with anyone, not only with Mycenaean Greece. This is not to say that the two regions never exchanged goods through barter, trade, or gift exchange, as the above letters from the Hittites

would argue that this did occasionally happen. As discussed in the section on LBA gift exchange, gifts do not need to be large and often times were very small, and these would likely be lost to the archaeological record. However, even if gifts were occasionally exchanged, this would equate to an exchange contact, not to a trade connection.

Bell has claimed that Phoenicia had direct contact with the Aegean, and that this contact is what saved Phoenicia from destruction at the end of the LBA at either the hands of the Sea Peoples or other roaming bands of people from the Aegean. She bases this on the percentage of Mycenaean pottery found at the site of Sarepta, which is higher than Cypriot pottery. Bell goes on to state the claim that Phoenicia could trade with whomever they wished, as they were not under the direct control by either Egypt or the Hittites, and that Linear B names which seem to have a Phoenician origin would suggest a trade connection. Finally, she states that Sarepta and other Lebanese sites were not destroyed at the end of the LBA because of this connection to the Aegean (C. Bell 2006, 88–90, 109 f., 137; 2009, 32 f.). However, this theory of connection and the lack of destruction is not without problems. As I have previously demonstrated and will demonstrate fully in the following chapter, the hypothesis of destruction is largely untested in the Eastern Mediterranean. In the Southern Levant, there is generally little evidence to support the destruction events attributed to the 'Sea Peoples' (Millek 2017). Thus, one cannot assume that a lack of destruction in Phoenicia indicates a direct relation with the Aegean, as this would then also be true of the Southern Levant. The possible Phoenician names mentioned in Linear B tablets would be strong evidence for contact, but it is interesting to note that all four of these names were found on tablets from Knossos, and only the 'man from Tyre' was found on a tablet from mainland Greece at Pylos (C. Bell 2006, 89). Thus, again, one may extrapolate that these names would have been known in the Argolid where most of the Mycenaean pottery originated; however, the evidence has not yet been found to support this. Moreover, there is the problem of pottery and percentages and what sherd counts really tell us. This is a problem that does not only apply to Sarepta but to the entire Eastern Mediterranean.

4.5.4. The Problem of Sherd Counts

If one reads any report about trade with the Aegean, generally, when it comes to LH IIIA2, it will be described that there was a 'flood' of Mycenaean pottery to the region the study covers. Or, one might encounter that there are vast amounts of trade, great quantities of Mycenaean pottery and other sentences which give the impression of Mycenaean, Levantine, Egyptian, and Cypriot ships going to and fro from the Aegean world. However, one thing that is never defined is, how much is a 'great quantity' of Mycenaean pottery. At what number of sherds or vessels does it go from a little or some trade to a flood? This of course is based in part on comparing to the times previous, but the question is not one of comparison; it is of quantification. Take for example the Levant, Cyprus and Egypt. In the Southern Levant, there are 308 sherds of published[137] LH IIIA2 pottery which could be called a great amount. However, the site of Enkomi on Cyprus itself produced 323 sherds and vessels of LH IIIA2 pottery (van Wijngaarden 2002, 136). Moreover, as previously mentioned, Amarna yielded 2,000 LH IIIA2 sherds which may represent 600 vessels. Thus, of these three examples, which one counts as a lot of Mycenaean pottery or a flood? The site in the Southern Levant with the most LH IIIA2 pottery is Lachish which has 71 sherds; however, this pales in comparison to Enkomi, which is then too dwarfed by the amount of pottery found at Amarna. If we are to consider that all three examples have a 'great amount of LH IIIA2 pottery', then this is a functionally useless term, as there is no gradient which is used to judge how much a great amount is. When these numbers, however small or large, are called great, large, or a flood, it is because of the maximal interpretation of the data.

What follows is better known in the world of the 'hard' sciences, that is, using a thought experiment to help visualise a problem. The purpose of going through this exercise is not to give an accurate picture of the amount of trade and contacts during LH IIIA2, but rather to take the existing

---

137 Published is a key which will become more apparent in chapters 6–8.

information known from archaeological contexts and from this imagining what the maximal position might have looked like to see if this matches the claims made by the maximal interpretation of the data, that is, a connected world with frequent contacts. Thus, in a way, this is putting informed imagination into practice.

The question that we must first ask is, how many pots could be shipped at one time? For Mycenaean pottery the answer is, simply, we do not know. Thus, let us take the assumption that the find at Amarna represents a single shipment of transport vessels, as has been argued by Kelder. There are 2,000 sherds, at the maximum 600 vessels and minimum 200. Taking this as a single shipment, it would mean that even if every sherd of the 308 LH IIIA2 sherds found in the Southern Levant were a vessel in and of itself, if we take the maximum number of vessels from Amarna it would represent only half a shipment, and at the minimum one and a half shipments within a 75 year period – in other words, at the most, two contacts in this period. However, of course, it is not certain if the Amarna sherds were from one shipment or perhaps several. Thus, I turn to a known number of vessels shipped, that being the approximately 150 Canaanite storage jars found on the Uluburun ship. Using this number, it again demonstrates that two contacts in seventy-five years would account for every sherd of LH IIIA2 pottery in the Southern Levant, even if each were a whole vessel. Even if we assume that this only represents a small fraction of the total number of LH IIIA2 vessels in the Southern Levant, the picture does not change drastically, as even multiplying this number by 10, creating an assumed 3080 vessels, this would only equate to 20 contacts over 75 years or 2.6 contacts every ten years. If using this imaginary number, the number of contacts remains small enough that it could hardly be considered evidence for connectedness. One can extend this thought experiment elsewhere. Wijngaarden lists 98 sherds of LH IIIA2 pottery at Ugarit (van Wijngaarden 2002, 44), which again, under both minimal numbers, would be less than one shipment and thus could equal one contact. The LH IIIA2 pottery from Enkomi would again represent one or two contacts. This would be far fewer contacts than generally imagined and would not

be a strong indicator for economic connectedness in the LBA.

However, some clarification. This is a thought experiment, and I would not argue for there having been only one or two contacts during the LH IIIA2 period in the Southern Levant; this was merely to demonstrate that, when the same logic that has been applied to Egypt is applied to another region, the picture of exchange between the Aegean and the Southern Levant, Ugarit, and Cyprus is drastically different. However, given the number of sherds in the Southern Levant from LH IIIA2, the number of vessels that could be shipped from a known ship, the number of contacts was most likely not much higher than the extreme minimal position proposes. Additionally, we cannot be certain who exactly was carrying these vessels, whether they came on a Mycenaean ship, whether they were brought from Egypt, or whether they were brought from Cyprus. Moreover, many of these vessels may not have been made in Greece at all and could have been produced in the Levant or on Cyprus (Zuckerman *et al.* 2010; Stockhammer 2011; Artzy/Zagorski 2012). It is also not known how many transport vessels a Mycenaean ship could carry. As Manning and Hulin have previously pointed out, the common belief is that these vessels piggybacked on the trade of other raw commodities like metal, which is invisible in the archaeological record. However, the Point Iria Wreck seems to have carried pottery as its main cargo (Manning/Hulin 2005, 297). Additionally, two ships wrecked off the coast of Ashkelon dating to ca 750 BC carried only amphorae as their cargo, each carrying over 300 amphorae (Ballard *et al.* 2002; Abdelhamid 2015, 1). Moreover, as Mycenaean pottery seems to be the main 'export' from the Aegean, it would only make sense that they would have carried more of it on a single ship which would mean 'large' amounts of pottery could indicate only one or two contacts. Thus, when it is argued, because there is a higher concentration of Mycenaean pottery over Cypriot pottery at Sarepta, that this indicates they were connected, this is not a clear logical conclusion, as this could have transpired for any number of reasons, and the number of LH III A2–LH IIIB sherds may only represent a couple of contacts rather than continued trade.

The difficulty in all of these studies is that what we know, or rather, the hard data being numbers of sherds or other finds, can be lost in other numbers and statistics. Manning and Hulin have already pointed out some of these problems, such as that of the 348 sites outside of the Aegean with Mycenaean pottery: 72.1% yielded fewer than 10 sherds from the time between LH I–IIIB or a 400 year period. Moreover, from the same time, of these 348 sites, 89% yielded fewer than 50 sherds. They went on to point out that when looking at the Aegean and the 1118 imported items listed in the 'Sailing the Wine-Dark Sea', it would represent 0.5 objects imported to the Aegean per year over the 600 year period the study covers. This along with other arguments led them to state that this database is 'misleading' (Manning/Hulin 2005, 278 f.). Cline has reacted to this, stating that, of course, 0.5 objects did not arrive each year and that trade rose and fell over time, and that what has been uncovered in the Aegean most likely only represents ten percent of what once existed. Moreover, that this type of argument is '… deliberately minimalistic and, I believe, an ultimately harmful interpretation of the available data' (Cline 2007, 200 note 1; 2010, 164 f.). With that said, it is thus important to take known examples and to ask the question, which appears to be more reasonable: the minimal or maximal view?

For this we turn to information from 'Sailing the Wine-Dark Sea' and again from the Uluburun wreck. During the LH IIIA period, which is during the time that the Uluburun ship would have sailed, 44 sherds of Canaanite storage jars were uncovered throughout the Aegean (Cline 1994, 99).[138] We shall assume these represent 44 whole vessels from an approximately 100 year period of time. On the Uluburun ship, approximately 150 Canaanite storage jars were found. For benefit of the doubt, we shall assume that the 44 Canaanite storage jars from LH IIIA are not accurate, not even that they represent only a tenth of what was there, but we shall assume it is one hundredth of what was shipped, creating a number of 4,400

imaginary Canaanite storage jars. Given the number of Canaanite storage jars found on the Uluburun ship as our measure,[139] this would then equate to 29 shipments or three shipments every 10 years. Moreover, taking the carrying capacity of the Uluburun ship, the ship may have been able to transport upwards of 1,000 Canaanite storage jars based on an average weight and size of the jars.[140] A similar argument could be made for the Cypriot pottery found on the Uluburun ship and that found in the Aegean, and a similar picture also emerges. Thus, either there is such a great disparity in what we find in the archaeological record compared to what might have been exchanged as to make what we have functionally impractical in trying to determine ancient exchange – or, there was far less exchange than previously imagined.

One study which points to this conclusion is that of Parkinson, who, using the database of imported objects made by Cline, attempted to identify contacts in the data rather than raw numbers. In order to determine contact in the archaeological past, Parkinson sorted Cline's database so that materials with similar contexts, periods, and origins were grouped together. He states that, in this view, a contact is: '[A group] of artifacts from the same context at a single site, which are dated to a similar time period and which derive from a single geographical region' (Parkinson 2010, 18). He explains that: 'For example, the three Mesopotamian or Syro-Palestinian glass beads … from Mycenae, Chamber Tomb 49, which is dated to LH I, are considered evidence of a single 'contact'. This is based on the argument that it is more likely that the beads were all acquired at a similar time' (Parkinson 2010, 18). Thus, in this view, rather than 111 objects found at Mycenae, it is reduced to 61

---

138 Of course this number will change in the future and this is based on those sherds published by Cline. For example, see Rutter 2014, 53–69, and Stockhammer 2015, 177–187.

139 An argument against this is that of course we may then add in the copper, tin and other items shipped on the Uluburun ship into this measure which would mean that 29 shipments would have been economically impactful. However, as stated before, we do not know if filled storage jars could be shipped by themselves, and thus for this thought experiment, the other items aboard the Uluburun ship are excluded.

140 Pulak Personal Communication, 7.01.2016. Cemal Pulak mentioned that this is a rough estimate and it would have to be seen if this many jars could fit on a ship the size of the Uluburun ship. However, it is useful in imagining the amount of vessels a ship like this might have been able to carry.

contacts. Or, rather than there being 41 objects from Thebes, there are only 7 contacts according to Parkinson's method. For Mainland Greece during LH IIIA–LH IIIB, while there are 151 objects, he has reduced this to 65 contacts (Parkinson 2010, 19 f.). Thus, in this view, there were fewer contacts which ebbed and flowed with the passing of time. However, while this method has reduced the number of artefacts into contacts, it still makes some assumptions which would make for more contacts than may have been.

Parkinson states: 'If, however, items from a single context derive from more than one geographical region, such as Shaft Grave V, Grave Circle A, from Mycenae which contains items of both Egyptian and Syro-Palestinian origin, then the number of contacts is based upon the number of geographical regions represented (in this case, two). This is based on the assumption that items originating from different geographical areas were acquired via different contacts' (Parkinson 2010, 19). He cites that, given the different origins for the objects found on the Uluburun and Cape Gelidonya shipwrecks, his methodology lumps together items from different regions which might have arrived at the same time. However, he goes on to state: 'The point here is to determine the number of contacts that were made with foreign lands by LBA mainland Greeks, not to determine the minimum number of shiploads that would have been required to produce it' (Parkinson 2010, 19). Herein lies the problem. Non-local material in and of itself does not equate to contact. It is simply non-local material in an archaeological context which could have arrived via a number of different means and actors.

For example, recently Egyptian blue glass beads dating to the time of Tutankhamen were uncovered in the grave of a Danish woman dating to ca. 1400 BC. The beads were found in the same region from which amber found in the LBA in the Near East and Egypt originates, and it was the first time that an object was found to have gone north rather than the amber only going south (Varberg/Gratuze/Kaul 2015). Here, a non-local object was found. However, it would be very unreasonable to assume it was brought by an Egyptian or that the Danish woman had any idea from where it came from other than not from the local region.

The same would be true of the amber found in the Near East and Egypt, as it is most likely evidence of down-the-line superregional exchange, but certainly not contact or knowledge. Thus, for the non-local objects found in the Aegean, one region being represented in the archaeological record does not necessarily represent contact. Moreover, from what we know from the found shipwrecks, it would be more reasonable to look for what Parkinson calls a shipment, as this would be an actual contact with the people, not with objects, from a region. Additionally, when using this form of contact, one can have the assumption that sites inland most likely did not have direct contact with the ships and the crews bringing the materials. Thus, as objects were unloaded at a 'port of trade', they would have moved inland by other actors than those who originally brought them, most likely being local merchants or people. This would mean that objects found inland may not represent more contacts, and adding this on to those at harbour sites or places where objects were most likely first deposited will increase the number of contacts artificially. Thus, while Parkinson notes there were 61 contacts in the LH IIIA–LH IIIB period, the actual number, given these considerations, was most likely less.

4.5.5. Summary

With the data from texts and archaeology presented, theories about connectedness discussed, materials questioned, where then does this leave the question of whether there was connectedness between the Aegean and the rest of the Eastern Mediterranean? When examining all of this together, I would argue there is not enough evidence to state that the Aegean and the Eastern Mediterranean were economically connected. From the textual evidence, there are only sparse references to the Mycenaean world, and much of the arguments for connectedness which are derived from this textual evidence are not at this time supported by physical evidence, such as the foreign archive on the Greek mainland, or the texts are over-interpreted. Most of the regions discussed are silent when it comes to textual evidence. The Egyptian texts come mainly from two pharaohs, Thutmoses III

and Amenhotep III, and these reference contact and do not speak in the texts themselves of connectedness and certainly not economic connectedness. Texts can be used in Anatolia to argue for connectedness between Ahhiyawa and the Hittites. However, given what is known from the texts, this would be connectedness through a shared border, and most likely did not extend beyond that other than through occasional gift exchange. Thus, the textual evidence when taken for what it is, and not arguing with material that has not been found, would argue for contact between these regions, but not connectedness.

The archaeological record produces a similar picture when the problems with interpretation are taken into consideration. When it is normally assumed that many sherds equal many contacts, this view oversimplifies the past. While the archaeological record has produced thousands of Mycenaean sherds outside of the Aegean, as seen in the example from Amarna, this does not mean thousands of vessels. It has been pointed out by Merrillees that, while there are 2,000 Mycenaean sherds at Amarna, this pales in comparison to the millions of local sherds found in contemporaneous sites, and demonstrates how minor imports were (Merrillees 1998, 153). Moreover, when taking a look using the assumed number of vessels making up the Amarna cache, it would mean that even using the smallest number of two hundred vessels per shipment from the Aegean, all LH IIIA2 vessels could have in theory arrived via two ships, if every sherd were a vessel. Even in the Southern Levant at the Amman Airport Structure, which yielded the second biggest collection of Aegean pottery with 486 sherds of mainly Mycenaean and some Minoan pottery, these sherds represent only 50–60 vessels (Hankey 1974, 133). Or, using a known number of vessels transported on a ship from the period, the 150 Canaanite storage jars on the Uluburun ship, this would still mean, in principle, that all LH IIIA2 sherds found in the Southern Levant could have come from two ships, and this does not even mean ships of Aegean origin. Given this consideration, that the Mycenaeans most likely shipped a considerable number of transport vessels at a time, the archaeological record begins to make sense.

There are 1,118 objects listed by Cline in 'Sailing the Wine-Dark Sea'; however, the Eastern Mediterranean has turned up thousands of Mycenaean sherds. It has been assumed that what is lacking is the evidence of perishable goods, and this is most likely true; however, given that the Mycenaeans, from all that we know to date, shipped mainly transport vessels filled with oil, or some other fluid, these might be a better indicator of how many contacts there were. Take, for example, Cyprus. Cyprus represents the region with the most Mycenaean pottery by far and, during LH IIIB, there are at least 721 LH IIIB objects found on Cyprus. Yet, on the Greek Mainland, there are no Cypriot items before the LH IIIB period, and during LH IIIB there are only 23 Cypriot objects (Cline 2007, 195). How can this disparity be explained other than by archaeologically invisible goods, and it must also demonstrate a great amount of hidden trade. However, this may not be the case. Given what we know of Alasiya, which I am assuming to be Cyprus, the main export of Alasiya was copper, as seen in the Amarna Letters. If this held true for the Aegean, then the Alasiyans would have mainly exchanged copper with the Greek mainland, which in turn would be archaeologically invisible (Knapp 1985, 243). However, given how much copper was valued, as already demonstrated by Monroe, it is imaginable that if this was the medium of exchange, and if the Mycenaeans were giving them filled transport vessels, one shipment of copper most likely would have yielded a return of a great quantity of filled Mycenaean transport vessels.[141] This would mean that, even though there is a great amount of Mycenaean pottery on Cyprus, it could have arrived *via* a small number of contacts, and the same would be true of regions where there is by far less Mycenaean pottery.

This limited number of contacts has already been demonstrated by Parkinson who reduced the number of contacts between the Greek Mainland and the world outside of this region to 65 throughout the entire LH IIIA–LH IIIB period (Parkinson 2010, 20). Given this information, Cline has recently stated that:

---

141 I will discuss the ideas of Sherratt and value added goods in the following section.

'When considered over the entire 600-year course of the Late Bronze Age must be ameliorated by the observation that such contacts were probably conducted in fits and starts and should probably not be seen as continual over the entire length of the Bronze Age. Whereas previously I argued for a constant stream of contact between the Aegean, Egypt, and the Eastern Mediterranean, upon reflection I would not now be at all surprised if trade had actually started and stopped, then started again, with years or even decades intervening between contacts' (Cline 2010, 166).

This statement is one I would completely agree with, and it is a very important and key statement in understanding the debate between there being a high level of connectedness or low levels of contact. The statement that: '... trade had actually started and stopped, then started again, with years or even decades intervening between contacts', could be described as intermittent contact at best, and if it were the case that there were decades between contacts, they should be described as sparse. If the Aegean did not have contact with the Eastern Mediterranean for years or decades, this would mean that these societies could not be considered to be connected either economically or politically. For example, if there were a ten year gap between when the Aegean exchanged with Egypt, if at the five year mark, Mycenae collapsed, Egypt would never know, as these gaps in contact would have been normal. If there is so little contact that it can wait years, this means that economic interdependence could not have existed, as these large gaps would not allow for such a thing. The societies would have collapsed again and again if this were the case. Thus, when one considers that the fall of the Mycenaean world would have been the cause for the collapse of the Eastern Mediterranean because of the break in an interdependent world system, given the evidence, this cannot be considered a plausible theory. It can also not be argued that these regions were in constant contact, as years or decades of no contact would not allow for this. This would explain the textual evidence which does not to date exist, because it is based on an assumption which has not been borne out. However, despite all this, the argument presented here will be considered far too minimalistic;

however, this minimal view has been given before when Wachsmann stated: 'Mycenaean maritime **trading** outside the Aegean has been highly overrated in the past by Hellenocentric scholars ... the kind of trade involved – whether direct or indirect – cannot be deduced from the finds alone. Thus, the onus of proof for extensive direct Mycenaean **trade**contacts with the Syro-Canaanite coast and Egypt must fall on those scholars who argue for its existence. For the present at least, this evidence is lacking' (Wachsmann 2008, 329). With that said, for an argument that is as complex and embroiled into personal opinion as this one about connectedness, it must be clear what is being argued and what is not being argued.

Firstly, I am not arguing for thalassocracies of any sort either Levantine or Cypriot (see for example, Knapp 1993, 332–347; Knapp/Cherry 1994, 128–134; Zukerman 2010, 887–901), nor am I arguing that Aegeans never sailed to other parts of the Eastern Mediterranean or that no one ever sailed to the Aegean. Secondly, I am not arguing that the peoples of the Eastern Mediterranean had no knowledge of the Aegean and *vice versa*, nor that they never had direct contact with each other. Thirdly, I am not arguing that people could not have moved throughout these regions sharing ideas, technology, practices, and beliefs. Lastly, I am not arguing that this picture cannot change, as further excavations or discovers could either further this theory or hinder it; however, as Cline has stated that very little has been found in the past 15 years of excavation other than a handful more of objects in the Aegean and some more sherds outside of it (Cline 2010, 167 f.), I remain sceptical if this evidence will ever be uncovered. What I am arguing is that, based on the textual and archaeological evidence, there is no basis to believe that the Eastern Mediterranean and the Aegean were economically or politically connected. Thus, in my view, contact would have occurred but at a much reduced rate than what the maximalists propose; this contact would have been intermittent, and the lack of contact would not have had an effect on the cultures of either the Aegean or the Eastern Mediterranean. This would mean, when such theories as that put forward by Iakovidis, who proposed that the destruction of the Levantine ports was disastrous for the Achaean rulers as they lost

their trading partners (Iakovidis 1993, 319),[142] that this is not borne out by the evidence as, again, years or decades of no contact could not allow for such a situation to take place. One might object about the use and consumption of Mycenaean pottery outside of the Aegean as proof against this theory; however, I will address this when speaking of the known Mycenaean material culture in the Southern Levant.

4.6.   Privatisation and the Nomads of the Sea

There is one more general theme to discuss about exchange in the LBA and the collapse of the Eastern Mediterranean. This is the general theory that, during the LBA to the Iron Age, there was a shift from palace-focused trade to private trade taken to the seas by freelance traders dubbed the nomads of the sea.[143] These theories focus generally on a maximal view of trade and interpretation of the limited textual knowledge we have about the LBA merchant. Additionally, they have had a great effect on the study of LBA trade and the collapse of the Eastern Mediterranean. However, this is not the last theory about how the loss of trade affected the societies at the end of the LBA, but these other theories will be discussed again in the following chapters, as they deal mainly with the question of destruction being the cause for the cessation of trade.

To begin is the argument put forward by Artzy, which focusses on the merchant during the LBA. In her view, there was a caste of people who acted as intermediaries between the regions of exchange. These people worked at times for the palace, or for themselves, or both, using their own ship or a ship provided by palace. This group of people acted like nomads or semi-nomads, which she believed operated as the main transporter for goods, and thus she dubbed this group of people the 'Nomads of the Sea'. These 'Nomads of the Sea'

acted as both merchants and emissaries for the palace, and while shipping goods for the palace, they took part themselves in sailor trade, known as tramping, buying and selling their own goods while fulfilling their palatial task (Artzy 1997, 7–9).[144] However, over time, the palaces of the Eastern Mediterranean grew dependent on this fringe group, as they gained more power. Thus, by the end of the LBA, these 'Nomads of the Sea' who started off as hired hands had become economic competition for their former employers, as they took the trading of goods into their own hands and pockets beginning in the 14th cent. and coming to fruition in the 13th cent. Finally, at the end of the 13th cent., once the economic situation was no longer favourable to them, this same group of people took to the seas once more as the 'Sea Peoples' (Artzy 1997, 12).

Susan Sherratt, working with this idea of the 'Nomads of the Sea', envisioned a world-system during the LBA where palaces held tight control over trade, both in the exchange of metals such as copper, but also low bulk high value manufactured goods. At first, the system began as an exchange of low bulk high value goods which grew in importance over time and became an important marker for elite behaviour and legitimacy. Along with this, though, there was growth of a connection between these different regions as trade in these luxury goods fostered trade in other commodities, creating a connected network throughout the Eastern Mediterranean. Thus, the control of these goods would have been needed not only for the elite to maintain their statues and power, but also to maintain the Eastern Mediterranean economy which grew out of this trade (A. Sherrat/ S. Sherrat 1991, 357–365; S. Sherratt 2000, 82–89). However, in this world of trade and exchange, there grew a class of sub-elites who did not have

---

142 And in the next chapter, I will demonstrate that the evidence for destruction and the timing of the interregional exchange also does not match this picture.
143 A. Sherratt/S. Sherratt 1993, 361–378; 1991, 351–385; 1998, 329–343; S. Sherratt 1998, 292–313;1999, 163–211; 2000, 82–98; 2003, 37–62; 2010, 81–106; Artzy 1985a, 135–140; 1997, 1–16; 1998, 439–448; Liverani 2003a, 19–21.

144 The classic definition for tramping is given by Braudel 1972, 107: ' 'Tramping' also made it possible to take on cargo. It gave ample opportunity for bargaining, and for making the most of price differences. Every sailor, from captain to cabin-boy would have his bundle of merchandise on board, and merchants or their representatives would travel with their wares. The round trip, which could last several weeks or months, was a long succession of selling, buying, and exchanging, organized within a complicated itinerary. In the course of the voyage, the cargo would often have completely altered its nature.'

access to the materials of the elites but wished to show prestige through the conspicuous consumption of value-added material. Value-added material would be items which in and of themselves are seemingly worthless, such as pottery, however, if brought from a foreign region, they gain value. Sherratt's case in point is pottery, which she claims has no intrinsic value in and of itself and which was not part of elite exchange, as pottery is never mentioned in any of the texts which describe gifts between the rules of the LBA (S. Sherratt 1998, 294–296; 1999, 164, 171–175, 177, 185, 195).

These ceramics of course refer to Aegean and Cypriot pottery, which Sherratt argues were transported and traded by the Cypriot middle men and grew the Cypriot economy as they benefited from both palatial trade, but also by selling Aegean and Cypriot pots to sub-elites in the Levant. This in turn led the Egyptian and Hittites to generally avoid this pottery, as she claims the market for this decentralised value-added commodity was with the sub-elites in the Levant, not with tightly-controlled exchange systems of the Egyptians and the Hittites (S. Sherratt 1998, 296–298; 1999, 170 f.). As she states: 'The basis of [the Cypriot] economy and livelihood was thus the creation and maintenance of essentially sub-elite markets for added-value products' (S. Sherratt 1998, 298). Eventually, the Cypriots decided to no longer be only the middle man, but in the 13th cent. to begin to mass produce White Painted Wheelmade III pottery after an Aegean style, to take production of these value-added goods as well as maintaining control over its trade. However, this trade between the Cypriots and the sub-elites in the Levant posed a threat to the closed, tightly controlled centralised networks of the Egyptians and the Hittites, and it is in her view that this trade in pottery is what eventually led to the downfall of these kingdoms, as this free trade which grew in areas not so tightly controlled undermined the LBA economy (A. Sherratt/S. Sherratt 1991, 373 f.; S. Sherratt 1998, 301–307; 1999, 195 f.).

This again led to the 'Sea Peoples'. However, in her view, they were merchants who moved to the Levant from Cyprus, and set up shop closer to the market which they had already been trading with for more than a century, and who were not the warring peoples portrayed on the walls of Medinet Habu. Thus, at the end of the 13th cent., instead of seeing trade as coming to a halt, she states that trade between Cyprus and the Southern Levant continued as the LH IIIC:1b pottery developed in a similar manner as that of Cyprus. 5,022 sherds of Canaanite storage jars were found at the Cypriot site of Maa-Palaeokastro during LC IIIA, equalling a minimal number of 86 vessels, some of which were made on Cyprus while others were made in the Southern and Central Levant. Ivory, which would have been shipped from somewhere in the Levant, also continues to appear on Cyprus during LC IIIA, all of which she believes documents a continued trading relationship between Cyprus and the Levant (S. Sherratt 1998, 304–307; 2003, 46–48).[145] Thus, as Sherratt summaries her argument: 'In short, what we are seeing is the growth of alternative networks: the erosion of monopolistic control by entrepreneurial activates, uniting European 'barbarians' and Eastern Mediterranean 'free traders' in a mobile commodity flow which undermined and swept away the older system' (S. Sherratt 2000, 89). The end of the LBA, then, was more the switch from one economic system to another, which left the palaces which had depended on the LBA economy in the past, as they could no longer cope with the changes from controlled trade to that free trade taken up by the 'Nomads of the Sea'.

This is the general theme, that of private merchants originally working under the palace eventually taking the prime position in Eastern Mediterranean trade and helping to bring about the collapse. However, this theory has since proven to be problematic, and many of the assumptions have come under scrutiny. Several articles have already addressed these at length, and here I hope only to cover some of this as well as examine some of the other problematic assumptions (Manning/Hulin 2005, 275–307; Routledge/McGeough 2009, 22–29; Zukerman 2010, 887–901). One of the first issues is that of the value-added items, such as in the case of Mycenaean pottery. The value of these value-added ceramics comes from their distance travelled and the prestige lent to them by this. However, the difficulty with this is that we do not know how

---

[145] See also for Bauer 1998 who presents a similar theory for the rise of the 'Sea Peoples'.

the people in the past would have perceived these ceramics. Huckle has pointed out that we do not know whether the people in the Southern Levant would have known the difference between a pot from Cyprus and a pot from Greece. If this knowledge was present, the degree to how much the people would have known would have varied between communities (Huckle 2005, 60). While it was possible that the people living on the coastal sites might have had some knowledge of where these pots came from, this may not have been true for those communities inland. Thus, these pots, when moving inward, might have fallen into the category of simply non-local or other, and as Manning and Hulin have noted, other is also a local category (Manning/Hulin 2005, 287). Or as they go on to say: 'This is more complicated than it seems to modern archaeologists, who 'recognise' imports very readily as a category. It is important to realise that this was not necessarily straightforward in the relevant prehistoric contexts, and certainly for the majority of potential consumers in such societies' (Manning/Hulin 2005, 292). Moreover, when non-local items do appear in the archaeological record, such as Mycenaean or Cypriot ceramics, there is the question why are they there. As Huckle has asked; '… this leads us to consider whether imported wares are present because they are Cypriot or Mycenaean or are we witnessing the incorporation of vessels into localized practice but of which some happen to have a foreign origin?' (Huckle 2005, 63). Sherratt has argued for the sub-elite consumption of these goods as a critical part of the Southern Levantine system; however, as Stockhammer has demonstrated in his analysis of Mycenaean pottery, this conclusion of elite consumption is not seen in the pottery and its depositional contexts. He states: 'It is also obvious that neither the consumption of closed transport vessels nor feasting dishes of Aegean origin can be associated with a Southern Levantine 'elite behavior' ' (Stockhammer 2013, 100). Thus, when attempting to attribute added value to pottery, there is not enough evidence to say how much value was added to them, nor is there enough evidence to say that these vessels fit into an elite consumption pattern.

Routledge and McGeough have taken to task the idea of separating private from royal trade. From the previous discussion in this chapter, it should be remembered that the textual evidence for trade in the Levant is based almost solely on texts from Ugarit, and this is the starting point Routledge and McGeough take to examine whether there is evidence for this separation between private and palace trade in the Ugaritic texts. What they describe in detail is that there is no easy or absolute basis to divide royal trade from that of the added value or sub-elite trade. Texts from Ugarit describe and list shipments which might seem to fall into the category of private trade, however, these items were well known by the palace, as was the fact that this trade was taking place. In Sherratt's view, the cargo on the Uluburun ship would be palatial, and that on the Cape Gelidoniya ship would be viewed as private and generally unknown to the palace. However, one partial text which lists the cargo of a ship from Alasiya is very similar to the cargo found on the Cape Gelidoniya ship, which would mean that the palace was at least aware of these types of shipments and catalogued them. Moreover, in the texts in which Ugarit deals with Alasiya, the king of Ugarit calls the king of Alasiya father, and it is difficult to imagine a subversive relationship between these two parties or that Cyprus was hiding trade from Ugarit (Routledge/McGeough 2009, 24–26). It is also the case that, in regard to the merchants of Ugarit who appear to have been private merchants, that their dealings and the cargoes they brought were well known to the palace, as is the case with Sinaranu. Thus, in their view, the merchants of Ugarit could have been imbedded to different degrees with the palace, acting as both private merchants and for the king, but that their dealings were not unknown or necessarily restricted by the king. Additionally, Routledge and McGeough do not see the palace as a controlling or managing institution, but rather as the 'biggest house on the block' (Routledge/McGeough 2009, 29). The palace interacted as the supreme house with the smaller houses who traded both privately and for the royal house. Thus, the idea of the 'Nomads of the Sea' is not necessarily out of place, as these merchants could have acted for themselves and for the palace, but there is little evidence from the texts from Ugarit to suggest that the palace was unaware of private trade, or that this trade was in any way seen as a threat to the palace (Routledge/McGeough 2009).

To finish this short discussion on the privatisation models, we must turn again to what we know and how we know it. The idea of the 'Nomads of the Sea' is most likely not misplaced, as in the Ugaritic texts which speak of merchants, we see both royal and private ventures taken up by Ugaritic merchants. It is also true that, in the Amarna Letters, the Cypriot merchants which are briefly discussed are in at least one place described as both messengers as well as merchants; however, our knowledge of the LBA merchant does not extend much beyond this. For a region like the Southern Levant, we can assume it acted like Syria, but in truth we do not know, as the contrast between Egypt and Ugarit has made clear that assuming one regions merchants are like another is not certain. Were there groups who acted like the 'Nomads of the Sea' and who took up tramping while traveling? Most likely, but the extent of this is unknown, and if we are to use the same information from Ugarit, the actions of these merchants would have been well known by the palace. However, as Routledge and McGeough point out, the problem is not with envisioning the 'Nomads of the Sea' as suggested by Artzy, but rather that through this group of people, an independent network of private entrepreneurial trade grew which was mainly independent of the palace, while also undermining their control over interregional exchange (Routledge/McGeough 2009). There is not enough textual information to support this suggestion.

The same can be said when turning to the archaeological evidence used to support the privatisation model, and that the Cypriot economy was dependent on trade in added value items to sub-elites in the Levant. One of the main problems with the argument from archaeology are numbers, that is, the frequency of 'imported' pottery and the conclusions based on these. Mycenaean pottery plays a large role in the privatisation model, as it is argued it was brought by Cypriot middle men who sold it to sub-elites, it being valued for being foreign. However, there are several problems with this argument. The first has already been discussed, and that is that these items were brought by Cypriot middle men, of which there is little evidence. It is possible that some Mycenaean pottery was brought by Cypriots, or Syrians, or from some other place that was not the Aegean; however, it is also true that at least some of the pottery was indeed brought by Aegeans themselves.[146] What has also already been argued is that numbers can be deceiving. Part of the privatisation model sees Mycenaean pottery being brought by Cypriot middle men in a great enough quantity that it was valued and consumed by the sub-elites in the Levant. However, a survey of the known existing pottery demonstrates how little of this pottery there actually is, particularly in comparison to local forms. Thus, as I have already argued, there is no strong argument to say that ships bearing large amounts of Mycenaean pottery were constantly coming to the Levant. Rather, the frequency that this pottery arrived into the Levant would have been seldom, or very little would arrive at any given time. This would explain why, as Stockhammer has noted, there is no elite behaviour of consumption of this pottery, and I would argue this Mycenaean pottery reached the Southern Levant in relatively small quantities over longer periods of time, which would mean that the different communities who obtained some of these wares would have appropriated them differently. Each separate community would have had a different Level of knowledge, and each would have appropriated this pottery differently, and this would not be the same over time, which would explain why there is no general pattern of consumption.

Another problem with pottery is actually the occurrence of Cypriot pottery. Sherratt argued that both the Hittites and the Egyptians generally avoided the decentralised trade of the Cypriot merchants. In the case of Egypt, she claims this is particularly true in the post-Amarna period, where few Cypriot pots have been found, while Cypriot pottery was still found in the Levant during the same period until the end of the

---

146 See for a full argument of this point: Zukerman 2010, 887–901. He states: 'This short study has no intention of questioning the scholarly consensus that Levantine and Cypriote mariners were major participants in LBA Mediterranean trade. However, the accumulation of various types of indirect indications surveyed in this study does not allow for the existing notion of a 'Cypro-Levantine thalassocracy' to be accepted without qualifications, and the current tendency to completely exclude Aegeans from this activity seems to be unjustified' (Zukerman 2010, 895).

LBA (S. Sherratt 1998, 301). However, this is not necessarily the case. While it is true that Cypriot pottery was far less common in post-Amarna Egypt, this was also true of the Southern Levant. Cypriot pottery was not so common in the Southern Levant before LB II, and it reaches its peak in the Southern Levant during LB IIA; however, as both Gittlen and Bergoffen's studies both note, during LB IIB both the amount and the number of contexts with Cypriot pottery is greatly reduced (Gittlen 1981, 51, 55; Bergoffen 1991, 59–76).[147] Cypriot pottery continued to be brought to the Northern Levant during this period (Papadimitriou 2013, 118–121), however, if we are to assume that the Cypriot economy depended on trade in added value goods with the Levant as a whole, this would mean that, according to the pottery evidence, they were dealt a major blow at the end of LB IIA. However, this is not seen in either the archaeological or textual evidence, meaning that to claim the Cypriot economy depended on trade in value-added goods does not appear to be supported by the archaeological evidence we have at hand. This is not to say that the Cypriots did not benefit from exchange in the pottery; however, there is no strong evidence to suggest that they depended on its trade, as in the Southern Levant, the only period of which we have archaeologically visible evidence of 'great amounts' of exchange is during LB IIA, and not before or after this. An important note, though, is that Sherratt is most likely correct in one of her hypotheses: that trade did not stop at the end of the LBA. However, the picture is different than what she imagined, as it has already been demonstrated that archaeologically visible exchange with Cyprus and the Southern Levant decreased after the end of LB IIA and not at the end of LB IIB. This will be examined more closely in the following chapters, which focus on non-local materials in the Southern Levant during the LBA and Iron Age I.

---

147 As Gittlen states: 'The end of Cypro-Palestinian trade late in LB IIA is, contrary to all previous studies, strongly indicated by the mass of evidence' (Gittlen 1981, 55).

4.7.   Summary

One of the main themes of this discussion is always **what do we know and how do we know it**. This survey of trade and exchange in the LBA was also to look at what we know about this and how we know it. When it comes to texts, there are as with all texts problems and difficulties. Many of the texts between the Great Kings of the LBA speak of gifts and the giving and receiving of gifts both great but mainly small. However, what this actually represents is unknown, as taking an anthropological view of these letters demonstrates that gifts are discussed in the same way as items of barter, and that even in texts it is difficult to be able to discern a gift from commerce or trade. Likewise, our knowledge of the LBA merchant is limited mainly to Egypt and 13th cent. Ugarit. From these two regions, it is clear that merchants were viewed very differently between cultures, and when asking about a region about which we know very little or nothing of their merchants, such as the Southern Levant, Cyprus, and the Aegean, it is a clear indicator, when building a picture of LBA exchange, that when thinking of the merchants, we may not know what their role was or how they always operated. Shipwrecks have yielded at least some information on how these people travelled and what goods they might have carried on their ships. However, each wreck offered a different picture, with the Uluburun ship most likely being the exception to the rule in the vast and lavish cargo it carried over such other shipwrecks like the Cape Gelidonya or Point Iria wrecks, which may be more representative of the average ship.

From this, and the archaeological material culture, many theories about vast interconnected networks have been proposed for the Aegean and the Eastern Mediterranean. However, for this, much more has been said than has been found in the archaeological record. This is very clear in the example of the Aegean, particularly of the connection between Mycenaean Greece with the rest of the Eastern Mediterranean, and the other regions of the Eastern Mediterranean. However, after a critical examination of the textual sources and the archaeological material culture, it would appear that these regions were not connected with

the Aegean, but were rather in intermittent contact. Finally, there is the theory that, through the privatisation of trade, the old palace system which tightly controlled trade collapsed with this change to the private merchant. However, with this, too, the archaeological theory, does not support the evidence which we have at hand, or is contradictory to what we have. With all this said, the theories regarding trade and exchange have been broken down to their building blocks, and it is from these building blocks that we can construct a new theory focusing on hard data rather than informed imagination. However, before doing this by examining non-local materials in the Southern Levant, there is one more theory which must be discussed. That is, that of destruction or that the destruction of trading centres throughout the Eastern Mediterranean crushed the trade routes and caused the collapse and ensuing changes in the turn to the Iron Age, whether they were destroyed by the 'Sea Peoples', pirates, other nomads, and hoards of fleeing people trying to find a better home.

5. Destruction in the Southern Levant at the End of the Late Bronze Age

5.1. Introduction

Destruction has been an important aspect in almost every theory on the end of the LBA. These events have been used to explain the cessation of trade, the loss of the city state system, the exit of the Egyptians from the Southern Levant, the appearance of the Philistines, and the movement of famine or poverty-stricken peoples. However, as has been pointed out elsewhere (Zuckerman 2007; Millek 2017), these most important events have been little studied, and not in a systematic fashion. Yet, destruction events have been associated with the breakdown of interregional exchange at the end of the LBA. This has been explained as stemming from the movements of the 'Sea Peoples' (Monroe 2009, 294–296; Langgut/Finkelstein/Litt 2013, 166 f.) or earthquakes (Nur/Cline 2001, 36), but the end result is always the termination of interregional exchange. The purpose of this chapter is to examine the destruction events between 1225 and 1150 BC with some notable exceptions such as Hazor and Megiddo which fall out of this general range, asking the question, is destruction the cause for the cessation of interregional exchange at the end of the LBA in the Southern Levant, or not? There may be some destruction events which have not been included, such as *Ṭabaqāt Faḥil* (Pella), as the date for this destruction event may be late in the 12th cent. BC or even into the 11th cent. BC (Bourke 2012, 184).[148] These destruction events will be listed alphabetically, not regionally or chronologically. The term 'crisis architecture' and signs of crisis follows the criteria set out by Zuckerman and Driessen. As Zuckerman describes it as a: '… decrease of energy input in construction and maintenance (disrepair, repair with inferior materials), a change in original plan (restriction of access and circulation, changes in the permeability of the buildings) and a change in the original

function of the structures (blocking of functional spaces or their partial abandonment).' (Zuckerman 2007, 4; cited from Driessen 1995, 65–76). One final note is that, throughout this examination, very few destruction events can be classified as 'Human Activity'. This follows the forensic investigation techniques used by modern arson investigators. Until all possible natural or accidental causes are ruled out, a fire cannot be classified as 'Human Activity' (Redsicker/O'Connor 1996, 121). Therefore, unless there is clear evidence for a human actor in a destruction event, the destruction will be classified here as an 'Unknown Cause'.[149]

5.2. Acco

Acco[150] has in the past been attributed a destruction layer at the end of the LBA (M. Dothan 1986, 106; Drews 1993, 9, 16; Stern 2013, 5). However, like several other destruction layers from this period, it does not exist, at least not at the end of the LBA. As Bell states: 'M. Artzy has informed me that an ongoing review of the stratigraphy of Akko suggests that there was no destruction at the end of the LBA' (C. Bell 2006, 137).[151] Therefore, Acco is classified as, 'No Destruction'.

5.3. Amman Airport Structure

The Amman Airport Structure is a single small square building of contested function. Its possible functions have ranged from different types of temples, a cultic structure, a watch tower, and a fortified trading post amongst others (Mumford 2015,

---

148 Another such site is Qubur el-Walaydah. It is stated both in the same paragraph that no evidence of destruction has been found at the end of the LBA but that it still remains a possibility that it was destroyed (Asscher *et al.* 2015b).

149 In the time that this volume was being edited, I added some additional sites that were "destroyed" based on recently published information which I could not include in this volume and updated the classification system. This reevalution can be found in, Millek forthcoming a. For further study of destruction at the end of the LBA in the Levant see as well: Millek 2018; forthcoming b; forthcoming c.

150 For an overview of the site see: Artzy 2006a.

151 See also Yasur-Landau 2010, 170.

90, see references therein). The following discussion will follow the recent stratigraphy set out by Mumford (2015); however, it should be noted that some information about the site has been lost or is vague, given the time and nature of the excavation. Phase 4a (Level 2) is dated to the beginning of the 13th cent. BC and is the Phase following the rich dedicatory fills of the 14th cent. BC.[152] The interior of the building was covered with a layer of ash 2–5cm, thick which Mumford has suggested is a layer from a possible destruction occurring sometime between 1274–1269 BC. This ash layer contained bits of human bones, charring on the tops of the column base, and additionally arrowheads, lance heads, swords, and daggers were found in the ash layer which showed signs of use, either having dinted edges or bent tips. The arrowheads were concentrated in the central Room of the structure, which Mumford proposes may be signs of a battle and suggests that this possible destruction may have been caused by the Egyptians (Mumford 2015, 95 f., 109).

In the final Phase of the structure, Phase 4b (Level 1) dating to the end of the LBA and perhaps ending in the Early Iron Age, there was likely a period of crisis at the site. While the function of the building is still unclear, several architectural alterations were made, likely changing the purpose of the structure. In Room VII during Phase 4b (Level 1a), a small hearth was constructed on the floor pavement of the Room which was later covered over in Phase 4b (Level 1b) by a poorly built wall, which split the Room into chambers VII and VIII. Moreover, during Phase 4b (Level 1b), several entrances were blocked in the structure, the central Room V was modified into two rooms, and a new entrance was cut between the central Room V and Room II. Mumford has suggested that these changes may be due to a greater desire for privacy or for increased security by creating smaller rooms. He does however also suggest that it may demonstrate a change in the function of the building and may represent a squatter settlement (Mumford 2015, 96). The possible destruction of

this structure was found in Room VII, as a layer of ash covered over burnt pavement and contained burnt pottery, which seemingly took place before the remodelling of the structure (Mumford 2015, 109). Mumford has proposed that the possible destruction in Phase 4b (Level 1) was potentially the result of Merneptah's or Ramesses III's actions in the region, or as he states it is: '... more likely, the turmoil surrounding the widespread Sea People raids and overland migrations and invasions by refugees and others in year 8 of Ramesses III.' (Mumford 2015, 110). After Phase 4b (Level 1) the building was then abandoned (Hennessy 1966, 159; Mumford 2015, 98).

The question concerning an end of the LBA destruction at the Amman Airport Structure is not clear given the sparse remains. However, I will propose an alternative interpretation of the remains concerning the destruction of the building. From the evidence available there is not enough to suggest there was indeed a destruction at the end of the LBA or in the Early Iron Age. The small ash layer in Room VII from the beginning of Phase 4b (Level 1) is not enough evidence to suggest that the building as a whole was burned or destroyed, as it may also represent a localised fire in this one Room though the ash likely originated from the hearth found in the same room. From the current evidence, the last noticeable destruction event to take place at the site was at the end of Phase 4a (Level 2), which may have been caused by warfare though the interpretation of the weapons found in the phase, and whether these are evidence for warfare or for sacrifice largely depend on the general interpretation of the building's function (Hennessy 1985, 100–104; Mumford 2015, 109). Phase 4a (Level 2) likely is the last Phase of use before the building fell into crisis and was finally abandoned; however, even in Phase 4a (Level 2) there was already a decrease in the amount of prestige objects found associated with this Phase compared to the previous Phase 5 (Level 4–3) (Mumford 2015, 91–95, 98–101). It is likely that Phase 4a (Level 2) was the beginning of the downturn at the site, and the possible destruction, no matter the cause, at the end of Phase 4a (Level 2) likely marks the end to the original use of the structure. Phase 4b (Level 1) was a period of crisis at the Amman Airport Structure seen in the construction of a small

---

152 To be discussed in the following chapters as they contained a large amount of Mycenaean pottery and Egyptian stone vessels amongst other non-local finds.

hearth, the addition of flimsy walls, and the blocking of entrances, all clear signs of crisis and, as Mumford suggested, probably signs of a squatter settlement. This is not much different than at *Tell el-ʿUmērī* Building C from the end of the LBA, which too had a change in function, and likely a squatter settlement before it was destroyed, which is also likely true of *Tell el-Fuḫḫār* (see later in this chapter). Therefore, whether the building acted as a temple, trading post, or military installation of some sort, it is likely that in the final Phase of the Amman Airport Structure it no longer acted in this capacity before it was abandoned toward the end of the LBA or in the Early Iron Age. Given this, the Amman Airport Structure is classified as: 'No Destruction'.

5.4.   Aphek

I have discussed the evidence for destruction of Aphek Stratum X-12 elsewhere (Millek 2017, 120–122). The site is classified as a destruction by warfare with an abandonment of the 'Egyptian Residence' after its destruction. An Iron I occupation of the site in Stratum X-11 continued the 'Canaanite' ceramic tradition but avoided building over the ruins of the destroyed 'Egyptian Residence'. Aphek is classified as 'Human Activity: Warfare'.

5.5.   Ashdod

The possible destruction of Ashdod Stratum XIV has been discussed at length elsewhere (Yasur-Landau 2010a, 220 f.; Ben-Shlomo 2011, 202; Millek 2017, 122). While the classification of Ashdod's destruction remains as a 'Partial Destruction of Unknown Cause', given the amount of evidence for destruction, it is a possibility that there was in fact no destruction at the site. As Yasur-Landau states: 'In Ashdod, there is no real evidence for destruction.' (Yasur-Landau 2010a, 340) and as Ben-Shlomo also states: 'Sites like Ashdod display no evidence for destruction in the Early Iron Age levels.' (Ben-Shlomo 2011, 202) Thus, at the moment, the site is classified as having a destruction of 'Unknown Cause' and 'Partial' in scale, but future excavations may alter this picture, either

confirming the destruction event or providing evidence the site was not destroyed at all.[153]

5.6.   Ashkelon

A destruction event was initially reported for end of the 13th cent. BC at Ashkelon by Phythian-Adams (Schloen 2008, 156), however, the recent excavation at the site revealed no signs of destruction in either Grid 38 or Grid 50 (Millek 2017, 122 f.). Given this, unless other evidence is uncovered to suggest the site was destroyed, Ashkelon is classified as 'No Destruction'.

5.7.   *Bet-El*

There are two LB phases for the city of *Bet-El* (Bethel) beginning in the 14th cent. BC. The site appears to have been unoccupied during the LB I and was not reoccupied until sometime in the 14th cent. BC (Kelso 1968, 28; 1993, 194). Phase 1 being LB IIA seems to have been of better quality than the following Phase 2 in LB IIB. During Phase 1, Area I was occupied by a single large structure with a central courtyard surrounded by groups of rooms in rows of either one or two. There was also evidence of well-made flagstone pavements, and the masonry was considered by the excavator to be of better quality than Phase 2 (Kelso 1968, 28; 1993, 194). Phase 1 was said to have been destroyed by fire in a possible earthquake; however, there is not enough detailed information to know the cause or extent of this destruction (Kelso 1968, 28, 31). The city was rebuilt in Phase 2 along the same general plan as Phase 1, and the pottery tradition continued, although it is stated that the quality of the pottery deteriorated throughout the LBA (Kelso 1968, 28, 58). In Area II Phase 2, three olive oil vats were found in association with large stone mortars used for crushing olives, and some walls dated to the last LBA phase. This area seems to have been an olive oil production site during the final phase of the LBA site (Kelso 1968, 29 f.).

---

[153] The same has already happened at both Ashkelon and *Tell eṣ-Ṣāfī* (Gath).

The exact scale and nature of the destruction of Phase 2 is unclear from the published material. Kelso states that: 'The last LB town was utterly destroyed by a great conflagration and the succeeding Israelite town was strikingly different.' (Kelso 1968, 31). Nevertheless, little more is said of the destruction than this. A wall found in Area II was said to have been burnt in an intense fire, so much so that the rocks cracked from the heat, and evidence of fire was found throughout the area. A pavement was found to have heavy burning on top of it, and a stone foundation was also uncovered with ash atop it. Additionally, Kelso states that the expedition found two breaches in the city's defences, as on the south side of the city an Iron I house had been built partially on the stub of the city wall and partially on 1.75m of ash and brick debris. A similar find was uncovered in the western portion of the site as some Iron I houses were built on top of 1–1.5m of ashes charcoal, brick, and earth (Kelso 1968, 30, 49). Additionally, what is of great importance is that the excavators noted that, at *Bet-El*, all the expeditions found much smaller amounts of pottery from LB II than normal. A number of rooms yielded no pottery or any other objects, and according to the excavator, the city seems to have been plundered much more thoroughly than was usual before it was given to the torch (Kelso 1968, 48). Moreover, in the following Iron I settlement, there is a break in the material cultural tradition, and the following settlers built over the LBA material such as the olive oil installations and also on one of the walls, but at slightly different angles. They also reused many of the stones from the LBA walls in Area II to build houses in the Iron I settlement. While the excavators claim that the site was destroyed by Israel (Kelso 1968, 49), the actual cause and nature of the destruction is vague.

From the descriptions given by the excavators, Phase 2 of the LBA city at *Bet-El* may have evidence of crisis, given that less energy was put into the rebuilding of structures after the LB IIA destruction, and the deterioration in the quality of the pottery. What is more important, though, is that there is evidence of the site being abandoned before it was destroyed, as the excavators noted that some rooms had no finds in them whatsoever. It does not seem reasonable, given evidence from other destructions by warfare,[154] that invaders would take everything out of the rooms, including pottery which would be seemingly worthless. Thus, the evidence may point to an organised abandonment of the site prior to destruction, which is further supported in that there was a change in the architectural tradition in the following Iron I occupation. Given the vague descriptions of the destruction itself, the cause remains 'Unknown'; yet, no weapons were mentioned as being found in the debris and some cracking was found in a wall of Area II, which is possible evidence for an earthquake as well, though it is also likely to have been from structural failure (Kelso 1968, 29).

5.8. Beth-Shean

The destruction of Beth-Shean falls in the middle of the 12th cent. BC; however, this destruction event is somewhat problematic. Excavations conducted by Yadin and Geva, as well as the renewed excavations conducted by A. Mazar, found evidence of destruction at the end of Level VI (Yadin/Geva 1986, 42–51, 89; Mazar 1993, 217 f.; 2008b, 1619–1622). Nevertheless, as noted by both Yadin and Mazar, the original UME (University of Pennsylvania Museum of Archaeology and Anthropology) excavations made no mention in their notes of any kind of evidence for destruction (Yadin/Geva 1986, 89; Mazar 2009a, 17, 30 note 8). Thus, there are two possible options, either of which will affect an interpretation of this destruction layer. Either the UME team did not come across any destruction, which would mean that parts of the site including the 'Egyptian governor's residence' were not destroyed,[155] or they made no notes of this destruction, and this piece of evidence is then missing. Therefore, the interpretation of the destruction found in Area S Stratum S-3a and in Yadin's Stratum 4 must be seen within this context.

---

154 See Millek (2017, 116 footnote 9) on the 604 BC destruction of Ashkelon and the destruction of Aphek X-12 (Millek 2017, 120–122).

155 See James/McGovern 1993 the original description of the Egyptian garrison town. See also Mazar 2006a, 2006b, 2006c for a discussion of the renewed excavation's work on Building 1500.
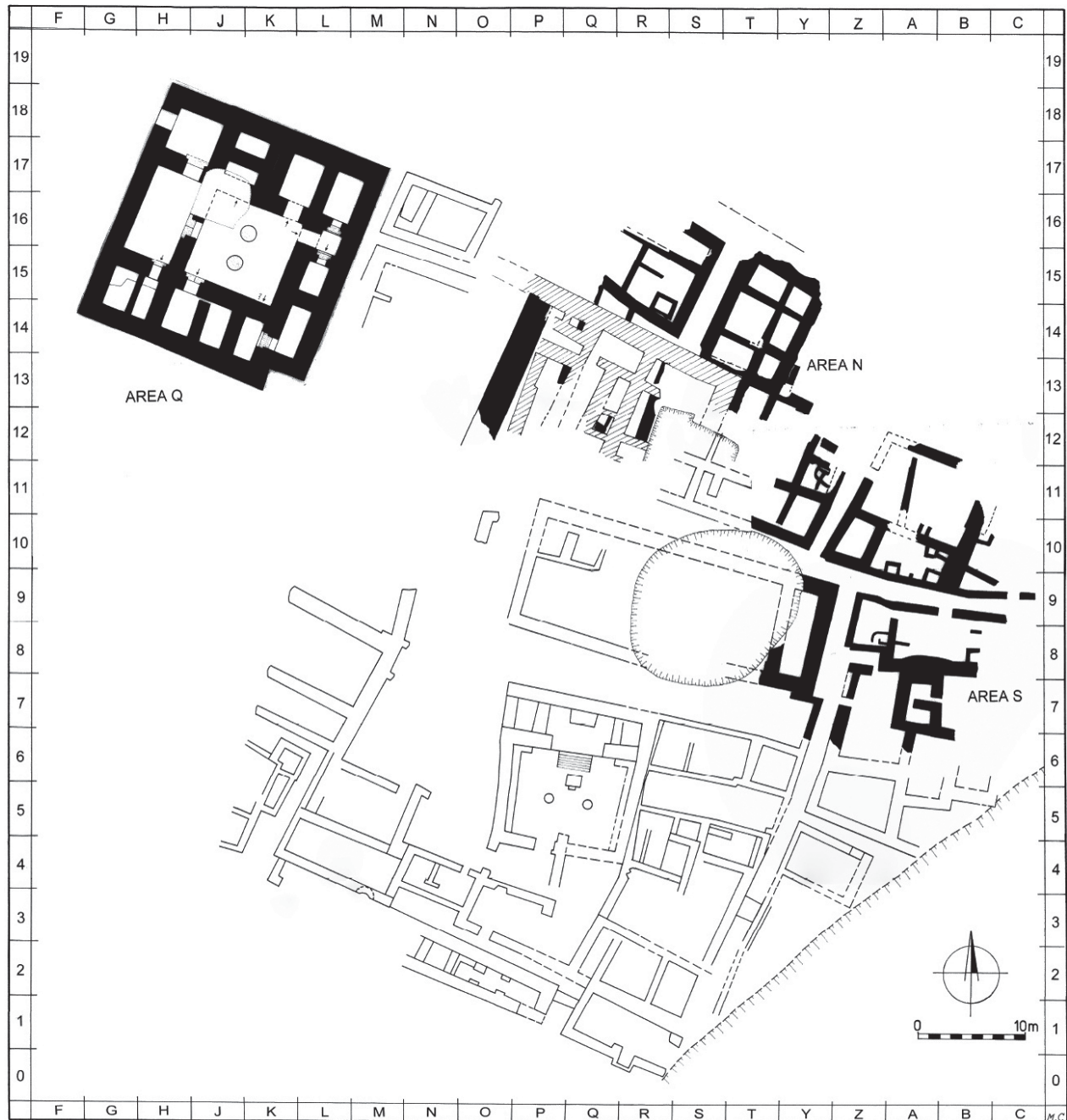
Fig 5.1.   Plan of Beth-Shean Level VI (Courtesy of Amihai Mazar).

Area S provides the most information for the end of the Egyptian phase at Beth-Shean (*fig. 5.1.*). The transition from Stratum S-5 to S-4 appears to have been gradual and peaceful; however, exactly what happened to this part of the city at the end of S-4 is unclear. Most of the floors from Stratum S-4 were found to be empty of *in situ* finds and the excavators cite no evidence of a destruction other than in Building SV, where one floor was found covered in a meter of brick debris

and grey ash and charcoal. The excavators attribute this one room of mudbrick collapse to a brief abandonment of the building, which resulted in this wall collapsing onto the floor, separating it from the following Stratum S-3 (Panitz-Cohen/ Mazar 2009, 102, 119, 124; Mazar 2009a, 17). They also state that: 'Two human skeletons found in this Stratum [S-4] (Loci 18714, Square B/7 and 10743, Square Y/7) allude to the possibility that an event such as an earthquake brought an end to the city.'

(Panitz-Cohen/Mazar 2009, 103). Neither skeleton is mentioned as being found under rubble, as one found in Building SP was discovered under a Stratum S-3 wall (Panitz-Cohen/Mazar 2009, 126 f.). The excavators state: '[Stratum S-3] was revealed almost directly above Stratum S-4 with no apparent destruction or abandonment separating them, indicating only a limited time lapse between the two strata' (Panitz-Cohen/Mazar 2009, 129). Nonetheless, given that there is little evidence for an earthquake, it remains difficult to determine what occurred at the end of Stratum S-4 leading to the events in S-3.

The final phase of the appearance of Egyptian or Egyptianised material culture at Beth-Shean is Stratum S-3a. Sub phases S-3b and S-3a were only noted in some locations. There was a general continuation in the orientation of walls and streets from Stratum S-4, though some individual houses underwent substantial changes in Stratum S-3. However, the function of the area remained the same, being a residential area attested to by the large number of tabuns and storage bins (Panitz-Cohen/Mazar 2009, 129 f., 162). The destruction of Area S Stratum S-3a is best summed up by the excavators who highlight several important points:

'The last phase (S-3a) was destroyed by a heavy fire, leaving behind a thick layer of burnt brick debris with black ash and charcoal, as well as many pottery vessels and other objects on the beaten-earth floors. In some places, the fire was intense enough to burn the outer face of the brick to a reddish pink colour. In some of the rooms, however, no evidence for fire was found, although they were filled with thick deposits of fallen bricks. This is probably due to the differences in the fate of each building, as well as to the construction techniques and\or the function of the various spaces; those which contained much timber and flammable materials such as olive oil stored in jars were heavily burnt.' (Panitz-Cohen/Mazar 2009, 131).

They go on to state: 'The evidence of destruction by intense fire at the end of S-3a is clear, although surprisingly, is not recorded in the UME reports. This fire appears to be the result of some violent event that brought about the prolonged

period of Egyptian occupation at Beth-Shean to an end' (Panitz-Cohen/Mazar 2009, 162).

Other evidence of the destruction of the site had also been uncovered by Yadin and Geva. At the end of their Stratum 4, which was excavated near to the UME team excavation of Level VI, they found evidence of fire, seen in the thick layers of ash uncovered, as well as broken bricks (Yadin/Geva 1986, 42, 89). In Building 2543, they found ash on the floors but which mainly concentrated inside and around bins or storage jars, and seen on the walls of the building. Moreover, in Building 2522, it seems that at the time of the fire, someone was grinding grain, as some carbonised grain was found near the grinding stones in the building, some between the stones and some even stuck to the upper stone (Yadin/Geva 1986, 48–51). The excavators state that: 'The grinding stone was undoubtedly in daily use when the building was set on fire and collapsed' (Yadin/Geva 1986, 51). This suggests a suddenness to the destruction in this area, and if it is to be correlated with the destruction found in Area S, it is a possible clue to the nature of the destruction.[156]

Several theories have been put forward to attempt to explain what happened to Beth-Shean in the mid-12th cent. BC which brought about the end of the Egyptian occupation. Yadin and Geva stated that: 'The Egyptian stronghold at Beth Shean was the target of a violent attack, and a very successful one, resulting in thorough destruction and burning. This destruction marked the end of the Egyptian presence at Beth Shean …' (Yadin/Geva 1986, 89). Mazar has claimed that the destruction could have been at the hands of other local Canaanites such as residents of *Tell eṣ-Ṣārem* (Tel Rehov) or *Ṭabaqāt Faḥil* (Pella), or that the destruction was the result of an attack by an unknown group or by semi-nomadic people (Mazar 2008b, 1620–1621; 2009a, 17). However, Panitz-Cohen and Mazar make an interesting observation, as they state that Stratum S-3a may have been hit by an earthquake,

---

156 There is also some possible evidence of destruction from Area N North as Building NC Stratum N-3a showed some signs of burned floors, charred beams, and a fallen basalt boulder (Killebrew/Mazar 2009, 58 f.). However, the majority of this area had been previously excavated by the UME team and little else is known if there was a destruction or not (Killebrew/Mazar 2009, 56). See also Mazar 2009b.

given that there were several tilted and split walls and because of the large accumulation of collapsed brick debris (Panitz-Cohen/Mazar 2009, 162).[157] Nevertheless, they make no association between this possible earthquake and the fire found also in Area S, as they state: 'The evidence of destruction by intense fire at the end of S-3a is clear, although surprisingly, is not recorded in the UME reports. This fire appears to be the result of some violent event that brought about the prolonged period of Egyptian occupation at Beth-Shean to an end' (Panitz-Cohen/Mazar 2009, 162). Given the evidence found in both Stratum S-3a and Stratum 4, I would argue there is sufficient evidence to suggest the cause of the destruction was by earthquake.

Firstly, examining the evidence from the destruction itself, there are several pieces which would indicate it was an earthquake. First is that while some rooms were burned, others were found filled only with fallen mudbrick with no evidence of fire. Second, there is no evidence of abandonment prior to the destruction, and given the finds in Building 2522, it would suggest the destruction event was sudden. Third, there was no evidence of weapons of war, in addition to the fact that all of the buildings for which we have recorded evidence of destruction are domestic, and therefore may not have been the target of a military assault.[158] Fourth is the evidence from the fire itself. As Marco states: 'Fire may be associated with earthquakes where thatched roofs, fabrics, and wooden beams were common. Ovens and fireplaces are active continuously even in dwellings of nomadic peoples of our time' (Marco 2008, 153). Thus, as Panitz-Cohen and Mazar have already stated, the reason why some of the buildings caught fire and others did not was due to their contents. Fifth, there was direct evidence for an earthquake, as there were several tilted and split walls uncovered along with the evidence for the fire and wall collapse. Finally, in the following Stratum S-2, the people

of Beth-Shean rebuilt the city reusing some of the same walls from S-3, and it seems they were familiar with the town prior to destruction as they used the same street and wall lines, and it is suggested that there was not a large time gap in between the destruction and reoccupation. Moreover, the local 'Canaanite' pottery tradition continued into Stratum S-2 with no major differences from S-3. The only major change in the pottery tradition was that after the destruction there was the disappearance of Egyptian and Egyptianised pottery from the site (Panitz-Cohen/Mazar 2009, 169–171; Panitz-Cohen 2009, 196, 269). As Panitz-Cohen states: 'We can thus summarize that the local pottery industry did not undergo any revolutionary change with the departure of the Egyptians, but rather experienced adjustments ...' (Panitz-Cohen 2009, 275). Therefore, other than the change in the Egyptian pottery, it would seem the local people reoccupied the city without an extensive time gap in between the destruction of S-3a and S-2.

Taking all of these pieces of evidence together, it would appear that the destruction noted at the end of Stratum S-3a and Stratum 4 was caused by an earthquake which led to some houses catching fire while others suffered only from wall collapse. The following city was reoccupied by the local 'Canaanite' population without any major changes to the material culture other than the disappearance of the Egyptian/Egyptianised pottery. However, even with this disappearance, it does not seem as if the local people had animosity towards the Egyptians, as the statue of Ramesses III and the stelae of Seti I and Ramesses II were found in the Level V Northern Temple. It may be that these objects were enshrined or venerated by the local Canaanites after the Egyptians left Beth-Shean (Mazar 2009a, 10). Moreover, there is no evidence that these monuments were mutilated.[159] This is a very different fate from the Egyptian statues which were mutilated at Hazor in its final LBA destruction (Ben-Tor 2006, 3–14). Thus, given that there is neither evidence for desecration nor for warfare, and given that the fire and collapse occurred differently in discrete structures, an earthquake would seem to be the only choice remaining.

[157] However, they do go on to state: 'Although such features could be the result of seismic activity long after the destruction of the city'.
[158] As Ben-Tor points out about the 732 BC destruction of Hazor only one of six private houses in the vicinity of the citadel of Hazor's Stratum V were destroyed in the destruction which was most likely at the hands of Tiglath Pileser III (Ben-Tor 2013, 34 f.).

[159] Mazar, personal communication 13.10.2015.

A final note is the question: why did the UME team not make any mention of destruction in the areas they excavated? If the destruction was caused by an earthquake then there are two possible reasons. Either, they simply did not record the destruction or evidence of destruction they uncovered. Or, it may be that they did not come across much evidence of destruction. As Marco points out when discussing the evidence of earthquakes at Megiddo: 'In modern earthquakes, damage is highly localized and varies greatly because of the heterogeneous nature of the underlying ground. The 'site effect', a fundamental characteristic of earthquakes, may explain why certain parts of Megiddo were damaged while others were not.' (Marco *et al.* 2006, 572). Thus, with the site effect, it is possible that the UME team did not come across much evidence of destruction. This idea could be strengthened, as even in the renewed excavations in Area N South, Building ND from Stratum N-3a which is correlated with Level VI had no signs of destruction. As Mazar states: 'The building went out of use with no sign of violent destruction' (Mazar 2009a, 15). Therefore, it remains a possibility that the UME team did not uncover evidence of destruction. However, the areas they excavated did undergo changes after Level VI. The single Temple complex was replaced in Level V by a Northern and Southern Temple, and important structures of Level VI were replaced by domestic units (Mullins 2012, 142–151). This could indicate that these buildings were destroyed and then built over by new structures, or it could also represent a change after the exit of the Egyptians, as the sacred area's buildings changed but the area remained sacred. The answer to this, however, will remain unknown, though future excavations may alter this picture.

5.9.   Beth-Shemesh

The evidence for destruction of Beth-Shemesh is sparse (for a full review of the work by Grant, see Millek 2017, 124 f.). However, while Grant uncovered some evidence of destruction, the renewed excavations at the site have not unearthed any major evidence of destruction of their Level 8 which

corresponds to the end of Grant's Stratum VIB.[160] The renewed excavations have also found a strong continuation of the local 'Canaanite' ceramic tradition in their Level 7 which corresponds to the first part of Grant's Stratum III. Moreover, they found no locally made LH IIIC or Philistine wares in this level (Bunimovitz/Lederman 2009, 116, 121). There is unfortunately too little information from Grant's excavations to know the scale or cause of the possible destruction at the end of Stratum VIB. Therefore, it is classified as 'Unknown' though future detailed publications from the renewed excavations may change it to 'No Destruction'.

5.10.   *el-ʿAfūle*

An end of the LBA destruction event has been attributed to *el-ʿAfūle* ('Afula). However, the LBA site has yet to be uncovered, other than tombs (Millek 2017, 120). Thus, at the moment, there is no evidence to say that Stratum IV of *el-ʿAfūle* suffered any destruction at the end of the LBA.[161] It is classified as 'No Destruction'.

5.11.   *ez-Zīb*

A destruction event of unknown scale and unknown cause has been attributed to LB II fortifications at *ez-Zīb* (Achzib) (Prausnitz 1993, 32). However, there is no other information available of the destruction event, or of the strata before and after (Prausnitz 1963, 337; 1965, 257). Thus, the destruction is classified as 'Unknown'.

5.12.   Gezer

Destruction at Gezer toward the end of the LBA can also be debated as to whether it should be said that the city itself was destroyed, since the evidence from Fields I, II and VI each presents a

160 Bunimovitz, personal communication 22.08.2015.
161 For a discussion of the stratum after IV and its effects on the interpretation that the 'Sea Peoples' destroyed the site, see Millek 2017, 120.

different picture of the end of the LBA. To gain a better insight to this possible destruction, a look must be given to General Stratum XVI. However, little can be said of this stratum in Fields I and II other than that there might have been a decline from this period to the following Stratum XV (Dever/Lance/Wright 1970, 20 f.; Dever *et al.* 1974, 47; Dever 1993, 502 f.). The majority of what is known about Stratum XVI comes from Field VI on the acropolis. In Stratum 9B-A (General Stratum XVI), a multi-roomed building dubbed 'Palace 14120' was uncovered. It was believed to be an Egyptian residence representing the wealth of the Amarna period at the site. However, the building at the end of Stratum XVI seems to have been abandoned and emptied of the majority of its content. No *in situ* pottery was found and there was even very little sherd material. Almost all of the rooms in the structure were sterile and the majority of the finds from the building came from its courtyard (Dever *et al.* 1986, 41–43).

Mudbrick debris was found on the floor of the structure; however, there were no traces of fire, no calcined plaster, baked mudbricks, ash or fallen beams, and no evidence of smashed pottery or objects on the floors. Moreover, the debris was quite homogenous and seems to have originated from the collapse of the mudbrick super structure onto the floors, as if the walls were deliberately pushed inward or allowed to fall after the building was abandoned. The excavators concluded that the building was not destroyed in an attack, but was either demolished by the people of Stratum 8 or was left to decay and was later covered over by the people of Stratum 8. Stratum 8 itself was mainly represented by surfaces, as there were surprisingly little architectural features after the abandonment of Palace 14120. The Stratum 8 people levelled off the palace of Stratum 9 and simply placed new surfaces, sealing the walls and brick debris filling most of the rooms (Dever *et al.* 1986, 43, 46–48). This drastic change in the site is a clear indicator of crisis at the site during General Stratum XV, as Field VI changed from being a monumental palace to a plastered courtyard with no structures.

The evidence for destruction at the end of Stratum XV is sparse. In Field I, Stratum 5C-B corresponding to General Stratum XV has no real signs of destruction, with the only evidence being a tabun which had been crushed by rock fall (Dever/Lance/Wright 1970, 22 f.; Dever *et al.* 1974, 50; 1986, 50; Dever 1993, 504). Dever states: 'In Field I there is little actual evidence for destruction or a gap in occupation' (Dever *et al.* 1986, 50; Dever 1993, 503). Likewise, Field VI Stratum 8 also shows no sign of destruction (Dever *et al.* 1986, 46–49). Field II Stratum 13 (General Stratum XV) does have some evidence of destruction, which mainly comes from a courtyard found in Area A. Little can actually be said of Stratum 13 other than that some incoherent walls were uncovered along with a surface of water-washed pebbles, most likely representing a courtyard. Dever described the evidence for destruction as: 'Str. 13 in this area was terminated by a violent destruction involving fire. Several storage jars and large vessels were found smashed on Surface 1193, orientated with their bases forward the north and possibly fallen from a roof in that direction' (Dever *et al.* 1974, 48). The debris averaged a depth of 25cm made of soft ash, roof beams, and crumbled mudbrick, and other restorable pottery was found overlaying the destruction debris (Dever *et al.* 1974, 48–50). Given that there is no other evidence for destruction, at most, the destruction event of Stratum XV is a Single Building destruction.

Following this event, there were some changes which took place throughout the site during General Stratum XIV. In Field I Stratum 5A, the floor levels were raised, covering over some of the walls from the previous phase; other walls were added, others still were reused. There was evidence of destruction at the end of this phase, including a large rock-fall in the eastern portion of Surface 3012 over Wall 3011A, inside the wall above Surface 3009A and over the north corner of Wall 2011. Additionally, in the whole area in and around this rock fall and indeed in Areas 2 and 3, there was orange-buff brick detritus up to 20cm deep, and in Area 1 there was 45–55cm of debris mostly made of dark brown rubble, with patches of ash, some plaster fragments, and bones (Dever/Lance/Wright 1970, 23 f.). In Field II after the fire in Stratum 13, there was some reuse of the architectural elements from Stratum 13 in Stratum 12.

However, much of this stratum was disturbed by building in Stratum 11, thus it is unclear exactly what took place. Yet, there is some evidence of destruction at the end of Stratum 12, as the excavators uncovered collapsed stones, rubbly mudbrick detritus, plastery debris, charred wood, ashes and sherds, i.e., they contained disaggregated destruction debris. However, not all of this material was *in situ,* as it was dug up and used as fill in the following Stratum 11 (Dever *et al.* 1974, 51).

In Field VI Stratum 7 the large plastered area of Stratum 8 had been abandoned, and the only evidence for human activity in this area was the extensive digging of trenches (Dever *et al.* 1986, 50–59). An important point is that in Fields I, II, and VI, there was a continuation of local 'Canaanite' ceramic tradition with no evidence of 'Sea Peoples' material culture (Dever *et al.* 1974, 50, 52 f.). Even in General Stratum XIII, while some Philistine wares were introduced, the majority of the ceramics remained in the local tradition (Dever/Lance/Wright 1970, 26; Dever *et al.* 1974, 54). As Dever states: 'It is clear, therefore, that the Philistine control of Gezer, while introducing a new type of painted decoration, very clearly did not disturb the work of the common Canaanite potter who continued to obtain his clay from the same sources as before, to prepare it as he had earlier, and to continue to use many of his stock forms' (Dever/Lance/Wright 1970, 26). The major change between Stratum XIV and XIII is a shift in architecture and the general abandonment of structures from Stratum XIV (Dever *et al.* 1974, 51; Dever/Seger 2014, 14).

With the current evidence from both Strata XV and XIV, the destruction events appear to be either natural or accidental, as there is a lack of any kind of weaponry, there is generally little evidence for destruction, and there is a strong continuation of the local 'Canaanite' ceramic tradition from Stratum XVI through XIII even when some Philistine wares were introduced. Concerning Stratum XV, there is little evidence of destruction, and what was found in Field II could have resulted from either a Natural or Accidental cause. Therefore, the destruction found in Field II is tentatively classified as 'Natural/Accidental?'. For Stratum XIV, there are only ephemeral remains of a local 'Canaanite' settlement, and any evidence

of destruction was generally disturbed by the following construction activities in Stratum XIII. At the moment, for the above reasons, it is also tentatively classified as 'Natural/Accidental?'. However, Dever has stated concerning Stratum XIV that: 'This stratum ends with no apparent destruction, but the following Str. XIII shows major changes.' (Dever/Seger 2014, 14). Thus it remains a possibility that Stratum XIV had no destruction at all and was mainly a period of ephemeral occupation and partial abandonment. Future excavations at the site may change how these events are interpreted, as new evidence has already been uncovered. In the recent excavations at Gezer, a LBA building was uncovered. The excavators state that, 'A destruction debris consisting of dark ash and fired mudbrick detritus was found nearly a meter in height in some areas. The pottery associated with this destruction consists of LB II pottery' (Ortiz/Wolff 2012, 12). Thus, in time, the picture of Gezer at the end of the LBA may be changed as these excavations continue.

5.13. *Ǧezīret en-Nāmī*

Little information has been published about the LB IIB settlement at *Ǧezīret en-Nāmī* (Tel Nami). Therefore, there is no hard evidence to give about the destruction event which took place at the end of the 13th cent. or beginning of the 12th cent. BC. After MB IIA, *Ǧezīret en-Nāmī* remained unoccupied until LB IIA where an occupation level was found in both *Ǧezīret en-Nāmī* and *Ǧezīret en-Nāmī* East. However, after a possible destruction, *Ǧezīret en-Nāmī* East was turned into a necropolis for the site, and the habitation in *Ǧezīret en-Nāmī* was reduced (Artzy 1990a, 23; 1990b, 75; 1993, 1096 f.; 1995, 22). As Artzy states: 'LB IIA Nami seems to have been violently destroyed, and a new settlement was constructed shortly thereafter. The new settlers built a rampart, at least to the north and west of the tell' (Artzy 1990b, 75). The rampart was built partially out of the destroyed walls, the brick, and ash from the LB IIA settlement, with its function being possibly to protect from invaders or from the sea. In Area D1, stone floors, stone walls and fallen mudbrick were uncovered. Evidence of intense heat suggests that this area was industrial.

Several bronze objects were found in Area D1, including chisels, arrows, parts of a bronze statue and other unidentifiable pieces, which might indicate, according to the excavators, a bronze recycling centre. However, little more can be said of this area and stratum, as most of it was destroyed by a mortar shell in the 20th cent. AD (Artzy 1990a, 24; 1990b, 76; 1991, 197; 1992, 24).

Area G was a possible cultic area were a rectangular courtyard was uncovered. It had benches on its western wall and possibly on the eastern wall, a small paved area to the north with a large pedestal, and a basalt basin along with pieces of ceramics, incense burners, chalices and an intact seven spouted lamp. Gold and silver fragments were also found on the floor of the building along with pieces of bronze, some of which were complete, others which were cut off. A few bronze arrowheads and possible short spears were also found along with other pieces of scrap metal and bronze working tools. Fragments of a crucible were also found in this area, suggesting it might also have acted as a metal industrial area at the end of the LBA (Artzy 1990a, 24; 1991, 197; 1992, 25; 1993, 1096; 1995, 22 f.). However, both areas having been heavily damaged through erosion or war, little more can be said of the end of the LBA strata than this. Ǧezīret *en-Nāmī* East was used as a burial ground, with most of the finds dating to the 13th cent. BC. These finds included gold, bronze, silver, weapons, jewellery, ivory, and complete objects made of bronze such as incense burners, sceptres, lamps, bowls, strainers, and a wine set (Artzy 1993, 1097).

There is little information about the destruction of the site. In Area D1, the only published evidence of destruction is that the area was sealed by a thick layer of mud and fallen mudbricks which might have been from a collapsed roof (Artzy 1990a, 24; 1990b, 76; 1992, 24). Area G was found to contain a large amount of crushed pottery, the basalt basin was found knocked off its base, crushing pottery underneath it upon falling; however, other than this, little else has been published about the destruction (Artzy 1991, 197; 1995, 23). Weapons of war were found in both Areas D1 and G; however, these could have been a part of the bronze industry going on at the site. Likewise, while it appears that bronze work was going on in the sanctuary, it is unclear if this is a sign of crisis or not. Therefore, there are any number of possible causes, from natural destruction to warfare to it simply being abandoned and allowed to fall apart over time. The site was subsequently abandoned after this destruction event, but this again could have been for any number of reasons (Artzy 2006b, 50). Unless further information is published or excavated, the destruction is classified as 'Unknown'.

5.14. Hazor

The final destruction of Hazor at some time in the mid-13th cent. BC has been well documented, and studied in the past. Several in depth studies have already been presented,[162] and here I will explore the results of these studies. Evidence for decline, crisis, and abandonment were found throughout the site. In the Lower City, Areas K and P, the two city gates were seemingly destroyed in Stratum 1B and went out of use in the final phase of the city during Stratum 1A. Area F seems to have had a short-lived occupation during Stratum 1A, but the area was abandoned without any evidence of destruction. In Area C, there is no clear evidence, as it is only attested to by a beheaded statue found in the temple in Area C (Ben-Tor/Zuckerman 2008, 3). However, it is possible that this area was also abandoned, as Zuckerman noted that, beside the beheaded statue, the evidence for destruction of Area C was based on destruction found in Area H (Zuckerman 2007, 23; 2013, 97). Area S, formally called Area A-210, also demonstrated signs of abandonment with no evidence of destruction (Zuckerman 2013, 97; Marom/Zuckerman 2011, 40–42). As Zuckerman states: 'In contrast to the temples and public buildings in the Upper and Lower Cities, no signs of fire or violent destruction were encountered in the rooms of the Area S building at the end of the Late Bronze Age. Thus it seems that the house was abandoned in a planned and orderly fashion' (Zuckerman 2013, 97). The

---

162 See Yadin 1993; Ben-Tor 1998; 2002; 2006; 2013; Ben-Tor/Rubiato 1999; Ben-Tor/Zuckerman 2008; Zuckerman 2007; 2009; 2013; Marom/Zuckerman 2011.

only area in the Lower City which has strong evidence for destruction is the Area H temple. Ben-Tor and Zuckerman describe it as a: '… fierce conflagration. Fallen stones, ashes, and mudbrick material reaching more than a meter high, as well as broken vessels and cultic paraphernalia, were found mainly in the inner hall. It is noteworthy that the statue of a seated figure found in this destruction layer was decapitated, and its head was found lying nearby…' (Ben-Tor/Zuckerman 2008, 3). After these events, the Lower City of Hazor was never reoccupied.

Destruction in the Upper City Stratum XIII Areas A and M was complete. However, this too was only after a period of decline with clear evidence of crisis.[163] The destruction of the Ceremonial Precinct, including the Ceremonial Palace and the Podium Complex in Area M, was an intense conflagration. Temperatures in some parts reached 1300°C, causing mudbricks to vitrify, basalt to crack, and clay vessels to melt. The three factors which played into this were the large amount of wood, the approximately 1000 gallons of olive oil stored in the 'palace', and the high winds which prevail in the region (Ben-Tor 1998, 462; 2013, 30 f.; Ben-Tor/Rubiato 1999, 22; Ben-Tor/Zuckerman 2008, 4). Mutilated statues, Egyptian and local 'Canaanite' were found throughout the destruction debris with heads and hands cut off as well as some being smashed to pieces, while others were buried, seemingly to protect them (Ben-Tor 2006, 4–14). For purposes of classification, the well presented evidence for the destruction of Hazor makes it in some ways simple. In the pre-destruction phase, the site suffered both from crisis and from abandonment. The destruction itself is characterised by a multi-building destruction mainly in the Upper City, with the Area H temple being the only definite evidence of destruction in the Lower City. There is clear evidence of Human Activity, specifically desecration seen in the mutilated statues found in both the Upper and Lower City. Following this time of crisis, pre-destruction abandonment and eventual violent destruction, the city was abandoned, with the Lower City never

to be reoccupied and the Upper city abandoned in Iron I. The question which remains though is, was there warfare at the site, and who were the people responsible for the destruction event?

There are currently several theories to explain who might have been the destroyer of Hazor. These range from the ever cited 'Sea Peoples', the Egyptians, other Canaanites, an internal rebellion against the city, and of course by Israelites.[164] Zuckerman has presented evidence against all these theories other than her own, this being that the city was destroyed in an internal rebellion against the powers of the city. This is why, in her view, the majority of the Lower City was left untouched while all symbols of power, such as the temples and public buildings, were burned or mutilated. She believes that as there is no direct evidence of warfare or human victims, and that this would be a point against the proposal that the Israelites were responsible for the destruction (Zuckerman 2007, 24–26). Ben-Tor agrees with Zuckerman that the destruction could not have been at the hands of 'Sea Peoples', the Egyptians, or other Canaanites; however, he also presents evidence against the internal rebellion theory. He states that very few houses were actually excavated in Area S, as much of the Lower City remains to be excavated, and that the finds in Areas C and F were greatly affected by erosion and ploughing, making it impossible to know if they were indeed destroyed or not. Ben-Tor goes on to note that, generally, destruction events were focused on destroying the symbols of power. He mentions that in the 732 BC destruction of Hazor Stratum V, only one of six private houses was burned in the vicinity of the destroyed citadel; the others were left standing (Ben-Tor 2013, 33–35). He goes on to ask the question, that if these were the local people, then where did they go, and why did they leave the city for 200 years after the destruction? While in the past, Ben-Tor was leery to state that it was indeed the Israelites who had destroyed Hazor (Ben-Tor 1998, 465; 2002, 308; Ben-Tor/Rubiato 1999, 39), recently he has stated that the Israelites should be accredited with the destruction. He states: 'Canaan of

---

163 For a full examination of the evidence of crisis, see: Zuckerman 2007.

164 For a decision of these various theories, see: Ben-Tor 2013, 31–36. Zuckerman 2007, 24–26.

the 13th–12th cent. B.C.E. was 'ripe for the taking,' and the early Israelites where in the right place at the right time. None of the other potential destroyers of Hazor can be held responsible. The early Israelites were in the region at the time, and they are the only ones who have a record of doing the deed. They should therefore be credited with having brought down Canaanite Hazor' (Ben-Tor 2013, 59).

Strictly archaeologically speaking, the material evidence from the destruction of Hazor will never reveal who destroyed the city. From the evidence at hand, it is clear that at least part of the site was destroyed by human hands; however, the question remains in what way. There is as of yet no published evidence of warfare taking place at the site. The only real evidence of violence at the site is the mutilation of the cultic statues. This then brings up the point of another type of possible human destruction, that is, a Post-Battle Destruction. In either of the two accounts in Joshua 11 and Judges 4, the actual discussion of the destruction of the city of Hazor is minimal at best. After the battle of Joshua 11:1–9, the reference to the destruction of Hazor is as follows. The author writes '(10) Then Joshua turned back at that time, and captured Hazor and struck its king with the sword; for Hazor formerly was the head of all these kingdoms. (11) They struck every person who was in it with the edge of the sword, utterly destroying them; there was no one left who breathed. And he burned Hazor with fire' (Joshua 11:10–11). In the book of Judges Chapter 4, after the battle against Sisera near Tanaach and his death at the hands of Jael, the only mention that could be considered to be a reference to the destruction of Hazor is found in verses 23–24. It states: '(23) So God subdued on that day Jabin the king of Canaan before the sons of Israel. (24) The hand of the sons of Israel pressed heavier and heavier upon Jabin the king of Canaan, until they had destroyed Jabin the king of Canaan' (Judges 4:23–24). Whether or not one wishes to associate these accounts with the destruction of Hazor, what is important is that, in both, the actual battle took place not in the city, and not even in its general vicinity. The destructions described in either place are a post-battle destruction of the city when its fighting forces had already been defeated elsewhere. Given this as a

consideration, it remains a possibility that the reason why no evidence of warfare has been found in the destruction of Hazor may be because it was destroyed after the fact, that is, a battle with some force was fought elsewhere, the army of Hazor lost, and this victorious group came and destroyed the city without having to face much of a fighting force. However, this is purely speculation, and who the group of people was who were responsible for the destruction remains an unknown.

5.15. *Ḫirbet el-Burǧ*

A destruction event has been associated with the end of the LBA at *Ḫirbet el-Burǧ* (Tel Dor) (Stern [*ed.*] 2008, 1695; Stern 2013, 5). However, as Stern states: 'The Bronze Age stratum of destruction at [*Ḫirbet el-Burǧ*] **has not yet been reached**' (Stern 2013, 5. Emphasis my own). Thus, given that, at the moment, no evidence for destruction has been uncovered, *Ḫirbet el-Burǧ* is classified as 'No Destruction' (see also Millek 2017, 125).

5.16. *Ḫirbet Tell eḏ-Ḏurūr*

No evidence of destruction was found in the Southern Tel Stratum 9 at *Ḫirbet Tell eḏ-Ḏurūr* (Tel Zeror), as the building was found abandoned at the end of the LBA. In the Northern Tel Stratum XII, the only evidence of destruction was an ash layer and some burnt beams. However, there is no clear evidence to suggest that this destruction was contemporaneous with the building and may have been a post abandonment fire, as there is no other evidence of destruction (Millek 2017, 131 f.). Therefore, as there is only clear evidence of abandonment, the end of the LBA is classified as 'No Destruction'.

5.17. Jaffa

Two destruction events have been associated with Jaffa at the end of the LBA. The research surrounding these destruction events is currently based on the original excavations carried out by Kaplan (Kaplan 1967; 1972, Kaplan/Kaplan 1976; Kaplan/

Ritter-Kaplan 1993; Burke *et al.* 2010; Burke 2011; Burke/Pleistöcker 2013). However, recent excavations at Jaffa have altered both the sites stratigraphy and the interpretation of the destruction events. Unfortunately, this information has not yet been published, and until it is, any discussion based on the old material is outdated and likely to be found inaccurate.[165] Therefore, a discussion of Jaffa must wait until the publication of the recent excavations.[166]

5.18. Khirbet Rabud

Drews included Khirbet Rabud in his list of sites in the Southern Levant destroyed at the end of the LBA (Drews 1993, 16). However, there is no evidence of a destruction event from the limited LBA material that has been uncovered at the site (Kochavi 1974, 2–33). Therefore, the site is classified as 'No Destruction'.

5.19. Khirbet Umm ad-Danair

A quarter of a LB I–II structure was uncovered at Khirbet Umm ad-Danair. Evidence of a fire was found in the structure, as carbonised roof beams were uncovered; however, little else than this has been published or found. This destruction occurred at some time in the 13th cent. BC; however, a more exact date is unknown. After this burning event, the site was abandoned (McGovern 1989, 128, 130, 134); however, there is not enough information to determine the cause of this fire. It is therefore classified as 'Unknown'.

5.20. Lachish

Three destruction events can be attributed to Lachish at the end of the LBA: two in Level VII at the end of the 13th cent. BC and one at the end of Level VI ca. 1130 BC. A full discussion of the site and these three destruction events has been presented elsewhere (Millek 2017, 127–131). The two destruction events in Level VII, that is, the destruction of the residential structure in Area S, and the Fosse Temple III, have in the past been associated with one single destructive episode. However, upon closer examination, the nature of these destruction events does not appear to be the same, and it is likely that they are indeed two separate events. The destruction of the residential structure in Area S appears to have been an accidental fire likely starting in the kitchen, while the destruction of the Fosse Temple III appears to have been a termination ritual. The building was emptied of its goods, the fire was started at the altar, and the area was abandoned and not built over or dug into in the following phase, suggesting that it remained a sacred area (Millek 2017, 127–131). Therefore, both destruction events are classified as 'Single Building', as there does not appear to be a connection between the two. The residential structure in Area S is classified as 'Accidental', while the Fosse Temple III is classified as 'Ritual Termination: Sacred'.

A site-wide destruction ended Level VI at Lachish. Evidence of crisis was uncovered in Area S, as the Pillared Building had been transformed from a public building to a habitation area in its final phase. This building along with the Acropolis Temple in Area P were both burned. It appears as if most of the items in the temple were removed before it was destroyed, though whether this was by looters or the locals is unknown and unclear. Four human victims were found in the Pillared Building, but there was no evidence of trauma to the bodies, though they were badly preserved, meaning the cause of death is unclear. There was no clear evidence of warfare at the site; however, human activity remains a possible answer to this destruction layer if the temple was emptied of its belongings in a non-orderly fashion. It also remains a possibility that the destruction of the Acropolis Temple and the Pillared Building may not have been

---

165 Burke, personal communication, 23.08.2015.
166 An updated analysis of the destruction of the gate complex at Jaffa was presented in: Burke *et al.* 2017. Jaffa's gate complex was likely destroyed twice by attacks on the site. As Burke *et al.* suggest, in order to bring about the complete destruction of the gate complex, it would have required a deliberate effort consisting of several steps to completely destroy the gate. In the destruction of the gate during Phase RG4a, the excavators found arrowheads and a spearhead suggesting warfare, and in the final destruction of the gate in RG-3a it was found that doors of the gateway were closed when they burned (Burke *et al.* 2017, 109–116, 128).

contemporaneous. However, despite the wealth of evidence, there is not enough to give a concrete answer to the cause, and until more is uncovered, it remains classified as 'Unknown'.

5.21. Megiddo

The destruction of Megiddo again is one of the more hotly debated destruction events.[167] Both the number of destructions, the extent of the destruction, and the date of the destruction have been debated. For some of the questions about this disputed destruction, this survey will hopefully provide some answers. However, for others, such as whether or not there are two destructions in the Palace in Area AA, this will, as Arie notes, depend on the findings in Area H Stratum VIIA which have yet to be fully excavated or published (Arie 2013, 476). Therefore, the results from Area AA will be examined last.

Area BB was originally assigned a destruction event at the end of Stratum VIIA by Loud (1948, 105). However, after a re-examination of the pottery found in the area, there was no evidence of a destruction of the Tower Temple, and it was concluded that the destruction of the following temple built over the Tower Temple should be dated to the end of Stratum VIA. As Finkelstein states: 'No clear destruction of Stratum VIIA was observed in Area BB' (Finkelstein 2009, 113; Franklin 2013c, 1335). The descriptions of both Areas CC and DD are vague in Loud's excavations report and therefore the answer if there was destruction in this area or not is uncertain. However, as Finkelstein notes, while monumental structures were uncovered in Area DD and domestic structures in Area CC, there is no mention of destruction, and the pictorial evidence also does not indicate there was any destruction in either of these areas (Finkelstein 2009, 113 f.; Franklin 2013c, 1336). Evidence for crisis was found in Area G's LBA gate and gatehouse as noted by Zuckerman (2007, 10). During the final phase of the LBA, the gatehouse ceased to maintain its original function and was turned into a kitchen. The outer entrance was

blocked by a stone wall and three tabuns were found on the floor of the inner chambers of the gatehouse (Ussishkin 1995, 247–252; 2000, 104–122). Ussishkin believes that the gatehouse was destroyed at the end of Stratum VIIA, as he notes that pieces of carbonised wood were not found in the structure's construction and instead on the floor not associated with the tabuns (Ussishkin 1995, 253; 2000, 115). Finkelstein also states that the gate was destroyed at the end of Stratum VIIA, citing the work of Ussishkin (Finkelstein 2009, 114; Franklin 2013c, 1335). However, there is no other evidence for destruction aside from this carbonised wood. Even according to Finkelstein's own system of destruction classification, this does not count as a destruction, as it only has evidence of some burning, but no evidence of collapse or smashed material culture (Finkelstein 2009, 113). Therefore, there is not enough evidence to convincingly say the gate was destroyed, and even if it were, there is no evidence to say that it was 'burned' at the end of Stratum VIIA.

Area F on the lower mound during Level F-9 Stratum VIII(?) was dominated by a well-constructed building which appears to have been abandoned at the end of Level F-9 with no evidence of destruction. The following Level F-8 Stratum VIIB(?) is only evidenced by the robbing out of the walls from the previous phase, before the building was reused in Level F-7. Level F-7 Stratum VIIA(?) represents a reoccupation of the building from Level F-9; however, the building of Level F-7 was made up of flimsy walls only one course thick (Ilan/Franklin/Hallote 2000, 77–95; Finkelstein/Ussishkin 2000, 593–594; Ilan/Hallote/Cline 2000, 220). This would seem to represent a period of crisis at the site much like the gatehouse in Area G. While the remains of this last phase were disturbed, there is no evidence of destruction at the end of Level F-7 (Finkelstein 2009, 114; Franklin 2013c, 1335).

Limited evidence for destruction was found in Area K Level K-6. A domestic unit was uncovered in Level K-8 comprised of a courtyard and two rooms. Level K-7 seems to be a short-lived phase seen mainly in the reuse of the courtyard and the raising of the floors. The final phase Level K-6 is associated with Stratum VIIA. There appears to be some evidence of crisis in this area,

---

167 For a general overview see: Aharoni/Yadin/Shiloh 1993.

as an entrance to the building was intentionally blocked with large field stones in the last phase of the building. Destruction debris was not found in the building proper called Building 04/K/44 but in a unit attached, called Unit 04/K/57. In this unit, a half metre of destruction debris was found on the earthen floor which was covered by an ash layer. Nevertheless, the courtyard Building 04/K/44 was not burned down. Some broken pots were found on the floor of Building 04/K/44; however, there was no other evidence of destruction. It is believed that these broken pots might represent a hasty abandoning of the area (Finkelstein/Ussishkin/Halpern 2006, 847–848; Gadot *et al.* 2006, 90–92; Arie/Nativ 2013, 171–174). As Finkelstein states: 'Traces of destruction were observed, in the sense that some vessels were found broken on the floors. There was no collapse and evidence for fire could be seen in limited spots only' (Finkelstein 2009, 114). However, with all this, there is little evidence to suggest that there was much of any destruction in Area K. Crisis was noted in the blocked door, but for the main building, broken pottery, again according to Finkelstein's destruction classification system, does not equate to a destruction (Finkelstein 2009, 113).

The evidence for the end of Stratum VIIA in Area M mainly comes from the renewed excavation's work. The *Nordburg* uncovered by Schumacher has been dated to either Stratum VIII or VII. However, no information about destruction can be seen in the early work of Schumacher. Therefore, what is known comes from some evidence found in Rooms 04/M/75 and 04/M/83. Evidence for crisis has also been noted in this area, as the entrance to Room 04/M/75 was intentionally blocked at some time in Level M-6A Stratum VIIA, much like the gatehouse and Building 04/K/44 in Area K Level K-6. In Room 04/M/75, crushed vessels were found underneath a metre of unburnt mudbrick. Mudbrick collapse was also found in Room 04/M/83 (Finkelstein/Ussishkin/Deutsch 2006, 66–78; Franklin 2013a, 187–189; 2013b, 234; 2013c, 1333). However, there was no evidence of fire and as Finkelstein notes: 'The excavations of 2004 and 2006 uncovered a room of the *Nordburg* (Level M-6) with pottery vessels smashed on the floor; no evidence for fire was observed. The excavation of this room revealed an accumulation

of almost a metre of unburned brick collapse. Whether the collapse took place in the final days of Stratum VIIA or the walls were pulled down in the early days of Stratum VIB is not clear' (Finkelstein 2009, 114). Therefore, it is unclear when this 'destruction' took place, as is the answer to the question of whether it is even a destruction or not. If it is to be associated with later building activates, this collapsed mudbrick would not classify as a destruction.

Area AA, and the palace found there, present the most difficult problem of Megiddo's Stratum VIIA 'destruction'. Loud argued that the palace was destroyed at the end of Stratum VIIB and it was easier for the builders to level off the material and build the Stratum VIIA's temple over it rather than to remove it (Loud 1948, 29). However, Ussishkin has argued that, rather than having two building phases with a destruction in-between, the palace was a single two-storied building with a basement and ground floor. Thus, in this view, the transition from Stratum VIIB to VIIA was peaceful, and the destruction uncovered by Loud with the metre and a half of debris and burnt brick should be attributed to the end of Stratum VIIA (Ussishkin 1995, 240 f., 246). However, Mazar and Samet have both demonstrated that a roof construction over Courtyard 2041 seems impossible (Mazar 2002, 264 f.; Samet 2009, 82–84). Samet also shows that upon examination of the plans, there do appear to be multiple phases to the building, and in Loud's original statement, she points out he believed there were five phases to the building from Strata VIII through VII (Samet 2009, 82). Mazar still places the destruction at the transition between Stratum VIIB and VIIA (Mazar 2002, 264 f.); However, Samet, while differing with Ussishkin on the building having two stories, does agree that it was destroyed only once at the end of Stratum VIIA (Samet 2009, 83 f.). Here, I will refrain from giving a definite answer to this situation and will withhold judgment until data from Area H has been published. There is, however, one last note again made by Samet says that the Palace of Area AA seems to have been emptied of most of its contents before it was destroyed. She argues that the building was emptied by the occupants of the palace, as there is a general paucity of pottery finds. Samet, argues that if it were looters, why

would they have left valuable jewellery and ivory but taken out worthless objects like pottery? She only speculates as to why the 'Treasury', which she argues might have been a sealed grave, was not emptied (Samet 2009, 84). While it is still speculation as to who removed many of the objects from this building and the cause for the treasury to remain intact, what is important is that there is further evidence of a general abandonment of the site in Area AA.

With all of this, what then is the evidence for the destruction of Stratum VIIA and the condition of the city before its partial destruction? Areas BB, CC, and DD from the original excavations have no evidence for destruction at the end of Stratum VIIA. While a destruction has been attributed to the gate in Area G, the only evidence of this is burnt wood. Therefore, there is not enough evidence to say that this was destruction and not a burning of the wood at some unknown date, perhaps even before it was turned into a kitchen. Area G does represent crisis architecture, as the gate house was sealed off and turned into a kitchen. No evidence of destruction was found in Area F though here too crisis architecture was detected. The building of Phase F-7 was of much poor construction quality than that of Level F-9. Area K too had evidence of crisis, as one of the doorways was intentionally sealed before the building was seemingly abandoned. True evidence for destruction was only found in a unit attached to Building 04/K/44 as only broken pottery was found on the floor of Building 04/K/44. Therefore, the evidence for destruction is minimal in Area K. Area M also had evidence of crisis, as a doorway was again found to be sealed. Mudbrick collapse was found in two rooms from Level M-6A. However, this evidence differs from that found in Area AA, as there is no evidence of burning and, moreover, it is unclear if this mudbrick collapse even occurred at the end of Stratum VIIA. It could also have occurred in Stratum VIB. Thus, from Areas BB, CC, DD, G, F, K, and M there is either a total lack of evidence for destruction, or very meagre evidence for a destructive event at the end of Stratum VIIA.

The final Area is AA whose dating remains controversial. Thus, if the destruction uncovered by Loud is dated to the end of Stratum VIIA, this would represent the only building to have been truly destroyed from the published material. However, excavations in Area H may change this picture, and a final judgment must wait until this information is published. After this 'destruction', the city did continue; however, it suffered a sharp decline (Ussishkin 1995, 260; Finkelstein/Ussishkin/Halpern 2008, 1947).

With the evidence presented, what then might have been the cause of the 'destruction' at Megiddo? Ussishkin states: 'The city may have been successfully attacked by invading Sea People groups, by Levantine Canaanite elements, by the Israelites, or by a force combined from different groups' (Ussishkin 1995, 261). Finkelstein has offered a similar answer, as he states: 'This could have been a razzia by a group of Sea Peoples, or a band of 'apiru, or an attack by a neighboring city-state. A well-organized military attack by Twentieth Dynasty Egypt on an important center such as Megiddo seems unlikely' (Finkelstein 2009, 122). Finkelstein does state, however, that in his view, the main target of this attack was on the palace, given the general lack of evidence from the other areas (Franklin 2013c, 1336). Cline maintains that the destruction of the site was by an enemy of some sort; however, the identity of these attackers cannot be recognised in the archaeological record (Cline 2014, 118).

The evidence for an attack on Megiddo could only be attested to the palace of Area AA, and this would indicate a directed attack toward a symbol of power. However, with the current problems in knowing exactly when the date of this destruction took place, this is a difficult point to argue. Moreover, as seen in several areas of Megiddo, the site during Stratum VIIA was undergoing crisis and perhaps a pre-destruction abandonment. If this is the case, the destruction of the palace could be for multiple reasons, ranging from an act of desecration or a natural cause. Marco has noted that extensive cracking was found throughout the gate in Area G, and that stone plates found in Chamber F in Area M were fractured at 90°. However, as he notes, this damage could have come at the end of Stratum VIIA, or during Stratum VIA or perhaps in a later period (Marco *et al.* 2006, 570–572). Therefore, with the evidence given, at this moment it is impossible to tell exactly when the destruction

found mainly in Area AA took place, and the cause. However, what should be noted is that the following Stratum VIB's poor settlement should not be a surprise, as this goes with the life of the site. Evidence for crisis and abandonment was prevalent throughout most of the areas in Stratum VIIA. Thus, the fact that the site was poorer in nature and size in Stratum VIB follows with the evidence of crisis seen before the destructive event. Therefore, one must ask if the destruction was the major event which caused the decline in Stratum VIB or whether it was the pre-destruction crisis conditions. I would tend to agree with the latter, given the general lack of evidence for destruction from Stratum VIIA. With all this said, the 'destruction' of Megiddo Stratum VIIA is classified as 'Unknown'.

5.22. Shiqmona

A destruction event has been attributed to the end of the LBA at Shiqmona (Elgavish 1993, 1374; Stern 2013, 5), however, no actual information or evidence for this destruction has been given. All that has been noted is that, under the Iron I remains, a LB II building was uncovered. In the reports on this building, no destruction is ever mentioned, nor any evidence to suggest a destruction (Elgavish 1975, 258; 1977, 167; 1978, 122). The building was said to be destroyed in the last third of the 13th cent. or the first quarter of the 12th cent. BC in the New Encyclopedia of Archaeological Excavations in the Holy Land; however, no evidence or description of this 'destruction' is ever presented (Elgavish 1993, 1374). Therefore, until the evidence for a destruction event is put forward, the site will be classified as 'No Destruction'.

5.23. Tel Azekah

The original excavations at Tel Azekah were carried out by Bliss and Macalister in the late 19th and early 20th cent.[168] Given the early date of these

---

168 See Lipschits/Gadot/Oeming 2012, 199 and Metzer 2015, 3–8 for a review of these early excavations.

excavations, little can be said about the end of the LBA. A renewed excavation at Azekah began in 2012, which has touched the end of LBA at the site. However, given that the renewed excavation is relatively recent, there is little published information about the end of the LBA, meaning the conclusions and classifications presented here will remain tentative until further excavations and publications. Remains dating to the LBA have been uncovered in Areas S1, S2, W1, and T2. In Area S1, a set of burnt wooden beams was uncovered, found next to an architectural complex. Another structure was uncovered in Area S2 which yielded some fragmentary architectural remains and evidence of a destruction event; however, little other information is available from either of these areas (Lipschitz/Gado/Oeming 2012, 204 f.). Area W1 also had occupational remains from the LBA, but no other information is available for this area (Lipschitz/Gado/Oeming 2012, 204). The only area to have been partially published is Area T2 Building T2/F627 (Metzer 2015).

Building T2/F627 was a residential structure on the top of the mound which had two phases T2-3b and T2-3a. Little can be said of the first Phase T2-3b from the current published information, and due to later disturbances from the Iron II and the Hellenistic period. What can be said about Building T2/F627 is mainly from Phase T2-3a when the building was completely destroyed in a fire, where the roof and possible upper story collapsed on the floor, burying at least four individuals in the destruction debris along with hundreds of objects (Lipschitz/Gadot/Oeming 2012, 204 f.; Metzer 2015, 1, 60–62, 140 f.). Only one room has been sufficiently published to date which can be discussed to any length. Room T2/F268 has been studied by Metzer who examined the finds in their contexts of the destruction debris. She notes, that from the shift from Phase T2-3b to T2-3a, Room T2/F268 underwent a functional change as a grinding installation was added to the room, along with two poorly made single brick thick partition walls. Metzer notes that this change may be taken as crisis architecture; however, because the grinding installation seems to be of a high quality, and because of the amount of finds in the room, she does not believe this to be evidence of crisis at Azekah in the early

12th cent. BC (Metzer 2015, 64–67, 142). However, she does note that the destruction seems to have been sudden as no precious objects were taken out of the building before it burned and collapsed, and the skeleton of a young woman was uncovered near the grinding instillation in Room T2/F268, seemingly crawling when she was likely crushed by the three storage jars found above her (Metzer 2015, 68, 126 f.,134–136). Found near the crushed woman were '92 beads, three scarabs and a bullae, five amulets, a weight, a small ivory stick with a hand, a bone flute, a button, a silver pendant, an arrowhead, [and] three metal objects that could have been part of a belt buckle.' (Metzer 2015, 134). As for the reason behind this event, Metzer states: 'The cause of the disaster remains unknown. An unexpected event does not necessarily point to a natural disaster; it could also have been caused by a surprise assault by a band of criminals.' (Metzer 2015, 68). After this destruction event, the site as a whole was abandoned for several centuries (Metzer 2015, 63, 68, 143).

Metzer is likely correct that this event was sudden, taking the inhabitants of Building T2/F627 by surprise. It is unclear from the current evidence what the cause of this sudden destruction was. While a single arrowhead has been uncovered in Room T2/F268, this is by no means direct evidence of warfare. There is also no current evidence which would suggest that an earthquake or some other natural disaster took place. The sudden nature of the destruction, that four people were caught in the structure, and that destruction was found in several areas of the tell is likely evidence against it being an accidental fire. Thus, until further evidence is uncovered, it must be classified as 'Unknow'. One final note, however, is the evidence for crisis architecture. Metzer has argued that even though the additional partition walls built into Room T2/F268 were poorly made and flimsy, she states that the site was not likely under any sort of crisis and still seemed to be in its prime given the wealth of finds (Metzer 2015, 142). However, it should be noted that the wealth of finds could also have been in a building suffering from traditional crisis architecture.

At Lachish, in the Pillared Building of Level VI, while the final phase of the building had undergone a shift to crisis architecture changing the use of the public building to a residential area, a number of valuable items were found in the destruction debris also near some of the victims of the destruction. However, while there was crisis architecture in the Pillared Building, there was no apparent evidence of crisis in the nearby Acropolis Temple (Millek 2017, 128–131). Moreover, evidence for crisis architecture is not only based on the addition of flimsy materials or walls, disrepair and the like. Another aspect of crisis architecture is the change in the function of the space (Zuckerman 2007, 4). At the site of *Tell en-Nā'am* (Tel Yin'am), Building 1, the largest building at the site with the best construction, it was originally a residential building. However, during the final phase of the building before it was destroyed, one of the rooms was converted into an iron smelting area with the addition of a flimsy partition wall.[169] The problem with Building T2/F627 and Azekah as a whole is the limited information currently available. If Building T2/F627 was originally a residential structure with no evidence of production but was later turned into a production centre, this would likely be evidence of crisis no matter how well built the grinding installation was, given the definition for crisis architecture.[170] Nevertheless, one room in one building of a site can neither affirm nor deny whether there was crisis at Azekah, as not enough is known about the phase before the destruction event or about the site as a whole. Until this time comes, if the material has been preserved, it must remain a possibility that the site was indeed under crisis. If this was the case, it would also help to make sense of the fact that the site was abandoned after the destruction much the same as Hazor and Lachish, both of which were destroyed with evidence of crisis and then abandoned.

---

169 See later in this chapter.

170 'Decrease of energy input in construction and maintenance (disrepair, repair with inferior materials), a change in original plan (restriction of access and circulation, changes in the permeability of the buildings) and a change in the original function of the structures (blocking of functional spaces or their partial abandonment)' Zuckerman 2007, 4, cited from Driessen 1995, 65–76.

5.24. Tel Mevorakh

Stern has attributed a destruction event to the end of the 13th cent. BC at Tel Mevorakh Stratum IX (Stern 1978, 76; 1984, 9; 2013, 5). However, while Stern excavated the site, in the report of the excavation of the Temple which had three phases in Stratum XI through to Stratum IX, there is no clear mention of destruction debris. There is no mention of a fire in the temple, and no mention of mudbrick collapse (Stern 1984, 8 f.). The only hint of any kind of evidence for destruction came from the 200 year abandonment of the site. As Stern states: 'We may assume that the upper part of the wall was made of mud-brick, and it was totally demolished during the 200 years of abandonment, i.e., from the end of the thirteenth century to the late eleventh century B.C.' (Stern 1984, 8). The only evidence of ash at the site came from a possible squatter settlement as a thin layer of ash was found associated with some small LBA pot sherds and segments of thin poorly constructed walls. Stern states: 'It appears that after the destruction of the Stratum IX temple, some of the occupants may have returned to the site for a short time, only to have to leave again before having the chance to rebuild it, probably because of the arrival of the Sea Peoples' (Stern 1984, 9). However, while destruction is mentioned, if there was any evidence of destruction, it would have come from post-abandonment deterioration. Therefore, it is classified as 'No Destruction'.

It would seem, however, that the ascription of a destruction event to Stratum IX of Tel Mevorakh comes from the underlying theory that the 'Sea Peoples' came and destroyed the settlements in the region. This seems to be the same reason that a destruction event has been attributed to *Ḥirbet el-Burğ* when none has been found. Though no strong evidence for destruction was found, Stern states: 'The destruction of the last Canaanite Stratum at Tel Mevorakh (Stratum XI, end of the thirteenth century B.C.) was accomplished by invading Sea Peoples' (Stern 1978, 76). Nevertheless, he goes on to say: 'However, in the oldest Iron Age settlement at Tel Mevorakh (Stratum VIII) not a single trace was found that could be attributed to this people

[the Tjeker].' The absence of the 'Sea Peoples' material culture would be an issue if the site had been destroyed by the 'Sea Peoples'. However, given that there is little evidence to claim a destruction event rather than abandonment of the site at the end of the 13th cent. BC, let alone a destruction by warfare, it would be perfectly reasonable that after abandoning the site for some 200 years, local people began to reoccupy the site. There is no need to invoke the 'Sea Peoples' in the development of this site from the LBA to the Iron Age.

5.25. Tel Michal

Tel Michal is another site attributed a destruction event by Stern in a list where he states: 'All sites on the Canaanite coast of the Hefer Valley, in the Sharon, and on the Carmel coast – without exception – were laid waste at the end of the thirteenth century BCE in a total destruction that put an end to Canaanite culture and Egyptian domination. This destruction has been attributed by the excavators of all the settlements in these areas to the Sea Peoples' (Stern 2013, 5). However, much as at Acco, *Ḥirbet el-Burğ*, *Tell Ğerīše*, and Tel Mevorakh, there is no evidence of destruction at Tel Michal, all of which were part of Stern's list of sites that were completely destroyed. As Herzog states speaking of the end of the LBA settlement, 'The settlement remained unchanged in plan and continued to exist until its abandonment in the fourteenth or early thirteenth century BCE' (Herzog 1993b, 1037). He goes on to state again: 'The settlement was probably abandoned in the 13th century BC, with the decline of international trade.' (Herzog 2001, 28). This abandonment of the site lasted for 300 years putting even the abandonment itself well out of the range of end of LBA destruction let alone one associated with the 'Sea Peoples (Herzog 1993b, 1037; 2001, 28). Moreover, in the excavation reports, there is no mentioned evidence that the site was destroyed (Herzog 1989, 39–41; Negbi 1989, 43–63). Tel Michal is thus another site which has been listed as destroyed with no evidence of destruction, and it is therefore classified as 'No Destruction'.

5.26. Tel Miqne/Ekron

A Single Building destruction of 'Unknown Cause' was uncovered at Tel Miqne/Ekron (for a full discussion see Millek 2017, 125). The building uncovered was filled with stored carbonised foods, which might suggest a sudden destruction, and no evidence of warfare has yet been published. Therefore, a natural or accidental cause is probable, but with what has been uncovered and published to date, there is not enough evidence to be certain. It is therefore classified as 'Unknown'.

5.27. *Tell Abu al-Kharaz*

A possible destruction layer has been attributed to Phase VIII at *Tell Abu al-Kharaz* dated to sometime in the 13th cent. BC (Fischer 2006, 374; 2014, 570). However, the remains of Phase VIII at *Tell Abu al-Kharaz* are sparse at best, as they were affected by later Iron Age construction and erosion (Fischer 2006, 158, 347). In Area 2, only scanty remains of stone walls were uncovered above the burned remains of the 14th cent. temple. It appears to have been a short-lived settlement and some of the stone walls, along with stone slabs which were used to support a roof, appear to have collapsed. However, this evidence shows no pattern, and not much more can be said of this phase (Fischer 2006, 158). In Area 3, there were again scanty remains from Phase VIII, as only some partial walls were uncovered and the remains of either a pit or silo (Fischer 2006, 175 f.). Given that little is known of this final LBA phase, there is no evidence of burning, and the site was apparently abandoned until ca. 1150 BC; the most likely answer to what happened to Phase VIII at *Tell Abu al-Kharaz* is that it was abandoned at some point in the 13th cent. BC. The only evidence of destruction are the vague remains of some collapsed walls, but given what is known, this most likely occurred due to the natural breakdown of architecture after abandonment. Fischer acknowledges that due to erosion and later building in the Iron Age, it is difficult to say if Phase VIII came to a violent end (Fischer 2006, 347). Thus, until further information is obtained

about the end of the LBA at *Tell Abu al-Kharaz*, it must be classified as 'No Destruction'.

5.28. *Tell Abū Ḥawām*

The destruction event of *Tell Abū Ḥawām* VC is unclear, as some possible destruction of the fortifications has been attributed to either the 14th cent. or the end of the LBA (see Millek 2017, 118–120 for full discussion of the site). However, after speaking to Michal Artzy she has stated that there is no evidence of a destruction event at *Tell Abū Ḥawām*.[171] Therefore it is classified as 'No Destruction'.

5.29. *Tell Abū Hurēre*

A Single Building destruction was uncovered at *Tell Abū Hurēre* (Tel Haror) in Area B Stratum B7. However, no destruction was uncovered in Area K Stratum K3 and this area seems to have been abandoned, as the later Iron Age I occupation was found only in Area B. Given the little evidence, the destruction is classified as 'Unknown', though a 'Natural/Accidental' cause remains likely, as there is no evidence of warfare and the site was undergoing abandonment (Millek 2017, 126).

5.30. *Tell Bēt Mirsim*

The destruction of *Tell Bēt Mirsim* city C2 is of unknown scale and cause. It is possible the city was under crisis before a layer of ash appeared ca. 1235 BC; however, few other conclusions can be drawn (Millek 2017, 123 f.). The following Stratum B1 did contain local 'Canaanite' pottery in the same LBA tradition as C2, but little more can be said than this. Given the limited evidence for this ash layer there is a possible 'Natural/Accidental' classification; however, with the limited information, the cause remains 'Unknown'.

---

171 Artzy, Personal Communication, 04.07.2016.

5.31. *Tell Dēr ʿAllā*

Phase E of *Tell Dēr ʿAllā*, has been cited by the excavators as being destroyed by an earthquake. Originally this destruction was dated to ca 1200 BC, but the current excavators of the site place the destruction of Phase E sometime after 1180 BC, perhaps at around 1150 BC (Franken 1992, 6 f.; van der Kooij 1993, 339 f.; Kafafi/van der Kooij 2013, 123, 126). There are several lines of evidence to support this classification of destruction by earthquake. First is that there is substantial evidence that there has been a considerable amount of geological activity at *Tell Dēr ʿAllā*, as earthquake cracks have been found throughout the site (Franken 1969, 32). Franken, in his excavation of the northern part of the tell, uncovered a LBA sanctuary associated with a number of rooms to the east and west of the building. In the cella of the sanctuary from the end of Phase E, the excavators found that part of the north wall and the podium in front of the wall apparently broke away and fell down the side of the tell. They found wide and deep cracks in the western wall and evidence of fire was found in the northern side of the building along with evidence of roof collapse. The fire was hot enough to melt some of the mudbricks, and in the northern side of the cella, a number of objects were found buried underneath the debris (Franken 1992, 17–36).

The rooms east of the sanctuary, many of which seemed to be used for domestic purposes, provide more evidence for a destruction by earthquake. In Room E1, they again found evidence of fire on the western side of the room along with a portion of the floor found to be cracked, and on the west side of the crack the floor had sunk. Several pots had been broken and were found in the crack. Moreover, while large fragments of these vessels were found in the crack, they also could be fitted with other fragments outside of the crack, suggesting that the pots had fallen, broken, and then some of the pieces fell into the crack while others remained outside. Part of the roof had also collapsed and covered over broken pottery laying on the floor of Room E1 (Franken 1992, 7, 38). Room E2 produced more evidence of large amounts of fallen debris, and fragments of broken storage jars. However, on top of a double line of large stones which might have been a bench broken by the earthquake, they found a human skeleton. It seems the victim was flung on his or her back in a crouching position with both hands raised towards the face when the earthquake took place, and the victim was killed by the falling walls. The skull was shattered and the bones burnt blue from a fire which also burned Room E2. It is uncertain, but the skeleton seems to have been that of an adult (Franken 1992, 43). Room E3 produced more general evidence of destruction, as two layers of pottery were found, one of which was directly on the floor and those found on top of the roof fragments which fell covering the floor. Room E4's north wall was split lengthwise in a landslide and Room E5's north wall sunk down and collapsed to the north. The floor of Room E5 had been burnt black and the floor on the north side of the room had sunk down below the level of the rest of the floor (Franken 1992, 45–69).

Further evidence for an earthquake was also uncovered in the rooms to the west of the cella. Steps leading up to Room E7 were displaced and the roof of the room was again found on the floor. Room E8, the north wall and part of the floor sunk 25cm along a crack which ran East-West parallel to the north wall. Steps found in the room had also been broken, other parts of the floor had been pushed up, and there was evidence of fire throughout the room. Pottery had been flung around the room, as fragments of the same vessel were found in different areas of the room (Franken 1992, 73–79). Room E9 was also found to have its east wall leaning west and the west wall had been broken off above ground level. There was again evidence of large portions of the roof found resting on the floor, with broken pottery found underneath the roof fragments and on the floor (Franken 1992, 84). Similar finds were also uncovered in the recent excavations at the site on the southern slope of the tell (Kafafi/van der Kooij 2013, 128). Given all of this evidence from the cracks found in the floors, leaning walls, wall and roof collapse, sunken floors and walls, and the crushed human skeleton, it seems reasonable to classify the destruction of Phase E as an earthquake in line with the original excavators' interpretation of the evidence.

5.32. *Tell el-Baṭāšī*

Tell el-Baṭāšī (Tel Batash) is again another site with a reported destruction event at the end of the LBA which does not exist (see Millek 2017, 123 for a full discussion of the site). As Mazar states: 'No evidence was found for a violent end of this building. On the contrary, it was reused by the Philistines in the following period' (Kelm/Mazar 1995, 67). *Tell el-Baṭāšī* is classified as 'No Destruction'.

5.33. *Tell el-Fāṛʿa* (South)

Little can be said of the destruction of the 'Egyptian Residence' uncovered by Petrie including the date of the destruction. Yisraeli has stated that the fire which destroyed the residence did not take place until the 11th cent. BC, while Wood has argued, based on the Egyptian artefacts found in the destruction and following squatter settlement, that the destruction should be dated to between 1200 BC and the mid-12th cent. BC (Yisraeli 1993, 441 f.; Wood 1991, 51 f.). Given this contradiction, I will cover the destruction evidence here, but the date remains in question. Thus, the site may or may not be associated with the end of the LBA. However, this problem aside, little can actually be said of the destruction event. A building called YR was uncovered with a smaller building to the west. It is difficult to determine whether there was any kind of crisis at the site before destruction as the description given by Petrie is generally too vague to come to any kind of solid conclusion. Notable finds in the structure were 45 storage jars, some sealed with a conical clay stopper with the figure of a god riding a lion, the fragment of a jar with the cartouche of Seti II, and a charred wooden box with ivory inlays (Petrie 1930, 17–19; Yisraeli 1993, 441 f.). Petrie described the destruction briefly. He stated: 'The final building was roofed with cedar beams, and the whole was burnt at last' (Petrie 1930, 18). Petrie goes on to say that, in the south eastern part of the building, the fire was strong enough to melt pottery to the floor and that in one doorway of the structure, there were stumps of charcoal from the burnt door posts,

and all about the room lay burnt beams of which some were pieces of cedar (Petrie 1930, 18).

When describing the wooden box, he states: 'These fragments were found in the chamber YC of the Residency of the 19th dynasty. The inlaid box had been thrown down on rough ground, crushed by the fall of burning beams, and carbonized' (Petrie 1930, 19). However, the exact scale of destruction is not given, nor what exactly happened in the building to the west of YR. Following the destruction of Building YR, there was a short squatter phase built into the old building, characterised by the flimsy cross walls in the structure and by a number of pits dug into the building (Petrie 1930, 18; Wood 1991, 51 f.). Given all of this information, there are several problems which cannot be overcome with the material that Petrie recorded. The first is, it is difficult to tell what exactly happened prior to destruction, whether there was a crisis of any kind, abandonment or whether the destruction was sudden. The inclusion of the 45 storage jars and the ivory inlaid box might indicate the site was destroyed before anything could be removed, but this is uncertain. It is also uncertain which changes took place after the destructions, other than that its official function seems to have been abandoned and it served as a squatter settlement. Given all of this, though, it could have been either a sudden natural fire, an accidental fire, or it could have been set afire by attackers. Therefore, it must be classified as 'Unknown'.[172]

5.34. *Tell el-Fuḫḫār*

Evidence of a LB IIB settlement was found in four areas at *Tell el-Fuḫḫār* (Tall al-Fukhār). However, the remains found in both Areas B and F do not add much to an interpretation of the destruction found in Area C and possibly D. The LB IIB remains from Stratum V found in Area B were mostly robbed out to the floor levels by the following Iron I occupation. This has left little evidence for

---

172 As there is little information about the site, I have classified it as a 'Single Building' destruction in scale though this is not certain.

destruction in this part of the site (Ottosson 2015, 15 f.). In Area F a number of houses were uncovered from Stratum V; however, what happened in this part of the tell is also unclear. As Strange states: 'Whether the houses were destroyed by violent action or whether it was an earthquake, as it is evidenced in the palace in CIII, or the lower settlement was simply abandoned, cannot be said' (Strange 2015b, 71). Therefore, the only evidence for destruction at this site comes from Area C.

A partially uncovered public building, possibly a palace, was found in Area CIII Stratum V. Two rooms of this building were exposed along with a monumental entrance, and given the destruction debris, it has been interpreted as having a second story. The exact dimensions of the building are unknown, leaving it currently at 15 x 20m, though it is possible that it stretched into Area D where some evidence of destruction was uncovered, which would make the building considerably larger (Strange 2015a, 35–37). This building had three phases of occupation and was most likely built sometime in the 13th cent. BC during Phase 1. Four floors were associated with Phase 2 of the building, and after the construction of Floor 3, it seems as if the site underwent some kind of crisis. A layer of earth was found on top of Floor 3 and below subsequent repairs to the building, which the excavators have interpreted as the building being abandoned for some time (Strange 2015a, 38). Floor 4 is the final occupation of the building, which again has clear signs of crisis. The monumental entrance was blocked by a poorly made wall, and in one corner of the building a fireplace was constructed. Strange has interpreted these finds as a squatter settlement before the building's destruction (Strange 2015a).

The destruction of this building is witnessed by burnt beams presumably for a roof, and evidence of massive mudbrick collapse and burnt mudbrick. One of the large stones in a wall of the building was broken in half, which the excavators state is a sign of possible earthquake damage, though they also postulate that it could have been cracked due to the heat from the fire. No evidence of human activity was uncovered, and the excavators place the cause of the destruction on an earthquake ca. 1200 BC (Strange 2015a, 38 f.;

2015c, 420). In the following Stratum VIA, there is a reuse of the public building's ruins. The people built on top of the debris or levelled it off to build a house or houses. Moreover, there was a continuation of the local pottery tradition, indicating that the people were either locals or perhaps even people who had lived at the site before the abandonment and subsequent destruction of the public building (Strange 2015a, 39 f.; 2015c, 421). From the little evidence uncovered, the most likely cause of this destruction event was a natural or accidental cause as there is no evidence for human activity. The evidence for crisis and abandonment of the structure prior to a squatter settlement and destruction would give good reason why the following people did not rebuild the building, as it had already lost it function as a public building. Rather than spend the energy to rebuild, the ruins were utilised most likely by the people already living at the site. Too little of the building has been found to know whether the destruction was natural or accidental, therefore it is classified as 'Unknown'.

5.35. *Tell el-Ḥesī*

A destruction event has been ascribed to *Tell el-Ḥesī* at the end of the LBA (Lapp 1967, 293; Drews 1993, 16). However, the excavations undertaken by Petrie and Bliss in the late 19th cent. leave much to be discussed: whether there was such an event and when it might have taken place, and it is possible the site was abandoned after 1300 BC (Petrie 1891, 16–19; Bliss 1894, 71–77; Matthers 1989, 59 f.).[173] The renewed excavations at the site did not uncover any remains from the LBA (Fargo 1993, 632). Thus, until evidence for destruction at the site is uncovered within a reasonable chronological framework, it must at the moment be classified as 'No Destruction'.

---

173 For a discussion of the problems and possible answers of this chronological problem, see Matthers 1989, 61 f., notes 7, 7a, and 7b.

5.36. *Tell el-Ifšār*

Evidence for the destruction of *Tell el-Ifšār* (Tel Hefer) at the end of the LBA is meagre. While three phases are given to the LBA, being A/9 through A/7, little is actually known of these, as the majority of the finds came from a single storage room and much remains to be published. The last LB level of the storage room was paved flat with kurkar and beach rocks. This room was destroyed by fire. The floor was covered with debris from the collapse of the building. Eight storage jars were found in the debris while some Cypriot milk bowl sherds were found on the floor. Not much more can be said of the destruction event, and the following phase A/6 in the Early Iron I is attested to only by pits and silos (Porath/Paley 1979, 237 f.; 1980, 218; 1982, 66; Porath/Paley/Stieglitz 1983, 265; 1984, 277; Paley/ Porath 1993, 612). Thus, the destruction of the site is classified as 'Unknown', as there is far too little information to come to a conclusion.

5.37. *Tell el-ʿUmērī*

The LBA remains from *Tell el-ʿUmērī* date mainly to LB IIB, as the site was abandoned during LB I and LB IIA. LBA remains have been found mostly in two areas. Field F produced some debris layers, made of a few walls and earthen layers; however, little more is known of the LBA occupation in this area. The main finds dating to the LBA were a large five-room possible temple complex called Building C found in Field B Phase 14 (Herr 2000a, 253 f.; 2000b, 170; 2008, 1849; Bramlett 2009, 107; Herr/Clark/Bramlett 2009, 76; Clark 2011, 43). Building C had three occupational layers named Floors 1–3, with Floor 3 being the last use of the building (*fig. 5.2.*). According to Bramlett, the function of Building C before Floor 3 seems to have been a temple, as five standing stones were found in a niche in Room 3. Moreover, in Room 5 which was attached to Room 3 and acted as either a vestry or storeroom, the excavators found fifteen handmade poorly-fired ceramic figurines and three nearly complete vessels. Room 5 may have acted as either a storeroom for cultic objects or perhaps as a *pre-favissa* (Bramlett 2009, 115–120).
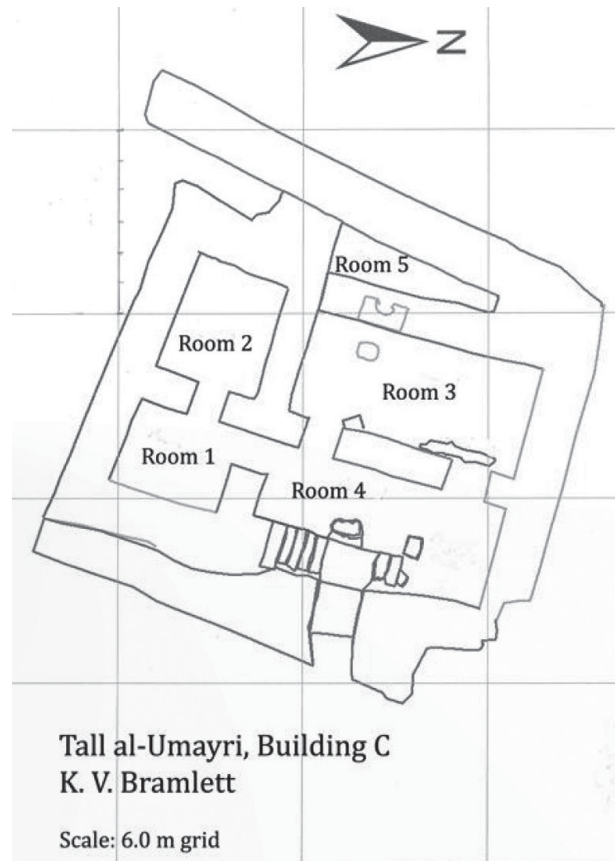
Fig. 5.2. Plan of Building C from Phase 14 at *Tell el-ʿUmērī* (Bramlett 2009, 287; Courtesy of Kent Bramlett).

Other than the finds in Room 5, the building was generally devoid of surface finds; thus, the functions of Room 1, 2, and 4 remain in question. However, as Clark notes, the purpose of this building was originally not primarily for domestic use, and seems to have served as some kind of cultic structure (Clark 2011, 48).

There are several indications of what might have transpired at *Tell el-ʿUmērī* during Phase 14. The first is that there is clear evidence of crisis in Building C. Floor 3, the last phase of use, was made of dirt which covered over the remains of a well-plastered floor from the phase previous. Along with this, in both Room 2 and Room 5 during Floor 3, evidence was found that hearths were constructed in each of these rooms indicating a change in use from a cultic or elite building to a 'vulgar or everyday' use (Bramlett 2009, 114, 121). Moreover, one of the two doors leading into Room 3 was blocked up in the final phase of the building, and the pottery remains found in Room 3

were vessels related to food consumption, all of which indicates crisis. Bramlett has stated that this is either evidence for a squatter settlement in the building after it was abandoned sometime in the 13th cent. BC or, as he believes, the signs of an economic downturn at the site (Bramlett 2009, 113 f.). Evidence of destruction was found in all the rooms of Building C. Burnt bricks, burned remains of roofing beams, collapsed mudbrick, and roofing detritus filled every room. The destruction debris seems to indicate that at least part of the building had a second floor. In Room 4, an ascending staircase was split down the middle, a doorjamb was also split down the middle, and the eastern exterior wall was partially separated, all of which the excavators believe point to a destruction by earthquake (Bramlett 2009, 123; Clark 2011, 49 f.). However, the problem with this destruction is the date.

Several issues arise when trying to date this destruction event. Due to the meagre pottery finds, this normal line of evidence is not a strong indicator for the date of destruction. Moreover, this lack of pottery evidence and the general paucity of finds may indicate that the building was abandoned after the period of crisis, seen in the possible squatters living in the building during its final phase of use. There is no evidence of warfare or human activity in the destruction, and the damage in Room 4 would seem to indicate that the building was destroyed by an earthquake. However, the problems with this earthquake is: was the building still inhabited at the time of this earthquake, and when did this earthquake occur? It is possible that an earthquake hit the site at the end of Phase 14, and at the end of Phase 13 when a part of the bedrock shelf collapsed under the MB rampart and caused repairs to be made to the glacis during Phase 12. There are no remains in Building C which would indicate it was used during Phase 13. It is also possible that there was only one earthquake at the end of Phase 14 and repairs were only made to the defensive system in Phase 12. Yet, it is also possible that an earthquake only occurred at the end of Stratum 13, and this earthquake caused the damage to the already abandoned Building C (Bramlett 2009, 123; Clark 2011, 81). Interestingly, during both Phases 13 and 12, there are no signs of occupation on top of Building C until the Iron II (Herr/Clark/Bramlett 2009, 81–83). This may

suggest a general avoidance of this structure similar to the avoidance of constructing over the Fosse Temple III at Lachish (Millek 2017, 128), and the Ceremonial Palace at Hazor.

Regardless of exactly when the damage to the building took place either in Phase 14 or 13, I would argue that the damage to the building most likely represents a destruction by earthquake, either during the 'squatter phase' or perhaps after this, once the building was abandoned. There is clear evidence of crisis at the site, and given this, the following change in both material culture and building techniques seen in Phases 13 and 12 is not surprising. While there is some continuity in the pottery, there is a general discontinuity in the assemblage, decoration, and manufacturing techniques, which would suggest some change in the social makeup of the site (Bramlett 2009, 109). Moreover, the meagre remains of Phase 13 would be a natural next step given the crisis and possible abandonment of the LBA site (Bramlett 2009, 109). The evidence from the destruction itself does not suggest human activity, and the evidence for earthquake damage to the building would thus indicate a natural cause over an accidental cause. It remains a possibility that this building was in fact abandoned before suffering collapse from an earthquake, which would classify it as a 'No Destruction: Post-Abandonment Earthquake'. However, there is not enough evidence to clearly support this option, and thus, it seems likely that the building burned due to the earthquake and the squatter occupation living inside of the structure. It is therefore classified as 'Natural: Earthquake'.

A second destruction event has been attributed to Phase 12 dated to the mid-12th cent. BC.[174] During Phase 12, it is likely that the settlement extended over the entire area while a

---

[174] It should be noted that Finkelstein has claimed that both Phase 14 and 12 should be re-dated. He claims that Phase 14 should be dated to the mid-12th cent. BC while Phase 12 should be dated to late 12th or early 11th cent. BC with its destruction taking place in middle or second half of the 11th cent. BC (Finkelstein 2011, 123). It goes without saying, that if this re-dating of the phases is substantiated, than only Phase 14's destruction event should be included in this study with the Phase 12 destruction falling out of the end of the LBA destruction range examined here. However, until Finkelstein's claims are substantiated, the traditional dating of both Phase 14 and 12 will be employed.
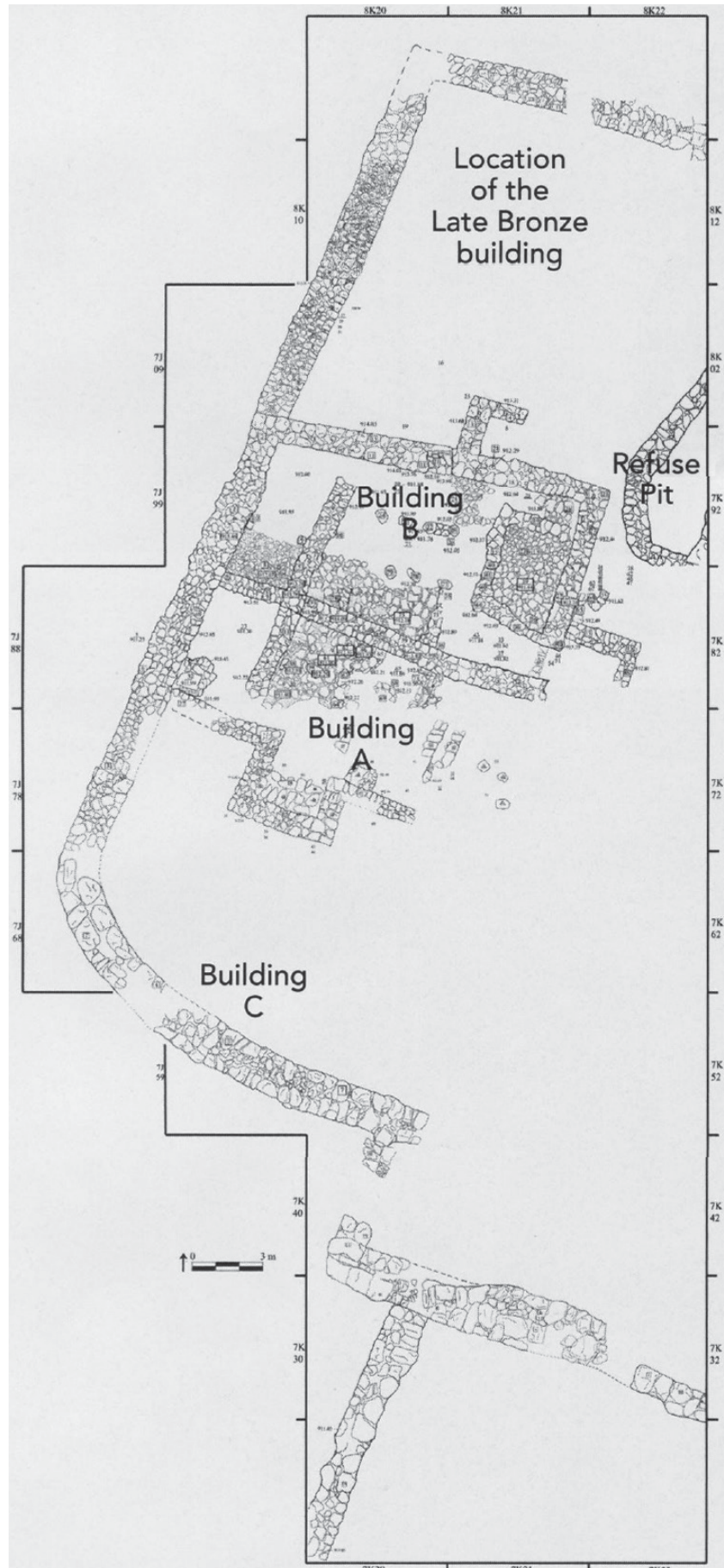
Fig. 5.3. Plan of Phase 12 at *Tell el-ʿUmērī* (Herr/Clark/Bramlett 2009, 83; Courtesy of Larry Herr).

two-metre-thick perimeter wall was constructed on top of the Middle Bronze Age rampart. Three houses were built on the inner face of the western section of the defensive wall named Buildings A, B, and C, near the LBA Building C but not over top it (Herr/Clark/Bramlett 2009, 82). Buildings A and B have been completely uncovered, with Building B being in the form of a typical 'four room' or 'pillared' house. Both buildings were completely destroyed in a fire, with destruction debris at some points reaching as high as two metres, seemingly with all of the belongings of the houses sealed under the destruction debris. The remains of at least four individuals, two adults, one likely male; one juvenile, about fifteen years old; and one child, were also uncovered in the destruction debris, where the bones were found burnt and disarticulated (Herr/Clark/Bramlett 2009, 88). Also amongst the destruction debris were five bronze weapon points and four stone ballistae/pounders or pounders (Herr 2000b, 171–173; Herr/Clark/Bramlett 2009, 86, 88). While the Iron I Building C has not been published completely, it too suffered destruction along with another fragmentary building, suggesting from the current excavations that the destruction was 'Site-Wide'.[175] Given the sudden nature of this destruction, as the houses seemed to have been burned with their contents intake, the human victims, and the weapons found in domestic contexts, the excavators have claimed that it is likely the site was destroyed by warfare (Herr 2000b, 174; 2008, 1849; Herr/Clark/Bramlett 2009, 86). Based on the evidence, it would seem likely that *Tell el-ʿUmērī* Phase 12 was indeed destroyed by an act of warfare. From the current evidence, it would also appear that the destruction was site-wide; however, this may change upon further excavation or publication of previously excavated material. Following this destruction, there was apparently a brief hiatus at the site during the second half of the 12th cent. BC until it was partially rebuilt, most likely in the 11th cent. BC (Herr/Clark/Bramlett 2009, 89). Given the above information, it seems correct to classify *Tell el-ʿUmērī* Phase 12 as 'Human Activity: Warfare'.

---

175 <http://www.madabaplains.org/umayri/research.htm> (last access 14.03.2016).

5.38. *Tell en-Nāʿam*

The destruction at *Tell en-Nāʿam* (Tel Yin'am) is not clearly dated to the end of the LBA, as it could have taken place in the mid-13th cent. BC. However, as it represents the end of this LBA site, it is included on this list. The final Stratum at the site was broken into two phases: XIIB and XIIA. There was no evidence of destruction from the transitions from Stratum XIII to XII; however, from the limited finds of Stratum XIII, it does appear the site was rebuilt upon different lines (Liebowitz [*ed.*] 2003, 45, 47–51). Stratum XII was made up of eight buildings and open spaces, with the largest, Building 1, assumed by the excavators to be the residence of a local ruler. Building 1 is the largest and most well-built structure in this stratum. In Stratum XIIB, this building was destroyed in a fire of unknown cause, as evidence of destruction debris was found in seven of the 10 rooms, including the courtyard. The fire was hot enough to crack basalt; however, the finds from this building have no clear indicator for the cause of the destruction (Liebowitz 1993, 1516; Liebowitz [*ed.*] 2003, 55–70).

In the following phase Stratum XIIA, Building 1 was rebuilt; however, the function of the building seems to have changed. Room 1 of Building 1, which in the previous phase acted as a storeroom, was subdivided by a mudbrick wall and was turned into an iron smelting area. A crude mudbrick wall was also built to divide Room 4 into two spaces, and another crude wall was built to separate Room 10 from the courtyard. This change in plan and function of the building, with the use of crude mudbrick, appears to be evidence of crisis at the site before Building 1 was again destroyed at the end of Stratum XIIA (Liebowitz [*ed.*] 2003, 83–87).

The construction of new walls continued in Building 2, as Room 4 was separated from Room 2 with the construction of a mudbrick wall. Rooms 2 and 5 of Building 5 were also subdivided by poorly constructed mudbrick walls. Buildings 1, 2, 5, 6, and 7 were destroyed at the end of Stratum XIIA, with general evidence of mudbrick collapse and fire. An intense fire was noted in Building 6 as the mudbrick was vitrified, creating a layer of vitrified material overtop of the floor (Liebowitz [*ed.*] 2003, 87–97). However, the cause for this destruction is

again unclear. The material remains vary from room to room, with some being generally devoid of finds, others having meagre finds, and some having precious finds such as a silver chain and jewellery found in Building 6. There is no clear evidence to suggest Human Activity, and after the destruction, there was a brief squatter settlement found in Buildings 1, 3 Upper, 5 and 7. This Post Stratum XIIA consisted of poorly made walls, and the finds generally consisted of scattered remains of ash, bones, and some pottery (Liebowitz [*ed.*] 2003, 83–98). The following Iron I occupation at the site, which appears to have been shortly after the Post Stratum XIIA, seems to have followed in the LBA building tradition along with having some continuity in the ceramic forms (Liebowitz 1993, 1516). With the evidence for crisis at the site and no clear evidence of human activity, a 'Natural' or 'Accidental' cause for the destruction of Stratum XIIA seems likely. With the destruction of many of the buildings, the people remained in the destroyed buildings until the site could be rebuilt with a general continuity into the Iron Age. However, the evidence is not clear enough to securely determine a cause, and the destruction is classified as 'Unknown'.

5.39. *Tell eṣ-Ṣāfī* (Gath)

A possible destruction was detected in Area E Stratum 4a. However, with the ongoing excavations at *Tell eṣ-Ṣāfī* (Gath), the excavators found no other evidence of destruction and detected continuation or abandonment (Millek 2017, 125). Therefore, *Tell eṣ-Ṣāfī* (Gath) is classified as 'No Destruction'.

5.40. *Tell es-Saʿīdīye*

Remains of a destruction event in the mid-12th cent. BC were found in every area of excavation at Tell es-Saʿīdīye. Little is known of the phase before the destruction of Stratum XII. Evidence of a previous Stratum XIII was found in Area AA and possibly in Area KK, but other than this, the only remains come from Stratum XII (Tubb/Dorrell/ Cobbing 1996, 27; 1997, 68). An Egyptian style residence was uncovered in Area AA having no stone foundation, but rather being built on a layer of *pisée* with a mudbrick foundation on top. The basic plan of this building seems to have remained the same in Stratum XII; however, the northern entrance on the western side of the building had been blocked with a carefully made mudbrick wall. Yet, another entrance into the building remained when the building was destroyed (Tubb 1988a, 43; 1988b, 40; 1993, 1298; Tubb/Dorrell/ Cobbing 1996, 27). Evidence of fire was found throughout this structure, as above the clay floor was found a dense deposit of broken pottery vessels and debris made of burnt wood, brick, and pottery. The fire burned the walls of the building and the stones which were found blocking some of the doorways were cracked from the heat.[176] Charred material was found throughout the building such as wooden stair treads, roofing timbers, wooden spindle whorls, and even a reel of cotton. The most intense fire seems to have been in the stepped passageway which led north from the east west street on the west side of the area. This may be due to the large amount of timber found in the area, as there were possibly wooden beams supporting the roofs. Pottery vessels were found broken throughout the debris, but the excavators believe that, given the lack of finds, this building may have been emptied of its precious goods by the inhabitants of the city (Tubb 1986, 118 f.; 1988a, 43; 1988b, 40). In another part of Area AA, the excavators uncovered two passageways or channels which stepped down a series of terraces, possibly used to transport water or feed the bath in Area E. The northern passage was at some point blocked by large boulders, and this area also demonstrated evidence of burning of the walls and mudbrick destruction. However, the passages themselves showed little evidence of burning (Tubb/Dorrell 1993, 58 f.).

In Area KK, two mudbrick buildings were uncovered, also built in the Egyptian style, with the western building remaining unexcavated. However, the eastern building revealed a room with a stone paved surface. The entire room was filled

---

176 It is unclear from the preliminary reports if these stones fell into the doorway or if they were placed there before the destruction much as the northern entrance was blocked.

with a metre of debris consisting of burnt mud-brick, ashes, and charred wood. While the alleyway was relatively free of destruction material, it did have a characteristic feature of Stratum XII, being that the point of entry was blocked with heavy stones before destruction (Tubb/Dorrell/ Cobbing 1996, 30 f.; 1997, 67).

Another large public building in an Egyptian style with no stone foundation was uncovered in Area EE. This building was found adjacent to a mudbrick casemate wall which had been constructed atop an earlier solid wall. In the public building, there was a possible bath complex, and in another part of the building there was a room with an inclined floor with the remains of some 50–60 Egyptian storage jars. The floors of the building also had broken pottery found on them, more so than that found in the 'Egyptian Building' in Area AA. Both the public building and the casemate wall were destroyed or burned at the end of Stratum XII (Tubb 1986, 119; 1990, 26–29; 1993, 1298; Tubb/Dorrell 1993, 59 f.). In Area MM, the main entrance into the city was uncovered. A pebbled paved road led to a vaulted mudbrick passageway which cut through the casemate wall. Both the gate chamber and the passageway were also filled with the typical destruction debris found in Stratum XII (Tubb/Dorrell/Cobbing 1996, 31–33).

Following this destruction event, the cemetery at *Tell es-Saʿīdīye* was abandoned, and the site was generally left in ruin. A small squatter settlement called Stratum XIB was uncovered in the 'Egyptian' style building in Area AA seen mainly by placement of hearths and grinding stones found within two of the rooms of the building. The people seemed to have levelled off the debris and made rough surfaces, and this brief settlement is dated to the late 12th cent. BC. There were also some remains which might have been a squatter settlement in Area EE, but this is unclear (Tubb 1988a, 43; 1988b, 39 f., 45; 1993, 1298). After this, the site was abandoned for a hundred years until it was partially reoccupied.

The cause of this site-wide destruction is unclear. This is partially because this information is based on preliminary reports, and once this site is fully published, the answer may become clearer. Also there are many complicated processes

going on at the site. The first is that there is evidence of crisis in the blocked doorways, and it is also possible that the 'Egyptian' structure in Area AA might have been abandoned prior to destruction. This suggests that the site was under crisis before being destroyed. There is also evidence at the site of faulting found in Area AA 900, with one of the cracks causing a 50cm downshift in the stratigraphy. The problem, though, is that it is not known if this faulting is associated with this period or if it occurred later (Tubb/Dorrell 1993, 58). There is also no clear evidence of warfare or human activity other than the possible abandonment. An accidental cause would be difficult to explain, the site-wide nature of the destruction event suggesting that a natural cause is most likely. With the date of the destruction in the first half of the 12th cent. BC and its close proximity to *Tell Dēr ʿAllā* it is possible that *Tell es-Saʿīdīye* was destroyed in the same earthquake that brought about the end of Phase E. A possible scenario for the end of *Tell es-Saʿīdīye* is that the site was undergoing crisis and partial abandonment when it was struck by an earthquake which caused the destruction of the site as, much like at *Tell Ḫēdar* (Tel Mor), the buildings had no stone foundation, leaving them more susceptible to earthquake related damage. The majority of the people left, other than some squatters who eventually abandoned the site. However, with the present state of information, the destruction is classified as 'Unknown'.

5.41. *Tell eš-Šerʿīa*

Little has so far been published of the finds from *Tell eš-Šerʿīa* (Tel Sera'). Therefore, much like many other sites, it is difficult to come to any conclusion as to the nature of the destruction. Two buildings were uncovered in Area A. In the last LBA Stratum IX, on the eastern slope, an 'Egyptian governor's residence' was uncovered, called Building 906. This building is described as having three different phases; however, there is little information about the building other than the description of the destruction. Mainly, what can be said from this is that the building appears to still have been in use, as it had many of its

contents still intact when it was burned in the mid-12th cent. BC (Oren 1972, 168 f.; 1982, 166; 1993, 1331; Oren/Netzer 1973, 253; 1974, 265). The destruction is described as a: '... considerable accumulation of broken bricks and pottery vessels on top of the burned bricks and beams testifies to a thorough destruction by fire that turned the bricks red and resulted in the collapse of the upper stories' (Oren 1982, 166). However, little else is said. It is possible that Building 906 demonstrates signs of crisis architecture, as Martin has recently stated that 'The interior layout of Building 906 ... underwent several changes – the addition of partition walls and the blocking of walls ...' (Martin 2011a, 222). Given the limited information available, at this time it is unclear if the blocking of doors and adding of partition walls was part of the normal life cycle of the building or if it is evidence of crisis. Thus, until further detailed information is made available, the evidence for crisis is tentative.

In another part of Area A, a cultic structure was uncovered, called Building 1118. The structure was first built in Stratum XI and continued to be used with some alteration through Stratum IX when it was destroyed by fire in the mid-12th cent. BC (Oren 1982, 165; 1993, 1330 f.). Some Philistine wares do appear at the site after the destruction of Building 906 in Stratum VIII, along with a change in the architectural plan. Oren believes that the site was destroyed either by the Sea Peoples, or by raiding nomads from the Negev (Oren/Netzer 1974, 265; Oren 1982, 166; 1993, 1331). Given the sparse published information on the destruction, there is little that can be said concerning it. It does appear that Building 906 was destroyed before it was abandoned, still retaining many of its contents, but the cause of this is unclear. It also remains unclear if Building 906 has evidence of crisis architecture or not. Additionally, while Building 1118 was also destroyed by fire, there is little information on the nature of this event. After this destruction event there is some introduction of 'Philistine' material culture in Stratum VIII but how much of a material cultural change took place is not mentioned in the published reports. Therefore, until more information is published, the destruction is classified as 'Unknown'.

5.42. *Tell eṭ-Ṭuyūr*

The destruction of a single building, most likely a storeroom, at *Tell eṭ-Ṭuyūr* (Tel Sippor) Stratum III is the only evidence for destruction at the site. A cultic building which was also uncovered in Stratum III had no evidence of destruction and was rebuilt according to the same plan, with no evidence of destruction between it and the Stratum II structure (Millek 2017, 131). With no evidence for human activity in the destruction of the single building, and the general continuity between the two phases, the cause for this fire was most likely 'Natural' or 'Accidental'. However, as this is uncertain, this single building destruction is classified as 'Unknown'.

5.43. *Tell ʿĒṭūn*

The LBA has not been completely uncovered at the site of *Tell ʿĒṭūn* (Tel ʿEton). However, a possible destruction has been uncovered at the site dated to the first half of the 12th cent. BC. Evidence of the LBA has been uncovered in both Areas B and C, with the LBA site likely covering the mound (Faust 2011; 2014, 588; Faust/Katz 2015, 90 f.). The evidence for a destruction at the end of the LBA is at the moment minimum. In situ vessels have been uncovered in Area B and in Square V46a, 'massive layer of burnt mudbricks' (Faust 2014, 588) was uncovered. With the current state of excavation, it is impossible to know if there was a destruction at the site, and if so, what the possible cause might have been or the events leading up to it. The excavators agree with this, as Faust states: 'We must wait for more data before any definite conclusion can be reached' (Faust 2014, 588). Therefore, at the moment, it will be tentatively classified as 'Unknown' until further results are uncovered at *Tell ʿĒṭūn*.

5.44. *Tell Ǧemme*

In another early 20th cent. excavation, Petrie uncovered a destruction event at *Tell Ǧemme* (Tell Jemmeh)[177] in his Phase G–H. He describes it as

---

177 Published as Gerar.

burnt floors found in various parts of the town, and at the time he ascribed the burning to the Philistines and dated it to some time shortly after 1194 BC (Petrie 1928, 6). However, Albright (1932, 74) and Wright (1939, 460) argued that this burnt layer could not be associated with the Philistines, as they dated the destruction event to the middle of the 10th cent. BC. Moreover, in the van Beek excavations at *Tell Ǧemme*, they uncovered no evidence for destruction at the site during the transition from LBA to Iron I.[178] David Ben-Shlomo would also date the burnt layer in Petrie's G–H to Iron I or later.[179] Thus, given this information, unless other evidence for destruction at the end of the LBA is uncovered at *Tell Ǧemme*, it must be classified as 'No Destruction'.

5.45. *Tell Ǧerīše*

The question of whether or not *Tell Ǧerīše* (Tel Gerisa)[180] was destroyed is one which pits modern excavation results against those from the early part of the 20th cent. Sukenik, the original excavator of the site, believed that a flourishing city was completely destroyed around 1200 BC and the site abandoned (Avigad 1976, 578; Herzog 1993a, 481). However, the little information that was published from his excavation yields few clues as to whether there was a destruction and exactly what the circumstances of the destruction were. Cook states about early results from the site that: 'From Vincent's summary, and from an account given in a Hebrew journal and translated in the Jewish World (Nov. 22nd), we gather that traces of a conflagration at the close of Bronze Age III point to a cataclysm which may no doubt be due to the Philistine invasion. Beneath this are Aegaeo-Mycenaean sherds' (Cook 1929, 114 f.). However, other than this, there are only possible vague references to a destruction event at the end of the LBA (Sukenik 1934; 1938; 1944). The picture from the recent excavations at the site, however, offer a different view of the end of the LBA.

Herzog found two large LB II buildings in Area A and C. Both given their size and construction would seem to have been palaces or buildings which served an important function. However, both buildings were found abandoned, with the building in Area A being abandoned first and the building in Area C abandoned second (Herzog 1982, 30 f.; 1991, 121 f.; 1997, 183; Herzog/Tsuk 1996, 60–62). As Herzog states about the building in Area C: 'The floors were generally cleared of finds, suggesting that movable objects had been removed before the building was abandoned' (Herzog/Tsuk 1996, 62). Moreover, in Area D, which mainly had evidence of Iron Age occupation, there was one level of the end of the LBA occupation, but: 'It was found that the latest LB stratum was abandoned, as there are no traces of destruction by fire' (Herzog 1990, 52). The Iron Age occupation was not found in the centre of the tell where Areas A and C were located, and Iron Age remains were found in Areas B and D away from the majority of the LBA finds (Herzog 1982, 30 f.; 1983, 123; 1988, 61; 1990, 52; 1993a, 483). There are thus two conflicting pictures. While Sukenik made mention that the entire LBA city he uncovered was destroyed in a conflagration, in the three areas of excavations which Herzog found LBA material, there were only signs of abandonment with no evidence of fire. The final LBA palace was emptied of most of its goods before being abandoned, and in Area D, the LBA occupation was abandoned before a subsequent Iron Age reoccupation. Given that there is only a vague reference that the city was indeed destroyed, and that all subsequent excavations found no evidence of destructions and only abandonment, it is in my opinion correct to classify *Tell* Ǧerīše as having 'No Destruction'.

5.46. *Tell Ḥēdar*

There are two destruction events which could be associated with the end of the LBA at *Tell Ḥēdar* (Tel Mor): both the end of Stratum VII Building B, and Stratum VI Building F (*fig. 5.4.*). Building B was originally constructed in Stratum VIII as a large square structure built in an Egyptian fashion and resembling an Egyptian fort or governor's residence (M. Dothan 1993, 1073; Barako 2007a, 20–22;

---

178 Van Beek 1993, 668–669; Ben-Shlomo 2012; 2014a; 2014b, 1056; Personal Communication 18.08.2015.
179 Ben-Shlomo, Personal Communication 18.08.2015.
180 Also spelled Jerisha.

Fig. 5.4. Plan of *Tell Ḥēdar* Building B Stratum VII (Barako 2007a, Plan 2.4; Courtesy of Tristan Barako).
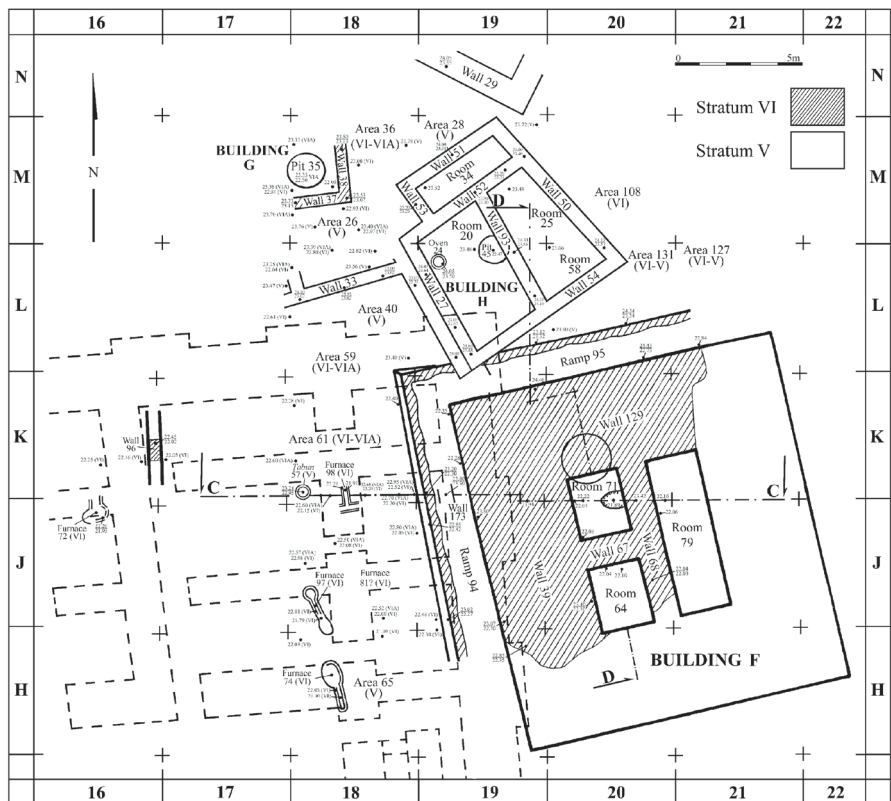

Fig. 5.5. Plan of *Tell Ḥēdar* Building F Stratum VI–V (Barako 2007a, Plan 2.4; Courtesy of Tristan Barako).

2007c, 241). Two other small buildings were partially found to the east of Building B. Building C had a paved mudbrick floor and Building D, found to the north, also had a paved mudbrick floor, though little else was found of these structures (Barako 2007a, 23).[181] Stratum VIII Building B was destroyed, as a layer of debris 0.9m thick separated it from Stratum VII. As Barako states: 'A thick destruction layer, comprised mostly of fallen mudbricks, separated the Strata VIII and VII floors of Building B' (Barako 2007c, 242). There was a lack of any evidence of burning, and Building B was rebuilt as its layout remained the same, though Buildings C and D seem to have gone out of use. Because there was a lack of any signs of fire, the original excavators believed that this destruction event was caused by an earthquake (Barako 2007a, 25).

With the rebuilding of Building B, the site continued to exist until Building B was again destroyed at the end of Stratum VII. This destruction is described as: 'A heavy destruction layer, in places as thick as 1.5 meters, covered the buildings of Stratum VII. Although thickest in the north of Building B, this layer was exposed in every room excavated. Unlike the collapse that separated Strata VIII and VII, it contained a large amount of ash and burnt mudbrick. Apparently the site was abandoned for a time after this fiery destruction, as evidenced by a thin, superimposed layer of windblown sand' (Barako 2007a, 25). This destruction was attributed by M. Dothan to either the Egyptians in the punitive campaign of Merneptah or to the Israelites (M. Dothan 1993, 1073). However, Barako believes, given the continued presence of Egyptian pottery at the site, the Egyptian answer is unlikely. He states: 'It is more reasonable to suppose, instead, that attacks on Egyptian garrisons (such as Tel Mor) by rebellious Canaanites (e.g. Gezer) prompted Merneptah's campaign … If any group, then, is to claim responsibility for the destruction of Stratum VII, it should probably be the Canaanites' (Barako 2007c, 242).

Building B was abandoned for a period of time and was not rebuilt. Occupation was renewed at

the site with the construction of Building F in Stratum VI. Building F was to the east of Building B, with the western edge of Building F resting on the destroyed remains of Building B's eastern side (*fig. 5.5.*). This building was described by Dothan as a migdol as it was a square building with massive 4m thick walls (M. Dothan 1993, 1073). The building seems to have had a second story which would have been reached via a ramp. To the west of Building F, five furnaces were uncovered along with slag and bronze splatter, indicating that the area was used as an open air smelting area, as no walls were found in association with the furnaces. A partial building called Building G was also uncovered; however, only a poorly preserved corner of the building was found (Barako 2007a, 26–30). Building F was also destroyed. Barako describes it saying: 'Stratum VI also ended in destruction. Numerous whole or almost whole vessels lay smashed on the floors of Building F, particularly in Room 71. On top of these vessels were fallen mudbricks and ten more broken pots, which, taken altogether, indicates a second story. After this destruction, Ramps 94 and 95 fell out of use, as did Building G' (Barako 2007a, 26–30). No reason or cause for this destruction was given.

Following this destructions of Building F at the end of Stratum VI, it was rebuilt in Stratum V without the ramp as a new building, Building H was built over Ramp 95. Barako again describes the end of this stratum and building: 'Because there is no mention of a destruction level having ended Stratum V, it is best to assume that its buildings, particularly Building F, simply fell out of use. In the succeeding strata (VI–I), the character of the site changed considerably. A single massive building no longer dominated the tel as in the five preceding strata (IX–V). Instead, the settlement became more open with relatively little architecture' (Barako 2007a, 32). There were only sparse remains of the following Stratum IV and it may have been a reuse of the structures from Stratum V; it too ends seemingly without destruction (Barako 2007a, 32 f.). With all of this, there remains the question, what caused the destructions events at the end of Stratum VII and VI?

There are several factors which must be taken into account when examining these destruction events. The first is that the local 'Canaanite'

---

[181] It is unclear if Buildings C and D should be dated to Stratum VIII or VII.

pottery continued to develop in a steady pattern throughout Strata IX through V without any signs of significant change. This is even true moving into Stratum IV as while there was the disappearance of Egyptian and Egyptianised pottery along with the introduction of some Philistine wares, there remains a strong continuation of the local 'Canaanite' ceramic tradition (Barako 2007b, 45 f.). Likewise, Egyptian and Egyptianised pottery was found throughout Strata IX through V. In Strata IX and VIII, Egyptian and Egyptianised pottery represented 4% of the total assemblage, this doubled in Stratum VII to 9%, increased again in Stratum VI to 15% and dipped in Stratum V to 10%. Some Egyptian and Egyptianised pottery was found in the following strata; however these sherds most likely came from Strata IX through V (Martin/Barako 2007, 149 f.). Moreover, no locally made LH IIIC:1b pottery was found at the site. Philistine Bichrome and Ashdod ware was found in Stratum IV–III; however, it is only 6% of the total assemblage, and this number is most likely inflated, as the excavators collected all decorated sherds (Barako 2007b, 69). Thus, throughout these strata, there is a general cultural continuity, and even the disappearance of Egyptian and Egyptianised pottery is not associated with any of these destruction events. Rather, it is associated with the abandonment of the site. What then might have caused these destruction events? The possible answer may lie in the Egyptian construction technique used to build Buildings B and F.

Both Building B and Building F were built in a traditional Egyptian style, that is, without a stone foundation. Moreover, both buildings were built with a foundation layer of sand (Barako 2007a, 20, 26). Being constructed on sand, the buildings would have both been more prone to damage by earthquakes. As Marco describes for the Area G gate at Megiddo: 'The gate has no foundation, a fact that could have made it particularly vulnerable to seismic activity' (Marco *et al.* 2006, 570). The same would have been true for both of these buildings, as a foundation of sand would have made them more prone to earthquakes and other types of natural destructions. As Brandl noted, the use of sand as a foundation may have also allowed for water to seep below the foundation, causing structural weakness (Brandl 2010, 254). He goes on

to point out that this was likely part of a foundation ritually referring to Weinstein's sixth act of an Egyptian foundation ceremony ritual (Weinstein 1973, 5 f. cited in Brandl 2010, 254 f.). To paraphrase from Matthew 7:24–27, it was the foolish man who built his house on sand rather than on rock, as it is clear from the parable that a sand foundation would not allow a house to stand up to a storm. Thus, given this information, it would be likely that both the Stratum VIII and VI destruction events were caused either by earthquakes or some other natural disaster. There is no evidence of warfare, there is no evidence of burning, and there is cultural continuity to both following strata. This leaves then the destruction of Stratum VII. Like Strata VIII and VI, there is no evidence of warfare in the destruction of Stratum VII. While Building B was abandoned after its final destruction, there was strong cultural continuity at the site both in the local 'Canaanite' pottery and in the Egyptian and Egyptianised pottery. While there is no clear answer for the cause of this destruction, given the above information, a natural cause is still likely. Thus, Stratum VII is classified as 'Natural?' and Stratum VI is classified as 'Natural: Earthquake?'.

5.47. Tell Irbid

Little has been published of the LBA remains from Tell Irbid. On the west side of the tell, domestic structures were found built over MBA structures, and on the south west side, a public complex dating to the LBA was uncovered, called Structure I. Evidence of fire was found in this structure, as wooden beams were burned causing the collapse of the mudbrick superstructure. One room contained burnt lentils, olives, grains, and possibly olive oil. The excavators place this destruction event to 1200 BC and to a natural cause (Lenzen/Gorden/ McQuitty 1985, 153–155; Lenzen 1997, 181). However, ^{14}C dates of the grain, which most likely was from the time of destruction, place the date of the event at the latest to 1260 BC (Strange 2008, 284). Therefore, it is uncertain if Tell Irbid should be included in a list of sites destroyed at end of the LBA. After this destruction event, the debris was levelled off and minor industrial and domestic

structures were built with a new construction technique (Lenzen 1997, 181). The cause of this destruction is unclear from the current published evidence. Given the burnt food, it was most likely sudden; however, this could either represent a natural disaster, an accident, or an assault on the site. Therefore, for the time being, it is classified as 'Unknown'.

5.48. *Tell Kēsān*

Only meagre remains of the end LBA at *Tell Kēsān* (Tell Keisan) have been uncovered (see Millek 2017, 125 for a full discussion). A brick building from Stratum 13 suffered some destruction attested to by debris; however, little more can be said. Therefore, the scale and cause must be classified as 'Unknown'.

5.49. *Tell Qassīs*

Much as at *Ǧezīret en-Nāmī* (Tel Nami), little can be said of the end of the LBA at *Tell Qassīs* (Tel Qashish). The majority of what is known is based on a single square S/18 found in Area A, as there is no strong evidence to say that there was a LBA occupation in Area B. The material that was uncovered in Area A was disturbed by events during Israel's War of Independence in 1948, where several trenches were dug and a cement bunker was constructed in the area. This disturbance of the remains was compounded, as the LBA materials were found close to the surface and were severely damaged by erosion and ploughing (Ben-Tor/ Bonfil 2003b, 331; 2003c, 369). The last clear LBA stratum was Stratum VI dated to LB IIA, and this was found mainly in two squares which ended in a fire. However, little more of this destruction event is described (Ben-Tor/Bonfil 1988, 108; Ben-Tor 1993b, 1200, 1203; Ben-Tor/Bonfil 2003a, 245, 276). Stratum V may be the last LBA stratum; however, as it was found in a square, and given that the walls found in this area could date either to Stratum V or to the first Iron I Stratum IV, very little can be said of the end of the LBA at *Tell Qassīs*. The ceramic assemblage in Stratum V does appear to be reduced from Stratum VI. However,

the ceramic assemblage for Stratum V was created from the finds in a single locus and most likely does not represent the whole assemblage (Ben-Tor/Bonfil 2003b, 331, 337). As the excavators state: 'We therefore suggest that Stratum V represents the latest LBA occupation of the site, while Stratum IV should be dated to Iron I. It should be recited, however, that due to the limited extent of the excavation, the severely damaged state of the walls, and the highly disturbed nature of the ceramic assemblage attributed to Strata V–IV, the above observations should be treated with reservation.' However, Ben-Tor has stated that: 'Traces of the fierce destruction by fire of the LBA settlement (layers of ash, brick rubble, and an abundance of pottery) are evident wherever remains of the period have been uncovered' (Ben-Tor 1993b, 1203). Nonetheless, despite this being said, there is no other description of a destruction event. Given the fragmentary nature of the remains and the limited area they were uncovered, it is unknown if there was a clear destruction at the end of the LBA, or how this transition took place. Therefore, the destruction is classified as 'Unknown'.

5.50. *Tell Qēmūn*

Little is known of the LBA at *Tell Qēmūn* (Jokneam), as much of the LBA material either lies covered by the Iron Age remains or was completely removed by builders in the Iron Age. Thus, the discussion is based on a limited area found outside of the Iron II walls (Ben-Tor 1993a, 808). What is known comes from two excavations Area A4 and A1. After an approximately 100 year occupational gap following Stratum XX, occupation resumed at the site in both Areas A4 and A1 in Stratum XIXb (Ben-Tor/Ben-Ami 2005, 241 f.). In Area A4 Stratum XIXb, the excavation uncovered a large dwelling structure which yielded artefacts attesting to its domestic nature, such as grinding stones and other household objects (Ben-Ami 2005a, 151–153). Likewise, a stone paving which most likely served as a courtyard was found in Area A1, though few architectural remains were found in this area from this phase. A dark layer of ash was found covering this phase in Area A1; however, no evidence of destruction was found in Area A4 from

the same phase (Ben-Ami 2005a, 162; Ben-Tor/Ben-Ami 2005, 242). There is too little information to know the cause of this fire; however, given that it was found in only a small area, it was most likely natural or accidental.

Following this localised fire, there was a general continuation in the architecture and the ceramics at Tell Qēmūn. In Area A4, the structures continued to use the same plan as the phase previous, with only minor changes and the raising of some of the floors. A similar situation is found in Area A1, as there was an attempt to revive this portion of the site, with floors raised and walls repaired, though there is no evidence of new construction. The excavators take this as a possible sign of decline which could also be a possible sign of crisis, though this is unclear (Ben-Ami 2005a, 154, 162, 164; Ben-Ami 2005b, 187). What has been found of Stratum XIXa was destroyed in a fire. A metre of debris and evidence of fire was uncovered in Area A4. Brick collapse was found in the structure and was also uncovered in an alleyway found next to it. In Area A1, they uncovered a burnt layer; however, the physical evidence for destruction is stronger in Area A4 (Ben-Ami 2005a, 154, 164). Ben-Ami suggests that the destruction may have been abrupt given the numerous intact and nearly intact vessels (Ben-Ami 2005b, 183); however, there is too little evidence to come to any solid conclusions, whether the site was burned abruptly or not, and to the cause of the fire. After the fire, there was an occupational gap followed by a different settlement pattern in Stratum XVIII. However, the finds from this stratum were meagre (Ben-Tor 1993a, 808 f.; Zarzecki-Peleg 2005a, 35; 2005b, 227). Thus, the classification is 'Unknown'.

5.51. Destruction in the Southern Levant at the End of the LBA: Conclusions

The question which is the focus of this chapter is, did the destruction of cities and towns cause a breakdown in interregional exchange and thus the collapse? To examine this question in detail, 54 destruction events dated roughly between 1250 and 1130 BC were examined with the goal of classifying both the scale of the event and the cause, if possible, while noting the pre and post destruction

conditions at the site. The answer, though, to this question, based on this examination, is not simply yes or no. For some sites, the answer could be claimed to be yes, such as the destruction which brought about the end of the LBA at Hazor. Certainly interregional exchange ceased at the site after this destruction event; however, this is because the settlement at the site ended with the destruction until later in the Iron I. Therefore, yes, interregional exchange did stop after the destruction, but the more likely cause of this cessation is that the site was already under crisis before it was destroyed. It was this crisis, coupled with the destruction, which caused the abandonment of the site, which in turn meant interregional exchange ceased. Therefore, it is not likely that the destruction itself was the true cause of the cessation of interregional exchange at Hazor, but rather it were the pre-existing social conditions, which caused the site to be abandoned after the destruction event, which in turn meant that there was no longer anyone to participate in interregional exchange (see *Map 1* and *Appendix I*).

For 17 sites,[182] the answer is clearer, as destruction did not play a role in the cessation of interregional exchange due to the fact that, from the current material, there is no evidence of destruction. While in the past these sites have been cited as being destroyed at the end of the LBA, these destruction events were either misdated, misidentified, or assumed to exist based either on the lack of evidence or poor material remains. Thus, even for a site such as Ashkelon which may have been the main entry point for Cypriot pottery during LB IIB, there is no evidence that the site was actually destroyed. Thus, the cessation of Cypriot exchange with Ashkelon was not due to the supposed destruction of the site, but rather would have been caused by other factors.[183] The same can be said for *Ḫirbet el-Burğ*, which both at the end of the LBA and during the Early Iron Age had a strong exchange with Egypt, one which

---

182 *Tell Abū Ḥaraz, Tell Abū Ḥawām*, Acco, *el-ʿAfūle*, Amman Airport Structure, Ashkelon, *Tell el-Baṭāšī, Ḫirbet el-Burğ, Tell eṣ-Ṣāfī* (Gath), *Tell Ǧerīše, Tell el-Ḥesī, Tell Ǧemme*, Tel Mevorakh, Tel Michal, Khirbet Rabud, Shiqmona, and *Ḫirbet Tell eḏ-Ḏurūr*.

183 See the discussion in the following chapter.

continued from one period to the next with no evidence of destruction in between, meaning interregional exchange never ceased at the site (Gilboa 2015). In Jordan, there is also little evidence to suggest that destruction was the cause of the decline in interregional exchange. At the Amman Airport Structure, there is little to indicate that the building was indeed destroyed at the end of the Late Bronze and was likely abandoned after becoming a squatters' residence. Moreover, interregional exchange at the site was likely far less during the 13th cent. BC than in the 14th cent. BC when the majority of the non-local items presumably arrived at the site. The cause of the downturn in interregional exchange at the site was again not because of a destruction event, but because of a social issue at the site, which resulted already in a downturn in exchange, followed by a period of crisis where the building's original function was lost, which indicates some other type of social issue or conflict rather than destruction being the cause. Therefore, for these 17 sites, there is no evidence to suggest that a destruction event was the cause of the decline or cessation of interregional exchange at the end of the LBA, as there is no evidence of a destruction.

Aside from these 17 sites which have no evidence for a destruction event, there are still other sites which, while having a destruction event, have little evidence to support that these events caused a cessation of interregional exchange. One example is Lachish, a site which has yielded large amounts of non-local materials including the most Cypriot sherds in the entire Southern Levant. At the end of the 13th cent., the accidental fire in Area S and the ritual termination of the Fosse Temple III would not have been cause for interregional exchange to cease at the site. Moreover, the final destruction of the LBA site at the end of Level VI took place after interregional exchange with Cyprus and Greece had already ceased.[184] Thus, even though this destruction event brought about the abandonment of Lachish for some 300 years, it cannot have been the cause for the cessation of interregional exchange at the site, as it happened after the fact. The same can be said for

the destruction events at both Megiddo and Beth-Shean, which occurred well after interregional exchange with Cyprus and Greece came to an end. Therefore, any site whose destruction event occurred in the mid to late 12th cent. BC cannot be associated with the end of interregional exchange, which includes *Tell eš-Šerīʿa, Tell es-Saʿīdīye, Tell el-ʿUmērī* Phase 12, *Tell Dēr ʿAllā,* and *Tell Ḫēdar* Stratum VI. If interregional exchange with areas such as Cyprus and Greece had already come to an end before the destruction event occurred, then the destruction, no matter the cause, cannot be associated with the end of interregional exchange.

Moreover, for some sites, the developing social situation at the site was more likely to be the cause of cessation of interregional exchange than the destruction event which took place at the site. For *Tell el-ʿUmērī* Phase 14, Building C was already a squatter's house, no longer maintaining its original function by the time it was likely destroyed in an earthquake, the same with the building at *Tell el-Fuḫḫār* which too had become a squatter's house before being destroyed. Both of these sites were already under crisis, and both structures had lost their original function, and it is likely that if any interregional exchange occurring at either site was brought to an end, it was due to the crisis, not to the destruction. The same can be said of *Tell en-Nāʾam* which also went through a phase of crisis before being destroyed. It is more likely that the social crisis which changed these sites to squatters' settlements or buildings showing crisis architecture would have been the reason for a cessation of interregional exchange, rather than the destruction event which brought an end to these sites under crisis. This is similar to the discussion of Hazor mentioned above. While Hazor was destroyed in the mid-13th cent. BC before interregional exchange with Cyprus and Greece came to a complete halt, the site was under crisis and already partially abandoned before it was ever destroyed. It is this crisis at the site, which is more likely to be the cause of a cessation of interregional exchange, which was brought about completely when the site was abandoned after being partially destroyed. However, again, it is reasonable to conclude that the reason for the abandonment of the site was more related to the pre-existing crisis and abandonment of Hazor than the final destruction.

---

184 See the following chapter.

Similarly, there are several sites where there is little evidence of destruction. Ashdod, for example, has very little evidence of a destruction event at the end of the LBA. As Yasur-Landau states: 'In Ashdod, there is no real evidence for destruction' (Yasur-Landau 2010a, 340). Given this, a destruction event is not likely to have been the cause of a cessation of interregional exchange. The same can be said of other sites as well, such as Gezer XIV, where there is again little evidence of destruction,[185] *Tell Qassīs*, which only has partial evidence of a destruction event, or Tel Miqne/Ekron, *Tell Abū Hurēre*, and *Tell eṭ-Ṭuyūr* which only have evidence of a Single Building destruction. Thus, again, for these sites there is too little evidence for a destruction event, firstly to conclude that the entire site was destroyed, and secondly that these events were the cause of the cessation of interregional exchange at the sites.

There are of course some instances in which, because of the nature of the remains, it is impossible to know if a possible destruction event was the cause of the break in interregional exchange. These sites are: *ez-Zīb*, *Tell Bēt Mirsim*, Beth-Shemesh, *Tell el-Ifšār*, *Tell Kēsān*, and Umm ad-Dananir. Until further information is made available or further excavations uncover additional evidence of the end of the LBA, it cannot be known if a destruction event was actually the cause of a cessation of interregional exchange at the site. However, for a site such as Beth-Shemesh, this is still unlikely, as the Iron I site was recovered after the possible destruction (Bunimovitz/Lederman 2009, 116–123).

A site whose destruction could be associated with the cessation of interregional exchange is the final destruction of the 'Egyptian Residence' at Aphek. The destruction of Stratum X-12 was not preceded by any sort of crisis or abandonment of the site, and was seemingly destroyed in an act of war. The single building was burned with its contents intact, and after the destruction of Palace VI,

the site was abandoned for a period of time until it was later re-inhabited during Iron I (Millek 2017, 121 f.). It could be said that this destruction event was the cause of the break in interregional exchange at Aphek, as the site was abandoned after its destruction and not re-inhabited until interregional exchange with areas such as Cyprus and Greece had already ceased. However, an aspect which is commonly ignored, and which has already been brought up briefly in this discussion, is the date when interregional exchange ended in its relation to the date of the destruction events.

In the following chapters, the chronological development of interregional exchange during the LBA and the Iron I period will be examined through many types of non-local material culture. Three of the largest suppliers of non-local objects were Cyprus, as evidenced by Cypriot pottery, Mycenaean Greece, again seen in Late Helladic pottery, and Egypt, likewise seen in imported pottery, but also in stone vessels, Egyptian amulets, and Nile perch. The questions which will be examined in detail in the following chapter are: was there a decrease in interregional exchange witnessed by these objects, and when? For Cyprus, while it has been commonly assumed that interregional exchange ended at the end of the 13th cent., this is not entirely true. Cypriot exchange took a drastic downturn at the end of the 14th cent. and continued on this development, petering out over the course of LB IIB. Thus, for Cypriot exchange, the evidence from the ceramics suggests that destruction events at the end of the 13th cent. were far too late to have affected it, as the drastic decrease in Cypriot exchange occurred a hundred years prior. For Late Helladic pottery, there is again a similar time problem, correlating a decrease in exchange with destruction events. Exchange with Mycenaean Greece likely all but stopped by the end of LH IIIB1, dated to 1250/1225 BC. Even taking the late date of 1225 BC, this trend occurred well before the majority of the destruction events considered here. Moreover, of the three sites which have the highest amount of Mycenaean pottery,[186] there is no evidence of a destruction at the end of the

---

185 Which too followed a period of crisis, which again would be more likely a candidate for a break in international exchange than a destruction event. As will be discussed in the following chapter from LB IIA to LB IIB, Gezer underwent a drastic decrease in the amount of Cypriot pottery found at the site.

186 *Tell Abū Ḥawām*, Amman Airport Structure, and Lachish.

LBA Amman Airport Structure, and the Level VII destructions at Lachish cannot be associated with any break in interregional exchange, as discussed above. *Tell Abū Ḥawām* was not destroyed at the end of the LBA; therefore, a destruction event at the site could not have caused the breakup of interregional exchange. Finally, exchange in Egyptian items did not end with the LBA but continued mainly in the Carmel coast and in the Acco Plain. Thus, destruction at the end of the LBA did not bring about the end of Egyptian interregional exchange. Thus, taking the time of the cessation of interregional exchange into consideration, it demonstrates that these events occurred before the destruction events, or the interregional exchange did not end but changed in the Iron I period compared to the LBA.

This observation can also be applied to destruction further afield and outside of the Southern Levant, but which could be assumed to have affected interregional exchange with the Southern Levant. For example, if one assumes that Ugarit played an important role in the interregional exchange of Cypriot or Mycenaean goods with the Southern Levant (Merrillees 1968, 200–202), then the destruction of Ugarit could have broken this chain of interregional exchange. However, this cannot be the case, as Ugarit was destroyed in ca. 1185 BC (Yakar 2006, 35) after Cypriot and Mycenaean exchange with the Southern Levant had all but ended. Thus, in this case, the destruction of Ugarit cannot have affected the interregional exchange of Cypriot or Mycenaean goods with the Southern Levant, as it occurred after the fact. The same can be said of destruction on Cyprus itself, if it is assumed that destruction on Cyprus was the cause of the break in interregional exchange between the island and the Southern Levant, based on the eight cited destruction events at the end of LC IIC and the beginning of LC IIIA (Karageorghis 1992, 80). However, as noted above and as will be discussed in the following chapter, the true downturn and the beginning of the end of Cypriot exchange occurred at the end of the 14th cent. BC in the Southern Levant, not at the end of the 13th cent. or the beginning of the 12th cent. BC. It is again a case of the slowing or cessation of interregional exchange occurring before the destruction

events, assumed to have brought about the end of interregional exchange.

One final aspect is of course destruction brought about by large overarching problems such as warfare or earthquake storms, a common theme in the causes of the end of the LBA. Concerning earthquakes, there are only three destruction events which can conclusively be classified as an earthquake induced event. These are the destructions of Beth-Shean Stratum S-3a, *Tell Dēr ʿAllā* Phase E, and *Tell el-ʿUmērī* Phase 14. There are two other possible destructions by earthquake *Tell Ḫēdar* Stratum VI and *Tell es-Saʾīdīye* Stratum XII; however, the evidence is currently inconclusive as to whether or not these sites were destroyed by an earthquake or by some other means. Despite claims of earthquake storms (Nur/Cline 2000; 2001; Nur/Burgess 2008) wreaking havoc, there is little evidence to support large devastating earthquakes crippling the sites and major centres of the Southern Levant. Therefore, it is unlikely that earthquakes played a major role in the breaking up of interregional exchange in the Southern Levant.

There is also little evidence that warfare and the purposeful destruction of sites by 'Sea Peoples', Egyptians, or other groups played a major role either. Only four destruction events can be convincingly attributed to human activity, with one of those being the ritual termination of the Fosse Temple III at Lachish. However, for Hazor Stratum XIII and Stratum A1, *Tell el-ʿUmērī* Phase 12, and Aphek Stratum X-12, these destruction events were likely brought about either as a direct act of war against the city or perhaps as a post battle destruction of the site. Nonetheless, there is little other evidence of widespread, site-wide or multi-building destructions which can be attributed to human activity. Moreover, as I have argued previously, there is little archaeological and historical evidence to suggest that the 'Sea Peoples' were responsible for the destruction of many of the sites in the Southern Levant. Even for a site such as Aphek, which has had its destruction attributed to the 'Sea Peoples', there is little evidence to support this claim. Following the destruction of the site and period of abandonment, the site was re-inhabited by the local 'Canaanite' population in

Stratum X-11, with no evidence of the 'Sea Peoples' or 'Philistines' at the site until Stratum X-10, when 'Philistine' material culture appeared at the site, with no evidence of destruction of the local 'Canaanite' site (Millek 2017, 121 f.).

Another commonly cited destructive agent at the end of the LBA is the Egyptian army led by Merneptah, or Ramesses III. However, while the archaeological record does not support large violent destructions at many sites throughout the Southern Levant, the Egyptian records also do not support this claim. Hasel's study of Egyptian military activity and terminology from the XIX and XX Dynasties does not support the assumption that Egyptian military policy was to destroy the cities or sites the Egyptian army encountered. His analysis reveals that the general focus of the Egyptian military was on open-terrain warfare, and upon subduing the enemy but not necessarily destroying the city or site. It is only occasionally mentioned that a wall or gate may have been partially destroyed in order to gain access to a site (Hasel 1998, 241–244). Moreover, there is no clear evidence from the textual references of Egyptian activity destroying administrative, cultic, or domestic buildings, nor is there any evidence of the Egyptian army using large-scale fires or conflagrations to destroy a site (Hasel 1998, 248–251). As Hasel states: 'There is absolutely no evidence of any use of conflagration in the iconography of known reliefs. This indicates that, overall, these references are rare in Egyptian literature and cannot be interpreted as a general military tactic of the Egyptians' (Hasel 1998, 249). Hasel summaries by saying: 'The textual and iconographic evidence indicates that Egyptians did not employ wide-scale and total conflagration of cities. The Egyptian interest was only in subduing them, bringing them back under the control of Egypt, and taking the plunder, booty, and captives back to Egypt' (Hasel 1998, 253), going on to say that: 'Egyptian military activity is not the major factor for the destruction of sites in the transition [from the LBA to the Iron Age]' (Hasel 1998, 254). Given this lack of textual support, it is doubtful that Egyptian military actions resulted in large-scale destruction that would have hindered interregional exchange.

The general lack of evidence for destruction by either the 'Sea Peoples' or the Egyptians does not mean that conflict did not affect interregional exchange. In the Amarna letters, several instances of dangers to interregional exchange are mentioned, such as caravans being attacked multiple times, merchants being killed, and escorts requested for caravans (Moran 1992, 13 f., 16, 276; EA 7, EA 8, EA 199). However, none of these dangers ever put a halt to interregional exchange, and while it is likely that the same type of actions occurred at the end of the LBA, it is doubtful that it had any great effect on interregional exchange. Indeed, there is not likely a time or place in history where people were not robbed or killed.

5.52. Summary

From this survey of destruction events at the end of the LBA, there is little evidence to conclude that the destruction events were the cause for the decrease or cessation of interregional exchange in the Southern Levant. Whether the destruction was caused by warfare, earthquakes, or other factors, the current archaeological evidence does not support that these events were the crippling factor to interregional exchange in the Southern Levant. What was briefly mentioned here, and what will be examined in detail in the following chapters, is that interregional exchange generally ended, or was all but ended, before the majority of these destruction events occurred. Moreover, several of the major centres such as Lachish and Megiddo suffered destruction well after interregional exchange with areas such as Cyprus and Greece came to an end. Additionally, these events did not bring about the end of exchange with Egypt, which continued into Iron I. Therefore, the cause for the cessation or slowing of interregional exchange must be sought in other areas outside of destruction, some of which will be examined in the following chapters.

6. The Non-Local Pottery in the Southern Levant from the Late Bronze Age to Iron I (Not Including Egyptian Pottery)

6.1. Introduction

The most ubiquitous and certainly most discussed and researched non-local material culture class is pottery. Coming mainly in the form of sherds with the rare whole vessel, non-local pottery makes up the vast majority of non-local materials. During the Late Bronze Age and Iron I, there are six regions, from which pottery originated and found its way to the Southern Levant: Cyprus, Mycenaean Greece, Crete, Western Anatolia, Arabia, and Egypt. In this section, I will present the Cypriot, Mycenaean, Minoan, Western Anatolian, and Qurayyah wares. Egyptian pottery brought from Egypt also appears during the LBA and Iron Age; however, this material class will be discussed in the following section in connection to the other non-local materials which originated in Egypt. The material will be presented in the following order. First, the data from the database for one type of pottery followed by a discussion of this type, in conjunction with the previous research on it and the conclusion which can be drawn for each type. Once each type of pottery has been explored and discussed, I will give a final synthesis of how these pottery types fit together and acted as resources in the Southern Levant.

Before examining the information from the database, several notes must be made. The first is, that I am well aware that the size of an excavation, the amount of LBA and Iron I material excavated, the state of publication, the methods of the excavation, and many other factors will play a role in the 'total' numbers of non-local pottery and where concentrations of it may be found. This is a problem every archaeological endeavour faces, as not all sites have been well excavated or excavated at all, nor have all excavations used the same method of artefact collection, as some may have chosen not to keep body sherds of non-local pottery while others may keep every small fragment, thus creating a skew. However, this is the nature of archaeological research, and the data investigated here will be taken as representative, but not

definite. Excavations and publications will always change the landscape of research, and the conclusions presented here are subject to change.

Secondly, the numbers given here are again not concrete. Some sherds may have been missed in an off comment in a letter, and these numbers will change in the future. Whole vessels have been counted as a single entry, the same as a single sherd, and if these vessels were counted differently, again the data would change from what is presented here. Moreover, for the following 17 sites there are no precise published numbers for the amount of Cypriot pottery: Acco, Ashdod, Ashkelon, Beth-Shemesh, *Ḫirbet el-Burǧ* (Tel Dor), Hazor, Ḥorvat Zelef, *Ṭabaqāt Faḥil* (Pella), *Šaʿar ʿEfrayim, Tell ed-Duwēr* (Tel Dover), *Ḫirbet Yarmūk* (Tel Jarmuth), *Tēl Naḥărīyā, Tell Qassīs, Tell eṣ-Ṣārem* (Tel Rehov), Tel Risim, and *Tell Abū Ḥawām*. Some general numbers may be inferred for the unpublished materials at Ashkelon or Hazor, but for sites like Ashdod, Acco, and *Tell Abū Ḥawām*,[187] no exact numbers can be given to these sites. However, in the reports which have been published, phrases such as 'some sherds', 'some vessels', and 'numerous' appear. While the exact numbers cannot be given, small stand in numbers have been given to these sites ranging from 3 to 10, with the number 3 given where it is stated there are 'a few' sherds, and 10 given to 'numerous'. This means that while there are no exact numbers for these sites, they at least appear on a distribution map.[188] Finally, vessel shapes were not taken into account, nor the exact location of deposition, given the broad range of non-local materials investigated in this study. Consumption studies and studies which have examined the vessel forms have previously

---

187 Other than the sherds already published by Balensi 1985.
188 216 sherds have been inferred based on the unpublished data as discussed above distrubited among the 17 sites as follows. Acco: 43, Ashdod: 41, Ashkelon: 20, Beth Shemesh: 3, *Ḫirbet el-Burǧ*: 6, Ḥorvat Zelef: 2, *Ṭabaqāt Faḥil*: 7, Šaʿar ʿEfrayim: 6, *Tell ed-Duwēr*: 6, *Ḫirbet Yarmūk*: 1, *Tēl Naḥărīyā*: 2, *Tell Qassīs*: 18, *Tell eṣ-Ṣārem*: 6, Tel Risim: 6, *Tell Abū Ḥawām*: 49.

been conducted, and the results from this work will be presented in the discussion. With these considerations in mind, we begin with the Cypriot pottery.

6.2.   Cypriot Pottery: Results

6.2.1.   Distribution

There are approximately 10,237 published sherds and whole vessels of Cypriot origin in the Southern Levant found at 105 different sites (see *table 1*). While the distribution of Cypriot pottery is wide, the concentration is not. 37% of all Cypriot pottery, based on sherd count, was uncovered at Lachish, with another 15% of all Cypriot pottery uncovered at *Tell el-ʿAǧūl*. This indicates that 52% of all Cypriot pottery comes from only two sites. However, if we also take the top 10% of all sites which have Cypriot pottery: Lachish, *Tell el-ʿAǧūl*, Ashkelon, Hazor, *Tell Ǧemme, Tell Ḥēdar* (Tel Mor), *Tell Bēt Mirsim, Tell Abū Ḥawām, Tell el-Baṭāšī* (Tel Batash/Timna), and Gezer respectively, these ten sites represent 79% of all Cypriot pottery in the Southern Levant. Taking the next 10% of all sites: Megiddo, Shechem, *Tell Abū Hurēre* (Tel Haror), *Tell eš-Šerīʿa* (Tel Seraʾ), Beth-Shean, Tel Mevorakh, *Tell ʿArā* (Cemetery), *Tell el-Fārʿa* (South), *Tell Qēmūn* (Jokneam), Acco these ten sites contain 10% of all Cypriot pottery. The remaining 85 sites, 80% of all sites with Cypriot pottery, have the remaining 11%. Thus, while there is a wide distribution of Cypriot pottery, it is concentrated in 10 sites, and mainly at Lachish, *Tell el-ʿAǧūl*, and Ashkelon. This concentration is also represented in the geographic distribution of Cypriot pottery. Taking these three groups of sites as three tiers of concentration, of the ten sites with 79% of all Cypriot pottery they are concentrated in the Southern Coastal Plain and the Shephelah, other than the two outliers Hazor and *Tell Abū Ḥawām*. The next ten sites with 10% of Cypriot pottery representing the second tier of concentration are located mainly in the region of the Carmel, Acco Plain, and the Jezreel Valley, though three sites – *Tell Abū Hurēre, Tell eš-Šerīʿa*, and *Tell el-Fārʿa* (South) – are in the southern half of Cisjordan. Moreover, taking the eleven

sites out of the top 20 sites located in the Southern Coastal Plain and the Shephelah or located south of the Yarkon River, the concentration of Cypriot pottery is clear, as 75% of all Cypriot pottery was found at these eleven sites. Of the 85 remaining sites, Cypriot pottery is widespread throughout Cis- and Transjordan. The significance of these three trends will be discussed below. Some common examples of Cypriot wares are white slip wares (*fig. 6.1.*), so called 'Milk' bowls (*fig. 6.2.*) and white shaved wares (*fig. 6.3.*) among others.

Of the 105 sites with Cypriot pottery in the Southern Levant, 95 are in Cisjordan, with ten sites in Transjordan. Of these ten sites in Transjordan, only the Amman Airport Structure yielded a significant amount of 53 sherds; however this is minor in comparison to the amount of Mycenaean pottery found at the site. Moreover, though it is the site with the highest amount of Cypriot pottery in Transjordan, it is ranked number 25 out of all sites with Cypriot pottery in the Southern Levant. Other than *Ṭabaqāt Faḥil* (Pella), no other sites in Transjordan yielded more than 10 sherds. Thus, given this, while some Cypriot pottery did make its way to Transjordan and specifically to the small yet anomalous Amman Airport Structure, little Cypriot pottery crossed the Jordan River.

6.2.2.   Chronological Development

The chronological development of Cypriot pottery is of course complicated, as 34% of the assemblage cannot be put into a precise chronological framework, either because of the state of publication or due to the find context (see *tables 2–10* and *maps 2–5*). This portion of the assemblage dates to the MBA through the LBA, LB I–II, LB I–Iron I, LB II, Iron I–II, Iron II and so on. Some of this material has been found in fill layers, such as 116 Cypriot sherds found in the fill of Level IV at Lachish in the Iron II period, but the wares are clearly LBA (Bunimovitz 2004, 1265–1268). Ceramic counts and percentages in the remainder of this section will not consider these finds. The current study does not include detailed information of the MBA Cypriot ceramics. However, the development of exchange with Cyprus began in MB IIA

Fig. 6.1. Late Cypriot White Slip Ware I–II (Courtesy of the Metropolitan Museum of Art) (left).
Fig. 6.2. Late Cypriot 'Milk Bowl' (Courtesy of the Metropolitan Museum of Art) (middle).
Fig. 6.3. Late Cypriot White Shaved Ware (Courtesy of the Metropolitan Museum of Art) (right).

and developed through MB IIB and MB IIC, with a particular concentration at *Tell el-ʿAǧūl* (Bergoffen 1989, 153–200; 2002; Papadimitriou 2013, 109, 114).[189] The periods covered by this database are finds securely dated to LB I, LB IIA, LB IIB, and Iron I. Further subdivisions within these periods will not be presented here (see Gittlen 1977; 1981; Bergoffen 1989; Papadimitriou 2013). These dates were determined based on the stratigraphic location of the sherds and the date given this stratum or level by the excavators.

Continuing the trend begun in MB II, Cypriot pottery appears at 27 LB I sites with 1,072 sherds and vessels, representing 16% of the clearly datable assemblage. However, out of these 1,072 sherds and vessels, 618 or 58% of all LB I Cypriot pottery from the Southern Levant came from *Tell el-ʿAǧūl*. The next site with the closest amount of Cypriot pottery is *Tell el-Baṭāšī,* which yielded 69 sherds. Again, given the location of *Tell el-ʿAǧūl*, the concentration of Cypriot pottery within the Southern Coastal plain and the Shephelah is clear. To the north, only Megiddo and Hazor yielded any

'large' amounts of Cypriot pottery.[190] *Tell el-ʿAǧūl* was thus the main port where Cypriot ceramics entered into the Southern Levant during LB I, as well as the main consumer of these goods, continuing the trend begun in the MBA. The Carmel region, the Jezreel Valley, and Galilee again played a secondary role. However, the distribution of Cypriot ceramics is greater in these regions than in the Southern Coastal Plain and the Shephelah. Cypriot pottery was also uncovered in four sites in Jordan, though only in small amounts. Again, while there is a distribution of this material over 27 sites, the ceramics are concentrated into the first ten, representing 88% of all Cypriot pottery from LB I. These sites are listed in rank order: *Tell el-ʿAǧūl, Tell el-Baṭāšī,* Ashkelon, Hazor, Megiddo, *Ǧett* (Jatt), Lachish, Beth-Shean, Ashdod, and *Ḫirbet Ḫānūtā* (Hanita).

The LB IIA represents the greatest influx of Cypriot ceramics into the Southern Levant as well as containing 53% of all Cypriot ceramics, numbering to 3,586 sherds and vessels, a 335% increase over the previous period. 28 sites contained Cypriot pottery clearly dating to LB IIA; however,

---

189 See reference there in for studies on MBA Cypriot ceramics in the Southern Levant.

190 Hazor: 52 sherds. Megiddo: 41 sherds.

the concentration of this material is clearly in the Southern Coastal Plain and the Shephelah. LB IIA Lachish yielded the most Cypriot material for any site and any period, containing 2,489 sherds, or 24% of the total assemblage from the entire LBA and 41% of the LB IIA assemblage. *Tell el-ʿAǧūl* also yielded a considerable amount of Cypriot ceramics, with 494 sherds. Together, these two sites represent 83% of all Cypriot ceramics from LB IIA. The distribution of Cypriot ceramics decidedly shifts to the regions of the Southern Coastal Plain and the Shephelah, while some also penetrated deeper into the Central Hill Country. From this data, *Tell el-ʿAǧūl* remained the main port where Cypriot ceramics entered into the Southern Levant, and the main consumer of these wares was the inland site of Lachish. Again, 94% of all Cypriot pottery is concentrated in ten sites, being: Lachish, *Tell el-ʿAǧūl*, Gezer, Jerusalem, *Tell Ḫēdar*, el-Qubeibe (Burial cave), Acco, Jericho, *Tell Bēt Mirsim*, and *Tell eš-Šerīʿa*.

Cypriot pottery greatly deceases during LB IIB, though not in the number of sites it is distributed amongst. 1,328 Cypriot sherds and vessels have been uncovered in 29 LB IIB sites, representing 20% of the assemblage. The amount of Cypriot pottery decreased by at least 63% from the previous period. Again, Lachish yielded the most Cypriot ceramics, with 551 sherds and vessels or 42% of all Cypriot ceramics from LB IIB. *Tell Bēt Mirsim* produced the second most Cypriot ceramics, with 228 sherds and vessels or 17% of the total LB IIB assemblage.[191] Together, these two sites yielded 59% of all LB IIB Cypriot ceramics. Again, much as in LB IIA, the concentration of Cypriot ceramics is in the Southern Coastal Plain and the Shephelah, and a secondary concentration in the Carmel Region and the Jezreel Valley. Much as in the previous two periods, the top ten sites contain 87% of all Cypriot ceramics, being: Lachish, *Tell Bēt Mirsim*, Beth-Shean, *Tell el-Baṭāšī*, Amman Airport Structure,[192] Beth-Shemesh, Ashdod (Southern Beach),

Tell el-ʿAǧūl, *Tell Ḫēdar*, and *Tell Qēmūn*. While the distribution of these ceramics remained relatively the same, the concentration was again mainly in a few key sites and principally in the Southern Coastal Plain and the Shephelah, though Beth-Shean and the Amman Airport Structure stand out as having the highest concentrations for the Jezreel Valley and Jordan.

The Iron I period continues the drastic decrease of imported Cypriot pottery which began at the end of LB IIA, decreasing by 94% from the previous period.[193] Cypriot pottery was found at 21 sites including 173 sherds from Lachish. However, these sherds have not been taken into account, as all of them appear to be intrusive. As Bunimovitz states: 'It seems, therefore, that the present assemblage of Cypriot sherds from Level VI should be considered intrusive, originating from Level VII or even earlier levels' (Bunimovitz 2004, 1270). Thus, these sherds may have originated from LB IIB or even LB IIA and cannot be counted as Iron Age material. Excluding Lachish, this leaves 20 sites with a total of 82 sherds and vessels. The site which yielded the most Cypriot finds was *Tell eṣ-Ṣāfī* (Gath), where 25 sherds where uncovered, 24 of which were clearly dated to the Iron IA period. *Tell eš-Šerīʿa* has the second most, with ten sherds dated to the Iron IA.[194] Distribution of the material again remains mainly in the Southern Coastal Plain, the region of the Carmel and Jezreel Valley; however, other than at *Tell eṣ-Ṣāfī* (Gath) and *Tell eš-Šerīʿa*, the concentration never gets higher than ten sherds or vessels, with *Ḫirbet el-Burǧ* having eight sherds, two sites having five sherds, three sites with three sherds, five sites with two sherds, and seven sites with one sherd. How much of this is residual or true Iron I exchange is not clear, but will be discussed below.[195] Moreover, as will be seen in the following section on Mycenaean

---

191 Both of these sites and the Cypriot pottery from LB IIB will be discussed below as it is not certain if some of the pottery from Lachish and *Tell Bēt Mirsim* dates before LB IIB.

192 These wares may also date before LB IIB. See below.

193 81% if the intrusive Cypriot pottery from Lachish is included.

194 Note: This does not include the Cypriot geometric wares which began to appear towards the end of Iron I. This study focuses on Early Iron I and not on the trends which began in Iron II.

195 Two Cypriot vessels found at Ashkelon from the mid-12th cent. BC are some of the few secure Cypriot finds from this period (Master/Mountjoy/Mommsen 2015).

pottery, the LH IIIC pottery found in the Southern Levant from Iron I is likely all from Cyprus and not the Aegean. This can be taken into account as also demonstrating the continued minimal exchange with Cyprus at the beginning of the Iron Age.

6.3. Cypriot Pottery: Discussion

It goes without saying that the material presented here is not without its problems or flaws, many of which cannot be overcome. While matter of fact numbers can be seen in the database material along with when these numbers appear, the reality is complicated. Lachish is a good example for several of these problems. One such problem is whether or not material is residual, such as that from the 13ᵗʰ and 12ᵗʰ cent. BC at Lachish. All of the Cypriot pottery from the 12ᵗʰ cent. BC is assumed to be residual from either the 13ᵗʰ cent. or the 14ᵗʰ cent. BC, and even some of the material from the 13ᵗʰ cent. BC may too be residual (Bunimovitz 2004, 1269 f.). How much material from other sites may be residual may alter the picture presented above. A second problem stems from the nature of the collections of pottery. The evidence from Lachish demonstrates how problematic the collection of material and the condition of the finds can be. During the original excavations at Lachish, it appears that only whole vessels were collected, while sherds were either ignored or thrown away. Moreover, from the recent excavations led by Ussishkin, the sherds which were uncovered, while high in quantity, were very fragmented in quality, making stratigraphical or topological conclusions difficult (Bunimovitz 2004, 1269, 1271). It also means that, because of the extremely fragmented nature of the finds from Lachish, their number is pushed up when the number of whole vessels may have been much lower in reality.

Another problem which comes out of this, is the information that is lacking for crucial sites such as Ashkelon. Ashkelon has produced the third most Cypriot pottery of all sites in the Southern Levant, but this information has only vaguely published details, as most of the finds come from the excavations during the 1920s, and have no or

flimsy chronological dating or have simply gone missing (Bergoffen 1988). Thus, one of the most important sites for Cypriot pottery remains largely in the dark. Moreover, not all Cypriot pottery was made on Cyprus, as Bergoffen demonstrated with the Red Lustrous Wheelmade Spindle Bottles from Ashkelon (Bergoffen 2010; 2013; see also Bushnell 2013, 325–328). However, it is again with these problems and considerations in mind that the information presented here can be compared to that produced in previous studies.

The distribution of Cypriot pottery in the Southern Levant, contrary to conventional thought (Artzy 2006b, 59), is in truth heavily concentrated in the Southern Coastal Plain, the Shephelah, and to some extent the Central Hill Country. Indeed, 82% of all Cypriot pottery in the Southern Levant is found in the region south of the Yarkon River[196] in Cisjordan. Of the remaining 18%, only 1% of Cypriot pottery was found in Transjordan, and 4% found in northern Galilee, mainly at the sites of Hazor and *Tell el-Qāḍī* (Tel Dan). The remainder of Cypriot pottery was found scattered throughout the Jezreel Valley, Mount Carmel, the Acco Plain, and the Northern Central Hill Country; however, 10% of this remaining 13% was found at only ten sites: *Tell Abū Ḥawām*, Megiddo, Beth-Shean, Tel Mevorakh, *Tell ʿArā* (Cemetery), *Tell Qēmūn*, Acco, *Ḫirbet el-Burǧ*, *Ǧett*, and Shechem. Several conclusions can be drawn from these rather staggering figures. The first is, that while Cypriot pottery is the most widely circulated non-local item discussed in this work, there is a disproportional concentration in the Southern Coastal Plain and the Shephelah. This would indicate that while Cypriot pottery could travel and be used anywhere in the Southern Levant during the LBA, in the northern regions, these items would have been by and large rare in comparison to those sites in the more southerly regions. For example, the small 'Egyptian' anchorage at *Tell Ḫēdar* yielded twice as much Cypriot pottery than Megiddo, a much larger and far more 'important' site. What this indicates is, that despite claims that Cypriot pottery

---

196 Tel Michal being the only exception.

was utilised generally as a sub-elite item throughout the Levant,[197] this is not the case.

Cypriot pottery was by and large consumed in the sites in the south of Cisjordan where it was likely widely available due to the continued exchange with Cyprus at *Tell el-ʿAğūl*, which continued from the MBA through LB IIA. Sites in the northern regions did yield Cypriot pottery, mainly the major centres such as *Tell Abū Ḥawām*, Megiddo, and Hazor. However, this was far less than in their more southerly neighbours. The same is true of sites in Transjordan. While some did utilise Cypriot pottery, and it certainly was available, it was only in small amounts. This has several very important implications about exchange with Cyprus, as the evidence from the ceramic assemblage of Cypriot pottery in the Southern Levant would suggest that Cypriot exchange was likely centred at two sites, *Tell el-ʿAğūl* from the MBA through LB IIA, and Ashkelon. It is possible that Ashkelon took over the little exchange which continued into LB IIB, as 55% of the 545 sherds and vessels uncovered by Phythian-Adams were found in the uppermost step underneath an ash layer which separated it from the following appearance of 'Philistine' pottery (Bergoffen 1988, 161). However, this is uncertain due to the poor preservation and the question of the type of habitation, if any at all, at *Tell el-ʿAğūl* during LB IIB (Kempinski 1993, 52 f.; Tufnell 1993, 49–52). Thus, this has great implications, as exchange with Cyprus was likely not strong at northern ports such as *Tell Abū Ḥawām*, *Ḫirbet el-Burğ*, Acco, and *Ğezīret en-Nāmī* (Tel Nami).

Artzy has argued that *Tell Abū Ḥawām* was the main port of entry for Cypriot pottery in the Southern Levant. She states that ships from Cyprus stopped in the region of Mount Carmel, specifically at *Tell Abū Ḥawām*, unloaded their goods there, and these were then trans-shipped over land to Hazor, Megiddo and to sites in the south such as Lachish (Artzy 2006b, 59). Based on the recent excavations at the site, she has also claimed that Cypriot pottery outnumbered Mycenaean pottery

by at least 40 to 1 and perhaps even competes with the total number of local wares (Artzy 2006b, 52; 2007, 364). However, these statements appear to be in contradiction to the evidence of Cypriot pottery distribution in the Southern Levant. While it is still likely that sites such as Hazor or Megiddo received their Cypriot pottery from *Tell Abū Ḥawām* or some other northerly port, Lachish would have certainly received its Cypriot pottery from either *Tell el-ʿAğūl* or Ashkelon. Moreover, from the distribution of the pottery, it is highly unlikely that *Tell Abū Ḥawām* or any port site in the Mount Carmel and Acco Plain regions were the main Cypriot ports of trade. Additionally, while the small excavation at the site has produced more Cypriot pottery, this material is likely an outlier based on the context of these newly found Cypriot objects, as they were found in the refuse area of one of the site's anchorages. Artzy states: 'It is likely that a good percentage of the pieces were refuse, damaged wares, thrown from the boats during or following the arrival. When the boats were anchored and the goods were unloaded, damaged ceramics from either the journey or the treatment at the port were then thrown out and ended up in shallow water' (Artzy 2007, 362). This explanation for the find context would explain why Cypriot imports were perhaps as high in quantity as local wares, as this explanation would suggest that not many local wares would be deposited in such a context. Thus, unless a tremendous amount of Cypriot pottery is uncovered and published from *Tell Abū Ḥawām*, it cannot be considered the port of entry for Cypriot goods during the LBA based on the ceramic evidence and general distribution.

Taking the 'Egyptian'[198] sites into consideration, a general trend also emerges. There is a general concentration of Cypriot pottery at 'Egyptian' sites; however, this is more likely to do with their geographical location than any specific use of Cypriot pottery at 'Egyptian' sites. The majority of these sites fall within the southern half of Cisjordan, the main area of distribution for Cypriot

---

197 A. Sherratt/S. Sherratt 1993, 361–378; S. Sherratt 1998, 292–313; 1999, 163–211; 2000, 82–98; 2003, 37–62; 2010, 81–106; A. Sherratt/S. Sherratt 1991, 351–385; 1998, 329–343; Artzy 1985a, 135–140; 1997 1–16; 1998, 439–448.

198 *Tell el-Fārʾa* (South), *Dēr el-Balaḥ*, *Tell eš-Šerīʿa*, *Tell el-ʿAğūl*, Jaffa, *Tell Ḫēdar*, Aphek, Beth-Shean, and *Tell es-Saʿīdīye*.

pottery, 'Egyptian' site or otherwise. Thus, high concentrations at *Tell eš-Šerīʿa* and *Tell Ḥēdar* are more likely to result from their location rather than a specific pointed use of these objects, with *Tell Ḥēdar* being an anchorage for Ashdod. Moreover, as *Tell el-ʿAǧūl* maintained its exchange with Cyprus from the MBA, the high concentration of Cypriot pottery at the site is likely not due to an Egyptian presence. Rather, it is because of the continued development of exchange with Cyprus which had already been established in the MBA. Nevertheless, even with this geographic placement of many of these sites, there was not always an utilisation of Cypriot pottery at more southerly 'Egyptian' sites. Both Aphek, and *Dēr el-Balaḥ* yielded little Cypriot pottery. Likewise, geography and the general trend that that Cypriot pottery was rather used in the south, would be the answer why Beth-Shean yielded relatively little Cypriot pottery with only 96 sherds. It is the final site before crossing over the Jordan to have a 'significant' amount of Cypriot pottery, as *Ṭabaqāt Faḥil* yielded 23 sherds, and *Tell es-Saʿīdīye* yielded only four sherds. Thus, it should not be surprising that little Cypriot pottery found its way to Beth-Shean, as it falls out of the main geographic region where this pottery was brought to the Southern Levant, and was on the fringe of the secondary sector which consumed a modest amount of Cypriot pottery, Mount Carmel, the Acco Plain, and the beginnings of the Jezreel Valley. Taking all this into consideration, there appears to be no specific consumption of Cypriot pottery at 'Egyptian' sites in the sense that 'Egyptian' sites specifically sought out these wares and products. Rather, the availability of these items, mainly in the south, created a concentration at certain, but not all, 'Egyptian' sites, and was more to do with the availability of the items rather than anything else.

That being said, this does not mean that certain sites did not specifically consume Cypriot pottery. Hazor stands out as an outlier, having the fourth most Cypriot pottery in the Southern Levant yet falling well outside the regions of high concentration. It is likely that Hazor obtained its Cypriot pottery either from Sarepta in the north or *Tell Abū Ḥawām*, both of which yielded more Mycenaean pottery than Cypriot pottery (C. Bell 2006, 88–90, 109 f., 137). However, as both of these sites did not yield nearly as much Cypriot pottery as sites in the south, it must be the case that Cypriot pottery was purposely utilised and brought to Hazor not because of its geographic location and availability, but because of a specific use pattern at the site. The same is likely true for other larger centres in the northern regions of the Southern Levant such as Megiddo and *Tell Abū Ḥawām*. Cypriot pottery was either exchanged at one of the coastal sites, such as *Tell Abū Ḥawām*, directly with Cyprus or with *Tell el-ʿAǧūl* in the south, and was utilised as 'little luxuries' (Bushnell 2013, 386) in small amounts.

This distribution pattern has several implications on the economic impact of exchange with Cyprus. The general conclusion is that pottery is not valuable enough in and of itself, having a low intrinsic value, to be the main cargo (Bergoffen 1989, 290 f.; A. Sherratt/S. Sherratt 1993, 361–378; S. Sherratt 1998, 292–313), and in the case of Cypriot pottery, it is assumed that lumber and copper were the main exports from Cyprus (Bergoffen 1989, 290 f.; Keswani 1993; S. Sherratt 2000). However, both of these are generally 'archaeologically invisible' and thus Cypriot pottery is taken as the stand-in for the exchange patterns for these other Cypriot products. If this is assumed to be the case,[199] and the Cypriot pottery is an indicator of exchange in these other products, then the ceramic evidence dictates that this exchange was squarely centred at *Tell el-ʿAǧūl* and Ashkelon, and there was little exchange with Cyprus in the region of the Carmel and the Acco Plain during the LBA. Indeed, in every period of the LBA and the Iron I period, exchange with Cyprus is centred in the Southern Coastal Plain. In LB I, 77% of all Cypriot pottery was found in the south. The situation during the following LB IIA period is even more drastic, as 97% of all Cypriot pottery was found south

---

[199] As Papadimitriou gives a note of caution saying: 'Since there is no consensus as to whether the circulation of pottery in the MBA and LBA Mediterranean was an independent enterprise or subordinate to trade in metals and other precious materials, ceramic evidence should be used with great caution if inferences about the nature of maritime exchanges are to be made' (Papadimitriou 2013, 124).

of the Yarkon River. In LB IIB, this number only decreases slightly, as 84% of the datable material is in these southerly regions, and if the material from Ashkelon truly does date to the later part of the LBA, this number would be even more drastic than in LB IIA. Only in the Iron I period is there a more 'even' distribution, as 67% of the Cypriot pottery was found in the southern half of Cisjordan, not including the 173 intrusive sherds from Lachish. Therefore, if the pottery evidence is to be taken as an indicator of exchange in other materials, in all periods, exchange with Cyprus was focused in the Southern Coastal Plain where these products were then exchanged with sites inland. The more northerly sites lay outside of the general area of exchange with Cyprus. This is not to say they did not exchange with Cyprus; however, from the current evidence, it would indicate that it was not a strong focus of this region.

In some ways this is a contradiction to the material found on the Uluburun ship which, as presented before, likely originated in the region of *Tell Abū Ḥawām* (Pulak 2010, 870; Goren 2013, 57–59). The 10 tons of copper on the wreck mainly originated from Cyprus, as well as the approximately 155 pieces of Cypriot ceramics which would indicate a stronger exchange with Cyprus. This leaves two options. Either the Cypriot pottery is not an indicator for exchange in other goods, and Cyprus exchanged with the port sites in Mount Carmel and the Acco Plain in archaeologically invisible material, or much of the Cypriot material on the Uluburun ship may have arrived in the Southern Levant via the Southern Coastal Plain or perhaps even Egypt, which has been suggested previously (Goren 2013, 59; Cline/Yasur-Landau 2007, 128–130). However, if it is assumed in theory, as it has been presented in the past, that Cypriot pottery is an indicator for other types of archaeologically invisible material, then this indeed indicates that the latter of these two options may be true. If one throws away the notion that Cypriot pottery is a stand-in for other types of invisible exchange, then the archaeological evidence will be very weak in helping to construct a strong exchange connection between Cyprus and Mount Carmel and the Acco Plain. It then must simply be assumed to exist without much supporting archaeological

evidence, if the pottery data is considered to be unrepresentative.

The chronological development of Cypriot pottery in the Southern Levant also raises several interesting facets of exchange with Cyprus during the LBA. First, unlike many of the other non-local materials classes to be discussed, Cypriot pottery was already being exchanged in significant quantities during LB I. While most of this was focused at *Tell el-ʿAǧūl* and the southern half of Cisjordan, Cypriot pottery still arrived at sites in Jordan and throughout the north of Cisjordan. Cypriot imports then drastically increased during LB IIA, with the highest frequency during the entirety of the LBA. However, in the following LB IIB period, Cypriot pottery greatly decreased in the Southern Levant. Moreover, some or much of this pottery may not even be from LB IIB. As Gittlen notes in his catalogue of Cypriot pottery, for both *Tell Bēt Mirsim* and Beth-Shemesh, there was a difficulty in determining the stratigraphical difference between the phases before the 13th cent. from the 13th cent. strata. Therefore, he placed all unclearly dated sherds into the 13th cent. (Gittlen 1977, 520, 529 Note 35). Thus, it is likely that some or even much of this pottery would be dated prior to the 13th cent. This may also be the case for some of the pottery from Lachish dating to the 13th cent. (Bunimovitz 2004, 1269 f.). The same can be said of the 53 sherds and vessels from the Amman Airport Structure which may also date to LB IIA or prior (Mumford 2015, 95). Given that these four sites represent 66% of all Cypriot pottery from LB IIB, the fact that some or much of the pottery from these sites may be dated to the previous century would further suggest that the pace of Cypriot exchange became a crawl during LB IIB.

This drastic decrease in exchange was originally noted by Gittlen in 1977 (Gittlen 1977, 519), and again in 1989 by Bergoffen (Bergoffen 1989, 211 f.). However, Gittlen's original statement that there was a 'Cessation of LC trade at the end of the LBA IIA' (Gittlen 1977, 519), has been noted before to not be the case (Bunimovitz 2004, 1271; Papadimitriou 2013, 118 f.), as is clear from the current study of Cypriot pottery. Furthermore, Cypriot exchange did not entirely cease after the LBA, as the evidence from the LH IIIC pottery from the

Southern Levant was mostly produced on Cyprus (Cline 2007, 196; Mazar 2007, 571; S. Sherratt 2009, 494), and two vessels dated to the mid-12th cent. BC at Ashkelon also seemed to originate in Cyprus, indicating some exchange still going on in the Early Iron Age (Master/Mountjoy/Mommsen 2015, 236–241).[200] However, several key points must be taken from this evidence. While exchange with Cyprus did not end at LB IIA, it certainly was no longer nearly as significant as it was in LB IIA. The exact date of when this decrease occurred cannot be pinpointed, as Bergoffen notes; however, she also states that it is possible that the decrease began in the post Amarna Period (Bergoffen 1989, 225). Moreover, as Merrillees and Bergoffen have noted, Cypriot exchange with Egypt also stopped or decelerated after the Amarna Period (Merrillees 1968, 201 f.; Bergoffen 1989, 211 f.). This is of great importance, as it affects many of the theories concerning interregional exchange and the collapse of the Eastern Mediterranean at the end of the LBA.

Cyprus has generally been considered a key part of the interregional exchange during the LBA, and more so, that it was the marketer and maker of products meant for the sub-elite groups in the Levant.[201] Moreover, the Cypriot economy was said to be largely based on foreign exchange. As Sherratt states: 'The basis of [the Cypriot] economy and livelihood was thus the creation and maintenance of essentially sub-elite markets for added-value products' (S. Sherratt 1998, 298). If this were the case and Cyprus acted as the lynchpin in the LBA economic interregional exchange system, then the collapse of the Cypriot economy, and thus those economies connected to it, should have occurred at the end of LB IIA,[202] not the end of LB IIB. The reason for this is, there is little evidence of exchange with Cyprus in LB IIB from several regions. Egypt, as mentioned above, has little evidence of exchange with Cyprus, and the Southern Levant has a drastic reduction of exchange based on the pottery evidence. In the Aegean, while LH IIIB

represents a greater percentage of Cypriot objects over previous LH IIIA2, 23 Cypriot objects were found during LH IIIB (Cline 2007, 195), only 2% of what was found in the Southern Levant. Cypriot pottery was still exchanged in the Northern Levant, though to what extent is not clear (Papadimitriou 2013, 119). However, as Bushnell has noted in her study of juglets, in the Northern Levant there are generally higher proportions of Mycenaean than Cypriot juglets (Bushnell 2013, 357). Additionally, while Cypriot pottery is found on the southern and western coasts of Asia Minor, few Cypriot items ever seemed to have made their way to the Hittite heartland (Genz 2011, 321). All of this would suggest that exchange with Cyprus during LB IIB either stopped, greatly diminished, or is not archaeologically visible in both the Aegean and Central Anatolia.

If this is the case, and if the Cypriot economy was based on this exchange, according to the pottery evidence, Cyprus should have collapsed at the beginning of LC IIC; if the Southern Levant depended on exchange with Cyprus as an economic resource, it should have collapsed at the beginning of LB IIB. Yet, this is not the case. The process of 'collapse' in the Southern Levant began some hundred years after this and did not end until 1130 BC. Furthermore, Cyprus did not completely 'collapse' until 1100 BC, 200 years after their exchange with Egypt, and the Southern Levant either came to an end or a crawl.[203] Thus, even though it has been suggested that it would appear that LH IIC or roughly the 13th cent. was the greatest period of Cypriot copper production (Kassianidou 2013, 139), this was the exact period when there is little evidence of Cypriot exchange with Egypt and the Southern Levant. Therefore, while it has been proposed that Cypriot ships carried copper ingots with small amounts of Cypriot pottery abroad to trade (Kassianidou 2013, 144), if this is the case, then little of this copper arrived in either Egypt or the Southern Levant, based on said pottery.

There are several main reasons which have been proposed for this drastic decrease in exchange with Cyprus after LB IIA. Gittlen proposed

---

200 See also S. Sherratt 1998, 304–307; 2003, 46–48.
201 Artzy 1985a, 135–140; 1997, 1–16; 1998, 439–448; Knapp/Cherry 1994, 165–167; S. Sherratt 1998, 292–313; 1999, 163–211; 2000, 82–98; A. Sherratt/S. Sherratt 1991, 351–385.
202 Or the beginning of LC IIC.

203 See discussion in Chapter 2.

that the cause of this was either political or economic events on Cyprus, or that a political breakdown occurred in the Southern Levant during the Amarna period, causing the break in exchange. Finally, he suggests that it may also have been due to the military campaigns of Seti I and Ramesses II (Gittlen 1977, 519; 1981, 51). Kromhalz, who noted that at the site of Tel Mevorakh, Cypriot exchange ended at the end of LB IIA, also posited that Egyptian intervention in the region may have caused the decrease or stop in exchange. He also states that it may have been that, during the 13th cent. BC, Cyprus was more aligned with the Hittites and was therefore barred from exchanging with the 'other side' (Kromholz 1984, 20). As for Egypt, Merrilles suggested that Ugarit was the main port which received goods from Cyprus, which were then brought further south. However, when Ugarit became a vassal of the Hittites during the reign of Niqmad II, that exchange with Egypt ceased. Moreover, he goes on to say that according to this suggestion, even though Egyptian and Hittite relations improved during the reign of Ramesses II, Cypriot pottery did not make its way to Egypt (Merrillees 1968, 200–202).

The reason for the decrease in exchange with Cyprus is not archaeologically or historically clear. There are several problems associated with explaining the break in Cypriot exchange with both Egypt and the Southern Levant as being due to Hittite involvement in Cyprus or Syria. If this was the case, then after the signing of the Silver Treaty in 1258 BC, there should have been a resurgence of exchange. However, this is not the case, and moreover, as discussed in chapter 2, there is little evidence to suggest that the Hittites ever had control over Cyprus during the 13th cent. other than some boasting of Hittite rulers. Therefore, this political reason does not appear to explain this break. Likewise, if Cypriot pottery came to Egypt or the Southern Levant by the way of Ugarit, it is also unlikely that the Hittite control over the city would have broken this exchange, barring the fact it is unlikely Ugarit had control over the Cypriot pottery exchange. As Bergoffen noted, if there was a sufficient interest in a Cypriot pottery trade in Egypt, they could have obtained these objects through the Southern Levant, as some Cypriot pottery did still appear

during the 13th cent. (Bergoffen 1989, 211 f.). Additionally, if there was a great enough desire for these products in the Southern Levant, and if the 'Egyptian' ports in the south had a moratorium on Cypriot exchange, this could have been picked up by ports in the Carmel or Acco Plain. However, this situation did not come to pass, as more Cypriot pottery was still uncovered in the southern half of Cisjordan during LB IIB. It is also unlikely that the campaigns of Sety I or Ramesses II broke this exchange, as the avoidance of Cypriot pottery began well before this in Egypt and likely also in the Southern Levant. There are two likely causes; however, neither can be more than a suggestion, and one's assumption will also change the meaning of these suggestions.

Gittlen's first suggestion is that political or economic changes on Cyprus were the cause for this breakdown. This may explain the gradual pulling out from these more southerly regions, beginning in Egypt and then from the Southern Levant; however, what this change may be is unknown. It could be a breakdown in the ResourceComplex on Cyprus, which had the effect that interregional exchange with these regions no longer acted as a resource. Or, as Bushnell has suggested, after the decline in exchange with Egypt, the Cypriots exchanged with their closer neighbours such as the Northern Levant and Anatolia, taking advantage of their close proximity to the production centres (Bushnell 2013, 372). Outside of political or economic changes on Cyprus, there is the possibility that the consumption patterns simply changed and that there was not a 'decline' in exchange, but rather a development in the want for these products in the Southern Levant and Egypt. As Bushnell also points outs for Cypriot juglets: 'By the LBIIA, half of all juglets were imported, so that depositing Cypriot precious commodities as grave goods had become the norm rather than a luxury, defining group identity and the *status quo*' (Bushnell 2013, 373). Thus, the decrease in use of Cypriot ceramics during LB IIB could also be explained as a decrease in desire for these products. However, both of these suggestions have far-reaching theoretical consequences, yet both are centred on the ResourceComplex which allowed interregional exchange to take place between Cyprus and the Southern Levant.

As mentioned before, one of the aspects of the ResourceComplex for interregional exchange is an ability to exchange, and this may have shifted on Cyprus due to political reasons which would cause a break in the ResourceComplex, no longer allowing interregional exchange between Cyprus and the Southern Levant. Secondly, is the need or want to exchange which, if the development in the use, consumption, and valuation of Cypriot pottery shifted in the Southern Levant where there was no longer a need or want for these materials, the ResourceComplex would break down. Thus, the shift in Cypriot exchange is due to a shift in the ResourceComplex. However, what this shift was and where it occurred is not clear at the moment.

For the first two points, that political changes occurred on Cyprus which caused them to no longer exchange with the Southern Levant or focus their attention on the Northern Levant, would then also indicate that Cypriot interregional exchange could not have been a crucial resource of the Southern Levantine economy. If it was, then again, the 'collapse' of the Southern Levant, or at least some sites thereof, should have occurred a hundred years before the general 'collapse' began around 1200 BC. This would also be the case with the second suggestion that a change in consumption habits caused this break. If there was no longer a desire to use Cypriot products, and if the people of the Southern Levant could simply cut off this exchange, it could not have played a major economic role. However, both of these suggestions also rely on the assumption that the Cypriot pottery exchange is also an indicator for exchange of Cypriot copper or other types of goods. If the Cypriot pottery is not an indicator, and was indeed independent of exchange in metals or other goods between the island and the Southern Levant, then archaeology is silent on the matter. This would not throw away the Cypriot pottery evidence, as there is still a clear consumption pattern in the southern half of Cisjordan which slowed down considerably in LB IIB. Nevertheless, if this is not an indicator for other types of exchange, there are no other archaeological or historical records which dictate the nature and amount of exchange between these two regions, leaving archaeology silent on what it can say about the nature of Cypriot and Southern Levantine exchange in LB IIB.

Taking only the Cypriot pottery into consideration, it is still unlikely that even this class of material ever played a large role in the economic spheres of the Southern Levant, even during the peak period of LB IIA. Both Gittlen and Bergoffen found that a general rule applied to Cypriot pottery, that bowls were more common in habitation contexts while juglets were more common in funerary contexts (Gittlen 1981, 52–55; Bergoffen 1991, 64 f.). The bowls used in domestic contexts reflect their use in daily life, while the juglets likely held perfumed or aromatic oils, though this is not certain, and were placed in burials (Gittlen 1981, 52; Bergoffen 1989, 288; Chovanec/Bunimovitz/Lederman 2015, 184).[204] However, despite their popularity, mainly in the southern half of Cisjordan, Cypriot ceramics and their contents were likely of moderate value.[205] As Bergoffen notes, Cypriot ceramics have been found in contexts that were: 'used by rich and poor alike' (Bergoffen 1991, 69). She goes on to state: 'Late Cypriot vessels probably circulated freely because they were only of modest value. The large quantities of such wares in Egypt's province in southern Canaan signals a brisk trade in those items, but not necessarily important economic benefits' (Bergoffen 1991, 73). Thus, even if the Cypriot ceramics represent an exchange in and of themselves, the decline in this exchange at the end of LB IIA would not have had a large impact on the development of the society in the Southern Levant. Moreover, much as Bushnell noted, by the end of LB IIA, 69% of all clearly datable Cypriot juglets had arrived in the Southern Levant. It is likely that by the middle of the 14th cent. BC, Cypriot pottery was no longer an exotic item; rather, it had become part of the *status quo*.

---

204 Merrilles originally proposed that the Base Ring juglets contained opium and thus were popular for their drug contents; however recent residue analysis of Base Ring I juglets from Beth-Shemesh indicate that these containers carried aromatic oils (Merrillees 1968, 145–157; Chovanec/Bunimovitz/Lederman 2015).

205 Artzy has also noted that during the LH IIB the quality of the White Slip wares decreased (Artzy 1985b). This perhaps could also be a factor in the decreased desire to purchase goods of lesser quality.

6.4. Mycenaean and Minoan Pottery: Results

6.4.1. Distribution

Pottery from the Aegean[206] found in the Southern Levant mainly originates from the Mycenaean Greek mainland, with only 3% of the total assemblage coming from Minoan Crete.[207] Therefore, because the Minoan assemblage is so small, it will be included in the discussion with the Mycenaean pottery. Approximately 2,814[208] Mycenaean and Minoan sherds and vessels have been uncovered in the Southern Levant at 81 sites (see *table 11* and *25*). Much like the Cypriot pottery, the majority of these sherds are located in a few key sites which are the top ten percent. Eight sites – *Tell Abū Ḥawām*, Amman Airport Structure, Lachish, Hazor, Beth-Shean, Megiddo, *Tell el-Qāḍī* (Tel Dan), and *Tell el-ʿAǧūl* – have yielded 76% of all Aegean pottery in the Southern Levant. For Aegean pottery, the situation is generally reversed from Cypriot pottery distribution. Sites in the northern part of the region including the Carmel, the Acco Plain, the Jezreel Valley, Upper Galilee and Jordan yielded more Mycenaean pottery than the Southern Coastal Plain and the Shephelah. Lachish stands out as an outlier in this trend, having the third most Mycenaean sherds or 13% of all Mycenaean pottery in the Southern Levant. *Tell Abū Ḥawām* has the highest concentration of Aegean pottery with some 743 sherds and vessels, though this number has surely grown, since Balensi reported there were 'over 700 Aegean imports' in 1985 (Balensi 1985, 67). However, *Tell Abū Ḥawām* certainly stands out in the Southern Levant, as it alone has yielded more Aegean ceramics than 73 out of 81 sites combined. The following eight sites: Ashdod, Aphek, Acco, *Tell Ǧemme*, *Dēr el-Balaḥ*,

Beth-Shemesh, Gezer and *Tell Bēt Mirsim* contain the next 13% of all Aegean pottery. Again, the trend seen in the Aegean pottery is generally reversed compared to the Cypriot, as the majority of these second tier sites are located in the Southern Coastal Plain and the Shephelah. This leaves only 11% of all Aegean pottery in the remaining 65 sites, with 50 of those sites having five sherds or less, and 25 of having only one sherd each. Thus, much like with the Cypriot pottery, there is a general concentration of Aegean ceramics at a few sites. The ten sites which yielded 50 sherds or more account for 80% of all Aegean ceramics in the Southern Levant. Common shapes include globular flasks (*fig. 6.4.*) and lentoid flasks (*fig. 6.5.*) among others.

Ten sites in Jordan yielded Aegean ceramics, mainly Mycenaean pottery; however, other than at the Amman Airport Structure, the concentration was low. The Amman Airport Structure was also the only site in Jordan to yield any Minoan pottery. When taking all sites into consideration, there is a general reversal in the Aegean pottery distribution compared to the Cypriot using the same geographic markers, that is, with the Yarkon River generally being the dividing point for Cisjordan. In the reverse of the Cypriot distribution, 67% of all Aegean pottery was uncovered in the Carmel region, the Acco Plain, the Jezreel Valley, Upper Galilee and Jordan, whereas the Southern Coastal Plain, the Shephelah and certain sites in the Central Hill Country account for 33% of all Aegean ceramics with 13% of this material at Lachish. This is in contrast to the Cypriot pottery, where 82% was found in the southern half of Cisjordan, leaving only 18% for the remainder of the Southern Levant.

One unusual site with a high concentration is the Amman Airport Structure which yielded approximately 486 sherds of mainly Mycenaean and some Minoan pottery, representing some 50–60 vessels (Hankey 1974, 133). What makes the site more unusual is the early date of some of this pottery, as an LH IIA/B Palace Style jar was found at the site. Thus, not only is there a large concentration of Mycenaean pottery at the Amman Airport Structure, there is also a long chronological history, as items that objects dating from LH IIA through to LH IIIB1 have been found in the structure (Mumford 2015, 96). Mumford has claimed

---

206 The Mycenaean and Minoan pottery results is based largely on the studies conducted by Leonard (1994) and van Wijngaarden (2002) who catalogued Mycenaean and Minoan ceramics in the Levant. More recent publications not included in these two works have been included here.

207 Approximately 76 published sherds with some uncounted sherds from *Tell Abū Ḥawām* given the number 3 in the database totalling to 79 sherds.

208 Twelve of these sherds have been inferred based on the mention that Mycenaean pottery was found at *Ḫirbet el-Burǧ*, Acco, and *Tell Abū Ḥawām* in small amounts. However, no numerical values were given in these publications.

Fig. 6.4.   LH IIIA Globular Flask (Courtesy of the Metropolitan Museum of Art).

Fig. 6.5.   LH III Lentoid Flask (Courtesy of the Metropolitan Museum of Art).

that this is possibly due to: '…particularly strong commercial ties with the Aegean, or possibly even the presence of Aegean merchants or perhaps mercenaries (?) in this region' (Mumford 2015, 103). He goes on to state that perhaps the building acted as a sort of tariff collection point, taxing caravans which went through the region and this is how it amassed its wealth. Moreover, he goes on to state that the site might have also redistributed some of this wealth to the local regional elite, while maintaining a high percentage of the goods which have been preserved because of three separate destruction events (Mumford 2015, 108 f.). These suggestions will be examined in the following section.

6.4.2. Chronological Development

Tracking the chronological development of Mycenaean pottery is best done by the LH period the vessel or sherd was produced in as the types allow for it, as many of the sherds cannot be dated to a single chronological period.[209] For example, the 700 sherds from *Tell Abū Ḥawām* can only be dated

to LB II while the dates provided by the manufacturing of the pottery give slightly better chronological information. Likewise, the 486 sherds found at the Amman Airport Structure could either be dated to LB IIA or LB IIB. Given that both of these sites represent the largest part of the Mycenaean assemblage in the Southern Levant, the LH dates will be used over the stratigraphic dates which were used previously for the Cypriot pottery.

Unfortunately, of the 2,764 sherds and vessels of LH pottery, 1,147 can only be dated to the LH period without any subdivision, leaving only 1,617 sherds and vessels. Moreover, out of this 1,617 sherds and vessels, 432 can only be dated to LH IIIA–B. Of the remaining 1,185 Mycenaean sherds and vessels, 1,126 date to and after LH IIIA2, leaving only 59 sherds and vessels dating to the LH II–LH IIIA1 periods. Thus, already, there is a clear trend, as only approximately 1% of the datable Mycenaean ceramics can be dated before LH IIIA2, meaning 99% of this material arrived during or after LH IIIA2 (see *tables 12–24* and *maps 6–9*).

The earliest pottery to arrive from Mainland Greece dates to LH IIA,[210] however, twelve objects can be dated to LH II, a 200 year long period,

---

209 For an overview of the development of Aegean pottery in the Levant examining the Minoan pottery in the MBA see Papadimitriou 2013.

210 With one vessel from the Amman Airport Structure possibly dating earlier to LH I–IIA.

Fig. 6.6.   LH IIIB Chariot Krater (Courtesy of the Metropolitan Museum of Art).

found at seven different sites. In the following LH IIIA1 period, a slight 'increase' can be seen as 13 objects dating to this short 25 year period were found at eight sites. However, it is not until LH IIIA2, relating to the Palatial Period in Greece, where there is substantial growth in the number of Mycenaean sherds and vessels in the Southern Levant. 26% of all Mycenaean ceramics are dated to LH IIIA2, with 308 sherds and vessels found at 35 sites, with a general distribution throughout Cisjordan and in several sites in Transjordan. Thus, there is a drastic increase in both the number of sites Mycenaean material was distributed to and the amount which arrived at those sites. The following development of Mycenaean pottery is mired by the unclear dating of the pottery itself. 152 sherds and vessels can be dated to LH IIIA2–B1, with an additional 33 sherds dated to LH IIIB1 and 6 dated to LH IIIB2. The largest assemblage comes from LH IIIB, with 343 sherds and vessels of LH IIIB pottery at 36 sites, with a distribution similar to that of LH IIIA2 (*fig. 6.6.*). However, in LH IIIC, there is a sharp decline. 63 sherds dating from LH IIIB–LH IIIC have been found at nine sites with an additional 41 sherds and vessels dated to LH IIIC from six sites. The origin of these sherds and vessels will be discussed below.

The Minoan pottery represents a very small section of the total Aegean pottery. Minoan pottery has been found at 15 sites in the Southern Levant with *Tell Abū Ḥawām* and the Amman Airport Structure yielding the most, with 37 and 13 sherds and vessels respectively. The finds are scattered throughout most of the major sites which yield non-local pottery, though only at *Tell Abū Ḥawām* and the Amman Airport Structure have more than five sherds been uncovered. There is some difference in the distribution when compared to the Mycenaean pottery. While more than 50% of Minoan pottery was uncovered in the north of Cisjordan and in Transjordan, concentrated at the Amman Airport Structure and *Tell Abū Ḥawām*, only six of the 15 sites which yielded Minoan pottery were in these two regions. Thus, in some ways, the Minoan pottery distribution mirrors the Cypriot distribution; however, it is difficult to make any kind of statement concerning the distribution, as the number of Minoan finds is very small.

The chronological development taken into this database represents a similar though slightly earlier exchange between Crete and the Southern Levant. Five sherds and vessels can be dated to LM I, IB and II. After this, there follow five sherds of LM IIIA1, three sherds of LM IIIA2, four sherds of LM IIIA–B, and six sherds dated to LM IIIB. Little else can be said of the Minoan pottery other than that even from this small selection, the trend is generally the same as with the Mycenaean pottery. After LM IIIA1 there is an 'increase' in the amount of pottery from Crete, coming to an end at the close of the LM IIIB. However, little more can be said of this material.

6.5.   Mycenaean and Minoan Pottery: Discussion

The results of the database do not differ from studies which have previously been conducted on this material class (van Wijngaarden 2002; Papadimitriou 2013; Bushnell 2013). Indeed, much of the discussion which could be presented here has already been presented in the section 'Contact, Connectivity, and Connectedness in the Late Bronze Age'. Concerning the distribution of the Aegean ceramics, again the trend is generally reversed from the Cypriot distribution. Whereas the Carmel region, the Acco Plain, the Jezreel Valley, Upper

Galilee and Jordan yielded only 18% of all Cypriot pottery, these regions yielded 67% of all Aegean pottery. This is not to say that Mycenaean and Minoan pottery did not make its way into the Southern Coastal Plain and the Shephelah; however, the main users of these wares seem to be those more northerly sites and the Amman Airport Structure. One difference between these two general areas is that while there is a higher concentration of Aegean ceramics north of the Yarkon River and in Transjordan, this concentration is mainly at a handful of sites, being: *Tell Abū Ḥawām*, Amman Airport Structure, Beth-Shean, Hazor, Megiddo, *Tell el-Qāḍī* and Acco. These seven sites represent 92% of all Aegean ceramics north of the Yarkon River and in Transjordan, leaving only 8% for the remaining 33 sites. In Cisjordan south of the Yarkon River, while there are fewer Aegean ceramics, the distribution is generally more even. While 40% of all Aegean ceramics south of the Yarkon River were uncovered at Lachish, 52% were uncovered in 13 sites, being: *Tell el-ʿǍgūl*, Ashdod, Aphek, *Tell Ğemme, Dēr el-Balaḥ*, Beth-Shemesh, Gezer, *Tell Bēt Mirsim*, Ashdod (Southern Beach), Ashkelon, *Tell eṣ-Ṣāfī* (Gath), *Tell Ḫēdar* and *Tell eš-Šerīʿa*. This leaves 8% for the remaining 27 sites. Thus, while there are fewer Aegean ceramics south of the Yarkon River, these ceramics are more evenly distributed amongst the 41 sites than the Aegean ceramics north of the Yarkon River and in Transjordan.

This general distribution pattern largely follows what Bushnell called the 'juglet route', that is, Mycenaean juglets arrived at *Tell Abū Ḥawām*, travelled to Megiddo and then on to Beth-Shean, crossing over the Jordan river at *Ṭabaqāt Faḥil* and travelled south along the east side of the Jordan valley (Bushnell 2013, 330. See also Leonard 1987, 261–266). While sites in the Southern Coastal Plain and the Shephelah received Mycenaean pottery, it is unclear if this pottery arrived at one of the southern ports such as *Tell el-ʿǍgūl*, Ashdod, or Ashkelon and travelled inland, or arrived first at *Tell Abū Ḥawām* and was moved south from there. Nevertheless, the distribution of the material demonstrates there were only a few sites which could be said to have specifically imported Mycenaean pottery, such as *Tell Abū Ḥawām*, the Amman Airport Structure, Hazor and Lachish, with

other sites receiving only a very small fraction of what was found at these sites.

For 'Egyptian' sites, again the trend is generally reversed compared to the Cypriot pottery found at these sites. The two 'Egyptian' sites north of the Yarkon River, Beth-Shean and *Tell es-Saʿīdīye*, both yielded more Mycenaean pottery than Cypriot.[211] For sites south of the Yarkon River, only Aphek and *Dēr el-Balaḥ* yielded more Aegean ceramics than Cypriot.[212] However, for Jaffa,[213] *Tell Ḫēdar*, *Tell eš-Šerīʿa*, *Tell el-ʿǍgūl* and *Tell el-Fārʿa* (South), Cypriot pottery far outnumbers Aegean ceramics. Even *Tell el-ʿǍgūl*, likely the main port in the Southern Coastal Plain during the 14th cent. BC, yielded only 73 Aegean sherds while it yielded 1,525 Cypriot sherds, not including the Cypriot finds from the MBA. *Tell Ḫēdar* and *Tell eš-Šerīʿa* are similar, producing 300 and 111 Cypriot sherds respectively but only 15 Aegean sherds each. Again, much as with the Cypriot ceramics, the use of Aegean ceramics at these 'Egyptian' sites was more likely determined by their availability rather than a specific utilisation. For those sites in the north where there is a generally greater concentration of Aegean ceramics, there are more Aegean ceramics at those Egyptian sites. For sites south of the Yarkon River, outside of Aphek and *Dēr el-Balaḥ*, there are generally far fewer Aegean ceramics than Cypriot, again due to the fact that there is a generally lesser concentration of Aegean ceramics south of the Yarkon River.

The chronological development of Aegean ceramics in the Southern Levant is for all intents and purposes a short period of time. Before LH IIIA2 there is a general lack of Mycenaean ceramics in the Southern Levant and during LH IIIA2 there is a drastic increase in the amount of Mycenaean pottery brought to the region.[214] The arrival of Mycenaean pottery continued on into LH IIIB but most likely came to all but a close at the end of LH IIIB1 or ca. 1250–1225 BC. For example, the

---

211 Beth-Shean: 105 Aegean, 96 Cypriot. *Tell es-Saʿīdīye*: 9 Aegean, 4 Cypriot.
212 Aphek: 62 Aegean, 24 Cypriot. *Dēr el-Balaḥ*: 42 Aegean, 30 Cypriot.
213 No Aegean ceramics have yet been published from Jaffa.
214 As Papadimitriou (2013, 107 f.) points out there is some evidence to suggest that the increase did not take place until LH IIIA2 *late*, though this remains uncertain.

Mycenaean ceramics found at Lachish, representing 13% of the total assemblage, are mainly dated to LH IIIA2–LH IIIB1, with only a few sherds dated to LH IIIB2 (French/S. Sherratt 2004, 1448). Moreover, in her study of juglets, Bushnell found that most Mycenaean juglets arrived during LH IIIA2–LH IIIB1 (Bushnell 2013, 333), stating that: 'Trade in juglet commodities probably terminated c. 1225 BC' (Bushnell 2013, 348). The LH IIIC pottery which has been uncovered in the Southern Levant most likely originates from Cyprus (Cline 2007, 196; Mazar 2007, 571; S. Sherratt 2009, 494). 21 samples of LH IIIC pottery from Beth-Shean were tested by NAA: 15 were positively identified as coming from Eastern Cyprus, with three more samples likely originating on Cyprus. The five other samples were chemical loners which had no clear match on Cyprus or in the Aegean (Mommsen/D'Agata/Yasur-Landau 2009, 510–513). This further supports the theory that the arrival of Mycenaean pottery most likely came to a general halt at least with the end of LH IIIB, if not slightly before this at the end of LH IIIB1. A note of interest comes from comparing the distribution of Cypriot pottery from Iron I and the Cypriot made LH IIIC pottery from the same period. while the concentration of Cypriot pottery was south of the Yarkon River, even during Iron I, 67% of all Cypriot pottery was uncovered south of the Yarkon River. However, for the LH IIIC pottery made on Cyprus, all of it is located north of the Yarkon River in the Acco Plain, Jezreel Valley and Northern Galilee with the exception of the two sherds from *Tell Ḫēdar*, LH IIIC pottery. While this material does not represent exchange with the Aegean, it does demonstrate that these wares in an Aegean style made on Cyprus were still utilized in the regions which had the highest concentration of Aegean ceramics.

In terms of development, Mycenaean pottery represents a very rapid increase and decrease in frequency when compared to Cypriot pottery. While Cypriot ceramics began to make their way to the Southern Levant in MB IIA, with a continual development until the end of LB IIA when a drastic decrease took place, Mycenaean ceramics represent only a brief period of exchange from 1375 through to 1250/1225 BC, though this time may have been shorter if the exchange truly picked up in LH IIIA2 late. The question is, then, does this brief period of exchange, archaeologically speaking, represent a resource for the Southern Levant during the Late Bronze Age?

To answer this question, one must also examine the use of the objects and their value, whether it be use-value or exchange-value. However, the first part of the answer is that exchange with Mycenaean Greece could only have been a resource during part of the LBA, that is, from 1375–1225 BC, and there is no evidence of it being a resource during the Early Iron Age. Secondly, there is little evidence to say that exchange with Minoan Crete was ever a resource during the LBA or the Early Iron Age, as the assemblage of Minoan ceramics is the smallest of all imported ceramic assemblages. Thus, when considering exchange with the Aegean as a resource, it should be taken into account that it was only for a relatively short period of time and that exchange with Minoan Crete seemed to have no real impact on the Southern Levant. This does not mean that the items from Minoan Crete were not valued; however, this was more likely due to their use-value rather than exchange with Minoan Crete having any economic or exchange value.

Throughout the Southern Levant, Mycenaean pottery was valued differently, as demonstrated by van Wijngaarden (2002). At larger urban centres, Mycenaean pottery was used in several different social spheres, appearing in domestic contexts, tombs, palaces and temples indicating that, while valued, in these larger urban settings, these objects had a more general value (van Wijngaarden 2002, 109–124; see also Stockhammer 2013). As Steel notes, for the Mycenaean pottery found at *Tell el-ʿAǧūl*, the site with the eighth most Mycenaean pottery in the entire Southern Levant: 'The fragmentary nature of the Mycenaean pottery from the settlement and its occurrence within secondary deposits argue against the curation of these vessels as an exotic, a valued prestige item, or an object invested with symbolic or ceremonial connotations' (Steel 2002, 38). It is thus likely that in those places were Mycenaean pottery was rarer, being the case for the majority of the sites in the Southern Levant, that it had a higher value, either because it was exotic, or because of its symbolic

value. In this case, it is likely that Mycenaean pottery acted as a resource, not in its exchange-value, but in its use-value, as it was appropriated into symbolic spheres such as cultic buildings, or burials. This is supported by the fact that while Mycenaean pottery has a distribution throughout 81 sites, the concentration is generally very low. It is highly doubtful that, for these sites, Mycenaean pottery would have had any great impact on the economic sphere of these settlements. Rather, they likely acted as 'little luxuries' (Bushnell 2013, 386) which were incorporated into different aspects of life throughout the various sites and regions of the Southern Levant. As previous studies have demonstrated, there was no single pattern of use for this material class (van Wijngaarden 2002, 109–124; Stockhammer 2013, 100). With that said, there are some differences in the distribution of types. Generally, the further inland, the fewer types are found. At the coastal site of *Tell Abū Ḥawām*, open vessels are more numerous than closed transport containers (Papadimitriou 2013, 108), whereas at a site like Lachish, the open vessels make up approximately 30% of the assemblage (French/S. Sherratt 2004, 1449) and at *Tell Dēr ʿAllā*, only closed shapes were uncovered (van Wijngaarden 2002, 99–108).

The Amman Airport Structure; however, stands out. While both *Tell Abū Ḥawām* and Lachish yielded high amounts of Mycenaean pottery, this is not surprising, as *Tell Abū Ḥawām* likely acted as the main entry point for Mycenaean pottery. It is also not surprising that Lachish, being in the southern part of the region and away from the main port of entry for this material, is a site rich in almost all non-local materials, being the only site to have all five kinds of pottery discussed in this section. Thus, the Amman Airport Structure is unusual in that a high amount of Mycenaean pottery, including some of the earliest found in the Southern Levant, was found at a site far into Transjordan. As Mumford stated, the reason for this might be because there were: '… particularly strong commercial ties with the Aegean, or possibly even the presence of Aegean merchants or perhaps mercenaries (?) in this region' (Mumford 2015, 103). However, despite such claims, there is little evidence to support it from a minimalist perspective and it makes far more of the

evidence than what is available. Though there is a high sherd count, the actual amount of vessels is between 50 and 60 and even if one assumes most of the material arrived during LH IIIA2 or before the end of the 13th cent. (Mumford 2015, 96), this still leaves 75 years for this material to arrive at the site. It is not likely that this small structure or the region surrounding it had any commercial ties with the Aegean, as there is little evidence to support this suggestion for any site other than *Tell Abū Ḥawām* in the Southern Levant. Moreover, the presence of this material culture does not mean that Aegean merchants had been at the site, as this would be falling into the trap of taking pots for people. The exact reason why there is a high concentration of Aegean ceramics at the Amman Airport Structure will likely remain a mystery; however, it is more likely that these objects played some kind of important social role or acted as a social resource rather than representing economic ties, as there is a specific importation of this material to the site over other materials such as Cypriot pottery which was more widely available.

As partially argued in chapter 4, it is likely that Mycenaean pottery played only a small economic role and this was likely restricted to *Tell Abū Ḥawām*. Compared to Cypriot pottery, Mycenaean pottery makes up only a third of what was brought from Cyprus and even some of the 'Mycenaean' pottery was not shipped from Mycenaean Greece. It has already been stated that the LH IIIC pottery likely all originates from Cyprus; however, of the 1,841 vessels Bushnell examined, 78% were known or presumed to be from Mycenaean Greece and 19% were recorded as locally made (Bushnell 2013, 328). She states: 'A sizeable proportion of the Mycenaean narrow-necked containers found in Cyprus and the Levant were manufactured outside the Aegean, mostly during LHIIIB' (Bushnell 2013, 359). Moreover, Zuckerman *et al.* found that of the 183 'Mycenaean' sherds tested by NAA from Northern Israel, 7% originated on Cyprus and another 11% were likely produced in the Levant (Zuckerman *et al.* 2010, 412). Stockhammer, in his investigation of 82 sherds of 'Aegean' pottery, found that roughly 28% were not made on the Greek Mainland but on Cyprus or in the Levant (Stockhammer 2011, 287). Thus, even if the

material has been included, it is likely that some, particularly from LH IIIB, does not represent exchange with the Aegean, but rather with Cyprus, or somewhere else in the Levant.

Moreover, when asking whether this material played a strong economic role, one must examine the entire picture. Other than the Late Helladic pottery, there is no further evidence of exchange in other types of goods between the Southern Levant and Mycenaean Greece. However, in the view that there must be a connection between these regions, other objects must have been traded, such as foodstuffs, liquids, textiles, hides, skins, timber, livestock and slaves (Dickinson 1994, 237 f.; Burns 2010b, 297–299). Nevertheless, the existing evidence for exchange between Mycenaean Greece and the Southern Levant is slim on either side of the exchange.[215] If one were to use 'informed imagination' (S. Sherratt 2010, 91) to fill in these gaps, from the current evidence, presently there is more imagination about exchange between Mycenaean Greece and the Southern Levant than there is archaeological information. Thus, the loss of exchange with Mycenaean Greece likely had little effect on the development in the societies of the Southern Levant. The only place it may have had a strong effect was at *Tell Abū Ḥawām*, but even here it is doubtable that interregional exchange with Mycenaean Greece was a significant economic resource as it likely played a marginal role in the site's economy.

Reasons why this exchanged broke down around 1225 BC are manifold, as these have been strongly tied to such theories as the 'Sea Peoples', trade collapse, or even the spontaneous collapse of the Mycenaean Palatial system. All could have been factors and this is a question that this study cannot answer. However, it is likely that a change

in the ResourceComplex on the Mycenaean end is the likely cause rather than a shift in the complex in the Southern Levant, as the Mycenaeans were either unable to exchange or no longer needed or wanted to exchange with those areas outside of the Aegean.

6.6.   Qurayya Ware: Results

Qurayya Ware, also known as Midianite pottery, Hejaz pottery, and Taymanite Painted Ware (Tebes 2007, 11)[216] derives its name from the site Qurayya in the Arabian Peninsula (Hejaz) (*fig. 6.7.*). The site Qurayya, is, to date, the only known location of production for this type of pottery, though it is likely the pottery was produced at sites outside of Qurayya (Tebes 2007, 13; 2013, 319). Qurayya Ware has been found at 22 sites in the Southern Levant, though the geographic distribution is limited to sites south of Gezer and the Amman Airport Structure in Transjordan, with a stronger focus on sites in the Negev region (see *table 26* and *map 10*). The pottery is not only limited in geographic distribution but also in quantity, as only approximately 189 sherds have been uncovered.[217] Of these sherds, 70, or 37%, have been uncovered at the mining site of Timna', while 15 of the 22 sites have yielded five sherds or less. The chronology of this pottery remains a matter of discussion[218] and here I follow the recent work of Singer-Avitz who has argued that this pottery emerged toward the end of the LBA and continued in use through 12th and 11th cent. BC. Thus, a general chronological development within Iron I is difficult to discern. Nevertheless, what can be said is that towards the end of the LBA and during the Early Iron Age, there was a development of an exchange network with Arabia represented by the Qurayya ware.

---

215 See discussion in chapter 4 as amounts of material can be deceiving. Even the finds from the Amman Airport Structure which yielded nearly 500 sherds being the second most in the entire Southern Levant, account to between 50–60 pots. Thus, there remain two options. Either the evidence for exchange between Mycenaean Greece and the Southern Levant is just a meagre remains of what once existed, or it is merely representative of the situation that there was not as much exchange as has been purported in the past. I agree with the later, though this view can always change with new archaeological findings.

216 See references therein.
217 Note: while Qurayya ware has been uncovered at Har Shani, Mezad Hazeva, Wadi 'Uqfi (Ma'ale Shaharut), Amman Airport Structure, *Wādī ʿAmrānī* (Nahal 'Amram), and *Naḥal Šǝlomō* (Nahal Shelomo) there are as of yet no concrete data for the exact number of sherds uncovered and thus have been assigned numbers of three or less.
218 See Tebes 2007; 2013; Singer-Avitz 2014 and references therein.

Fig. 6.7.   Qurayya Ware from the Temple of Hathor, Timna (Tebes 2014, Fig. 5; Courtesy of Juan M. Tebes).

6.7.   Qurayya Ware: Discussion

The majority of the Qurayya pottery are table wares, mainly bowls along with some cooking pots. Therefore, these items were seemingly not exchanged for their contents, which was the case for the majority of the Cypriot and Mycenaean pottery. Rather, following the suggestion of Tebes, the objects were most likely brought either as personal possessions by nomadic pastoralists or Hejazi villagers, or were part of a gift exchange between these same people and the locals in the southern region of the Southern Levant. The pottery has been found in a number of different find contexts including administrative buildings, cultic contexts, and some have been found as burial offerings. This suggests that they were seen to have social value, perhaps as an exotic item or, if part of a gift exchange, as having symbolic value as well (Tebes 2007, 20). Finkelstein suggested that this is also evidence of a possible invisible incense trade represented by the pottery (Finkelstein 1988, 247); however, currently this suggestion is not borne out by this type of pottery. The fact that the

majority of Qurayya pottery are table wares having only symbolic value would rather argue that these items were exchanged by those who owned the pottery in gift exchange or were deposited as personal possessions. As Tebes has stated: 'We are not dealing with the kind of caravan trade carried out by specialized middlemen that was characteristic of later periods' (Tebes 2007, 22). This does not exclude that some of this pottery was not sold or bartered, but it is more likely that, given the infrequency of its appearance, it only played a minor role in the society of the southern region of the Southern Levant. The important element was more likely the contact with the people from the Hejaz, not the interregional exchange with this area in this type of pottery. However, more research must still be done on these wares and in the region of their production, which may alter this picture.

6.8.   The Northwest Anatolian Grey Ware: Results

Northwest Anatolian Grey Ware, also known as Trojan Grey Ware, is the final non-local pottery to be discussed in this chapter (see *table 27* and *map 11*). It is both the smallest group in terms of total number of finds in the Southern Levant and in find locations.[219] Northwest Anatolian Grey Ware has been found at only six sites in the Southern Levant: Lachish, *Tell Abū Ḥawām*, Tel Miqne/Ekron, Ashdod (Southern Beach), *Tell eṭ-Ṭuyūr* (Tel Sippor), and *Tell eṣ-Ṣāfī* (Gath).[220] The concentration of these wares from these few sites is within the Southern Coastal Plain and the Shephelah; however, the majority of the finds have come out of Lachish and *Tell Abū Ḥawām*. Of the 61 sherds of Northwest Anatolian Grey Ware uncovered in the Southern Levant, 27 were found at Lachish and 23 at *Tell Abū Ḥawām*. Tel Miqne/Ekron had

---

219 Other than the Minoan pottery.
220 This additional sherd has been recently uncovered at *Tell eṣ-Ṣāfī* (Gath) found out of context in a mid-Iron I context in Area A <https://gath.wordpress.com/2012/09/13/a-sherd-of-trojan-grey-ware-from-safi/> (Last accesses: 01.03.2016).

eight sherds while Ashdod (Southern Beach), *Tell eṭ-Ṭuyūr*, and *Tell eṣ-Ṣāfī* (Gath) each yielded one sherd. Many of the sherds have come from unstratified or secondary contexts. However, there is a general trend that these vessels most likely made their way into the Southern Levant sometime during the 13th cent. BC, as some sherds have been securely dated from good contexts at Tel Miqne/Ekron, *Tell Abū Ḥawām*, and Lachish (Allen 1994, 40 f.; Yannai 2004, 1276).

6.9. The Northwest Anatolian Grey Ware: Discussion

Allen, in her 1994 article on the Northwest Anatolian Grey Ware at Tel Miqne/Ekron, proposed five possible reasons why these wares appeared in the Southern Levant. She states: '1) they were exported in the course of trade; 2) they represented a sort of trophy; 3) they were the personal possessions of a limited elite resident at Troy, who emigrated, primarily to the eastern Mediterranean; 4) they were the property of successful Mycenaean overseas agents doing business in the eastern Mediterranean or 5) they were items of gift exchange' (Allen 1994, 44). She argues that the likely answer to how these pots arrived in Israel was through the commercial actions of a small number of individuals (Allen 1994, 45). Yannai agrees with this, stating that the Northwest Anatolian Grey Ware has not been found in palaces, affluent households nor with other assemblages of luxury items. Therefore, these items cannot be associated with immigration or Canaanite elite practices (Yannai 2004, 1277). Yannai goes on to say: 'It is reasonable to assume that these vessels were imported into the Land of Israel due to very limited commercial activity, individual immigrants, sailors' trade and the transfer of single vessels by various means' (Yannai 2004, 1277). Given the limited nature of this material, not much more can be said. It is not likely that it represents any extensive commercial activities between the Southern Levant and northwestern Anatolia, particularly the site of ancient Troy. It is most probable that it represents a very small amount of this pottery coming into the Southern Levant as part of other cargoes. However, it is a possibility that this pottery may have arrived via Cypriot exchange given its distribution pattern, which will be discussed below.

6.10. The Non-Local Pottery in the Southern Levant: Distribution Conclusions

Non-local pottery has been uncovered at 136 sites in the Southern Levant, with the majority of these sites receiving very little. Indeed, 105 sites have 50 sherds or less, with 86 of those sites having 15 sherds or less, and 58 sites having five sherds or less. Thus, it should come as no surprise that in every non-local pottery group there is a general concentration at a few key sites, and this same pattern stands when examining all non-local pottery. This is clear, as 75% of all non-local pottery was uncovered in ten sites: Lachish, *Tell el-ʿAǧūl*, *Tell Abū Ḥawām*, Ashkelon, Hazor, Amman Airport Structure, *Tell Ǧemme*, *Tell Bēt Mirsim*, *Tell Ḫēdar*, and Megiddo. Another 12% of all non-local pottery was uncovered in the following ten sites: *Tell el-Baṭāšī* (Tel Batash/Timna), Gezer, Beth-Shean, *Tell el-Qāḍī* (Tel Dan), Shechem, *Tell Abū Hurēre* (Tel Haror), *Tell eš-Šerīʿa* (Tel Seraʿ), Ashdod, Acco, and Tel Mevorakh. This leaves the remaining 13% distributed throughout 116 sites. It should also not come as a surprise that the general concentration of this material is in the southern half of Cisjordan, as out of the approximately 13,295 sherds and vessels of non-local pottery, over 10,000 of these are Cypriot. Thus, the general overall distribution pattern will follow the Cypriot distribution pattern, which is heavily weighted in the southern half of Cisjordan below the Yarkon River. However, this is also in part due to the general distribution patterns of each class of non-local pottery. For the Cypriot, Qurayya Ware, and Anatolian Grey Ware, the general distribution is below the Yarkon River in Cisjordan. The only site in the north where Anatolian Grey Ware appears is at *Tell Abū Ḥawām*, while the other five are securely in the south. For the Qurayya Ware, while a few sherds have been uncovered in Transjordan, the majority of these finds are south of Gezer, mainly in the Negev. Thus, for all but the Aegean pottery, the general distribution of the non-local pottery is south of the Yarkon River, specifically in the Southern Coastal Plain and the Shephelah.

Despite that one might assume that larger sites would yield more non-local pottery, this was not necessarily the case. Of the top 20 sites which yielded 86% of all non-local pottery, the distribution between small to large sites is more even than one might expect. Small sites such as Amman Airport Structure, *Tell Ḫēdar* (Tel Mor), *Tell el-Qāḍī, Tell Abū Hurēre*, and Tel Mevorakh each yielded substantial amounts of non-local pottery. Indeed, the small site of *Tell Ḫēdar* yielded more pottery than larger or more important sites such as Megiddo and Gezer. This is likely as it acted as an anchorage for Ashdod. Larger sites certainly did yield substantial amounts of non-local pottery, with Lachish, Ashkelon, and Hazor yielding 51% of the entire assemblage. What is important to take from this distribution is that, while larger sites most certainly did use larger amounts of non-local pottery, this was not always the case. Sites both small and larger utilised considerable amounts of non-local pottery depending on the site's consumption patterns, but also likely due to the availability of the pottery. For a site like Hazor, being the largest site in the Southern Levant during the LBA, it fell out of the general area of Cypriot pottery distribution and the residents of the site must have purposely brought the material to the site, or it was brought to the site as a gift or payment. However, the same is true of the Amman Airport Structure which yielded more Aegean pottery than any other site in the Southern Levant other than *Tell Abū Ḥawām*. It is thus also true that the residents of this site must have either purposely brought the large amount of Aegean pottery to the site, or it was brought to the site for a specific purpose, as it too falls out of the general area of concentration for Aegean pottery. Therefore, sites both large and small utilised non-local pottery, with site size not being the determining factor in the consumption of these goods.

Of the 136 sites which yielded non-local pottery, 68 sites had only one type of non-local pottery. From the 22 sites where Qurayya Ware was uncovered, 16 had no other non-local pottery at the site. Thus, it can generally be said that the distribution of Qurayya Ware was outside of the general distribution of non-local pottery in the Southern Levant and was not connected to the Cypriot pottery distribution. This would be a

further indicator that this pottery was transported via alternative channels, such as nomadic people who used this pottery, as Tebes has suggested. 38 sites had only Cypriot pottery, while 14 sites had only Mycenaean pottery. 50 sites have yielded two types of non-local pottery. For all but Khirbet en-Nuhas, which had both Qurayya ware and Cypriot pottery, and *Tell el-Far'ah* (North), which had Minoan and Cypriot pottery, the remaining 48 sites each yielded both Cypriot and Mycenaean pottery. 13 sites yielded three types of non-local pottery. Of these, 8 sites had Cypriot, Mycenaean, and Minoan pottery.[221] Tel Miqne/Ekron, *Tell eṭ-Ṭuyūr* (Tel Sippor), and *Tell eṣ-Ṣāfī* (Gath) each yielded Cypriot, Mycenaean, and Anatolian Grey Ware. *Tell el-Fārʿa* (South) had Cypriot, Mycenaean, and Qurayya Ware, while *Ḫirbet* Ğedūr (Tel Gedor) yielded Mycenaean, Minoan, and Qurayya Ware. Only four sites yielded four types of non-local pottery. Both *Tell Abū Ḥawām* and Ashdod (Southern Beach) yielded Cypriot, Mycenaean, Minoan, and Anatolian Grey Ware, while both the Amman Airport Structure and Gezer yielded Cypriot, Mycenaean, Minoan, and Qurayya Ware. Of the 136 sites, only one yielded all five types of non-local pottery and 32% of the total non-local pottery assemblage. This site is Lachish. What is important from this is that, again, site size and importance is not the determining factor in which sites received several types of non-local pottery. Indeed, large or 'important' sites such as Hazor, Megiddo and Beth-Shean received only Cypriot and Mycenaean pottery. However, this is because for both the Northwest Anatolian Grey Ware and the Qurayya Ware, had a limited distribution in the southern half of the Southern Levant, while Minoan pottery also had a very limited distribution in the entire Southern Levant. Thus, while a site's importance and size did likely play a role, such as at Lachish and Gezer in the Shephelah, one of the main reasons why they have a wide variety of non-local pottery was also because of their access to this material. Another important aspect of this pattern appears in the comparison of the distribution of these various non-local pottery types. To begin, there are

---

221 Acco, Ashdod, Beth-Shemesh, *Dēr el-Balaḥ*, Jerusalem, Ta'anach, *Ḫirbet el-Burğ*, and *Tell el-'Ağūl*.

the smaller non-local pottery groups, the Qurayya Ware and the Northwest Anatolian Grey Ware. As stated above, the Qurayya Ware generally fell out of the non-local pottery distribution, as 16 of the 22 sites which yielded Qurayya Ware had no other non-local pottery. It was not linked with the more northerly Mycenaean distribution, nor was it linked to the southerly Cypriot pottery distribution. On the other hand, the Northwest Anatolian Grey Ware likely was linked to the Cypriot pottery distribution. Much like the Cypriot pottery, the majority of Northwest Anatolian Grey Ware was uncovered in the Southern Coastal Plain and the Shephelah, with *Tell Abū Ḥawām* being the only northerly site to yield Northwest Anatolian Grey Ware. Moreover, Northwest Anatolian Grey Ware was more common on Cyprus and in the Levant than it was in the Aegean islands and mainland Greece (Allen 1994, 42). This information, combined with Mycenaean pottery having a higher concentration in the northern half of Cisjordan, would suggest that the Northwest Anatolian Grey Ware was likely brought to the Southern Levant as part of a Cypriot cargo during the waning period of exchange between Cyprus and the Southern Levant. The Minoan pottery distribution is not as clear. While the Northwest Anatolian Grey Ware likely appeared in the Southern Levant over a 100 year period, the Minoan pottery arrived over a course of nearly 400 years. Thus, when comparing the Minoan pottery to the Cypriot or Mycenaean pottery, it more closely resembles the Cypriot pottery distributing. However, this may be for several reasons, the first being the nature of preservation and the fact that little Minoan pottery ever made its way to the Southern Levant, and thus the distribution is coincidental. Another explanation could be that Minoan pottery may also have been brought via Cypriot exchange; however, this is unknown. Thus, given the small amount of Minoan pottery and its long chronological history, there is no clear reason for its distribution, other than that it too was concentrated at *Tell Abū Ḥawām* and the Amman Airport Structure.

The comparison between the Cypriot pottery and the Mycenaean pottery brings out several interesting points from these 119 sites which yielded Cypriot or Mycenaean pottery. While Cypriot pottery was found at 24 more sites than Mycenaean

pottery, the overlap between these two pottery types is not complete. Of the 105 sites which yielded Cypriot pottery, 67 also yielded Mycenaean pottery, leaving 38 sites with only Cypriot pottery. Moreover, of the 81 sites with Mycenaean pottery, 14 had no Cypriot pottery. While the majority of these sites which yielded only Cypriot or only Mycenaean pottery yielded only a few sherds or vessels, it demonstrates that the general overlap in distribution between these two material types is not as strong as it might seem. Indeed, nearly half of the sites, 44%, had only Cypriot or Mycenaean pottery. This is in part because Mycenaean pottery had a smaller overall distribution compared to the Cypriot pottery; however, nearly a fifth of all sites which yielded Mycenaean pottery had no Cypriot pottery. What can be taken from this is, again, what is seen in the general distribution pattern. Cypriot pottery was used more so in the southern half of Cisjordan, while Mycenaean pottery was generally used in the northern half of Cisjordan and in Transjordan. Thus, it should be expected that, because of this general difference, there will not be as great an overlap between these two non-local pottery types as might have been expected given their similarities. However, this is in line with Bushnell's juglet study, where she also found a separation between the use of Cypriot and Mycenaean juglets. Mycenaean juglets were used more in the north and in Transjordan, while Cypriot juglets were used in the south of Cisjordan (Bushnell 2013, 357–359). This difference will come out again in the chronological discussion, and it has far reaching implications about the nature of Cypriot and Mycenaean exchange.

6.11. The Non-Local Pottery in the Southern Levant: Chronological Development Conclusions

Of the five non-local pottery types discussed, there is no single chronological development during the LBA. Indeed, each of these non-local pottery types has a different development through time from one another. In terms of time, the Cypriot pottery had the longest chronological development, beginning in MB IIA, ever increasing over the next several centuries, peaking in the 14th cent. BC, and

then drastically decreasing in the 13th cent., coming to a virtual halt at the end of the LBA. This development was mainly focused in the southern half of Cisjordan, particularly at the site of *Tell el-ʿAğūl*. For the Minoan and Mycenaean pottery, the development of exchange between these regions and the Southern Levant is not as long as the Cypriot pottery. However, while some Minoan and Mycenaean pottery did make their way to the Southern Levant during the MBA and LB I through the beginning of LB IIA, the general development of this exchange did not begin until sometime in the mid-14th cent. BC and lasted only for some 125–150 years, likely coming to an end at 1250/1225. As Papadimitriou notes: 'The small amounts of Aegean pottery exported to the Eastern Mediterranean prior to [the later part of LH IIIA2] argue against them having any significant economic impact on local societies' (Papadimitriou 2013, 120). He goes on to state: 'This suggests that, so far as pottery is concerned, Aegean involvement in the Eastern Mediterranean trade networks was minimal prior to the rise of the Mycenaean palatial system in mainland Greece.' (Papadimitriou 2013, 120). Thus, while there is a long chronological development of exchange with the Aegean, mainly Mycenaean Greece, the true development of 'significant' exchange did not begin until the mid-14th cent. BC and lasted only for a short while compared to Cypriot exchange. Likewise for the Northwest Anatolian Grey Ware, there is a very short chronological development beginning in the 13th cent. BC and likely ending in the same century. The chronological development of the Qurayya Ware also began sometime in the 13th cent. BC; however, it is the only non-local pottery type which continued to be exchanged through and into the 11th cent. BC.[222] Thus, taking all five of these non-local pottery types into consideration, only the Cypriot pottery had a substantial development from the MBA through LB IIA. However, the period when Cypriot pottery drastically decreased was also the time when Mycenaean pottery began to increase in the region, along with the small amounts of Qurayya Ware and Northwest Anatolian Grey Ware.

It has been suggested that the decline of Cypriot pottery during LB IIB was due to competition with a Mycenaean product (Gittlen 1981, 51 f.; Bergoffen 1989, 288). However, there are several difficulties with this suggestion. As Papadimitriou notes, there is a very small chronological overlap between the Cypriot pottery exchange and the Mycenaean pottery exchange. It is also unclear if there was also a functional overlap, as the 'goods' carried in the transport containers may not have been the same, and the Mycenaean pottery exchange also brought with it several open forms not seen in the Cypriot pottery exchange (Papadimitriou 2013, 123–127). Thus, the type of exchange between Cyprus and the Southern Levant and the Aegean and the Southern Levant may not have been the same. However, the distribution is also of key importance in answering this question. Mycenaean pottery did not appear in a market already saturated with Cypriot pottery, as Mycenaean pottery was generally used outside of the main area of distribution for Cypriot pottery. With 82% of all Cypriot pottery arriving below the Yarkon River and 67% of all Aegean ceramics arriving north and into Transjordan, it is unlikely that there was much 'competition' between these two ceramic products. Moreover, even during LB IIB, while Cypriot imports had drastically decreased, they were not overwhelmingly replaced by Mycenaean ceramics in the south of Cisjordan.

Taking Lachish as an example which had the most Mycenaean pottery south of the Yarkon River, including all Mycenaean pottery dated to the main influx from LH IIIA2 through LH IIIB, it is still less than half of the Cypriot pottery found in just the LB IIB alone.[223] Thus, given the general distribution of these two pottery types, it is unlikely that the influx of Mycenaean pottery caused the drastic decrease in the Cypriot pottery exchange. What is more likely is that this represents the diverse regions in the Southern Levant which utilised different non-local pottery, with the focus of Cypriot use in the south which was then not supplemented by Aegean pottery, as there remained

---

222 Imported Egyptian ceramics too were exchanged in Iron I. This will be discussed in the following chapter.

223 There are 233 sherds of Mycenaean pottery from LH IIIA2, LH IIIA-B, LH IIIA2-B, LH IIIA2-B1, LH IIIB, LH IIIB1, and LH IIIB2. However, there are 551 sherds of Cypriot ceramics from LB IIB.

more Cypriot pottery in LB IIB than Aegean. More-over, even at *Tell el-ʿAğūl*, the likely main port for Cypriot pottery, even there was little use of My-cenaean pottery. As Steel notes: 'The fragmentary nature of the Mycenaean pottery from the settle-ment and its occurrence within secondary depos-its argue against the curation of these vessels as an exotic valued prestige item' (Steel 2002, 38). Thus, as Papadimitriou has suggested, it is likely that Cypriot pottery and Mycenaean pottery did not exist as part of a single pottery trading network throughout the entire Eastern Mediterranean, but that there were two networks of exchange which only briefly overlapped in the 14th cent. BC (Pa-padimitriou 2013, 128). In the terms of this work, this would represent two different ResourceCom-plexes of interregional exchange, one with the Ae-gean and another with Cyprus.

Once again, this overlap was not only short chronologically; it was also not entirely the same geographically. This is significant, as it has been suggested that Mycenaean products were shipped by Cypriot merchants (Hankey 1967, 146; Gilmour 1992, 118–120; Cline 2003a, 364; C. Bell 2009, 34). However, given the distribution patterns of the Cypriot and Mycenaean pottery, it is unlikely that the two were both brought on Cypriot ships. This does not exclude the possibility that Cypriot ships may have brought some Aegean ceramics to the Southern Levant, as some 'Aegean' ceramics were produced on Cyprus; however, the general trend would argue against this occurring in any large amounts. This would be another argument against complete Cypriot or Canaanite thalassocracies during the LBA.[224]

Returning to the chronological development of non-local pottery in general, there is one clear trend which must be mentioned. Exchange in non-local pottery, not including Egyptian pottery, was mainly within the LBA. There is no secure find of pottery from the Aegean in the Early Iron Age, Cypriot pottery was a small fraction of what was found in LB IIB which too was a small fraction of the Cypriot pottery from LB IIA, and Northwest

Anatolian Grey Ware was also likely limited to LB IIB. Only the Qurayya Ware continued to be ex-changed in any quantity during the Iron I period; however, as stated above, this was largely outside of the general non-local pottery distribution. Thus, it can generally be stated that exchange in non-local pottery terminated at the end of the LBA. The general network which had moved both Mycenae-an and Cypriot pottery came to a close, while the Qurayya Ware circulated to sites that partly fell within that network, but mainly outside of it dur-ing the Iron I period. However, the general view of this chronological development must be nuanced by the different chronological developments of the various non-local pottery types.

While it can generally be said that non-local pottery was exchanged in the Southern Levant during the LBA, this is only partially correct. The Cypriot pottery covers the longest period of ex-change during the LBA and the beginning of Iron I. However, exchange with Cyprus falls off at the end of LB IIA. Thus, during the 13th cent. BC, exchange with Cyprus according to the pottery evidence was not nearly as strong as in the 14th cent. BC. Like-wise, exchange with the Aegean may have begun in the MBA; however, it was seemingly most in-tense during the second half of the 14th cent., and during the majority of the 13th cent. or only rough-ly half of the LBA. The same can be said of the Qurayya Ware and the Northwest Anatolian Grey Ware, as both of these only appear in the South-ern Levant during the last 100 years of the LBA. Thus, what can be taken from this is that, from LB I through LB IIA, the only non-local pottery that was exchanged in any great quantity was Cypriot pottery, which dominated. It was only in the final years of LB IIA and during LB IIB that other types of non-local pottery appeared in any significant quantities; however, even here it is mainly the My-cenaean pottery.[225]

---

224 See also for example, Knapp 1993, 332–347; Knapp/ Cherry 1994, 128–134; A. Zukerman 2010, 887–901.

225 Egyptian imported pottery too begins to appear more frequently during LB IIB. See the following chapter.

6.12. The Non-Local Pottery in the Southern Levant: Non-Local Pottery as a Resource

The question whether interregional exchange in non-local pottery was an economic resource is more a question of whether non-local pottery represents the exchange of other goods besides pottery. If the non-local pottery exchange is assumed not to be part of a larger exchange in other goods, then the economic worth of these objects is little. As Bergoffen states about Cypriot pottery: 'Late Cypriot vessels probably circulated freely because they were only of modest value. The large quantities of such wares in Egypt's province in southern Canaan signals a brisk trade in those items, but not necessarily important economic benefits' (Bergoffen 1991, 73). Additionally, as Bushnell states about exchange of juglets both Cypriot and Mycenaean: 'Though juglets have been labelled as 'precious commodities,' these ubiquitous products were more likely to have been modest 'little luxuries'' (Bushnell 2013, 386). Moreover, the same could be said of the Northwest Anatolian Grey Ware and the Qurayya Ware. Both appeared in modest quantities and likely had little exchange or economic value. Additionally, as discussed previously, for Mycenaean exchange it is not known whether other items were brought from the Aegean, as the only evidence of this exchange is the pottery. If pottery was the only item exchanged, then it is conceivable that all Mycenaean pottery came from a few contacts over the decades of intermittent exchange. If Cypriot pottery was also exchanged in and of itself, it too could have arrived as part of large shipments, thus decreasing the number of contacts. This does not mean that the ceramic items were without value, as they would have had use-value or a symbolic value and would have acted as a resource to a degree in the society. However, it is unlikely that the exchange only of non-local pottery had much of an economic impact on the Southern Levant, nor is it likely that these objects were precious commodities as Bushnell has suggested.

For example, Lachish during the 14th cent. BC, which yielded the most Cypriot sherds from any period and site in the Southern Levant, has been described as: 'a meagre settlement' (Ussishkin 2004a, 60). Indeed, for other sites such as Gezer and Jerusalem, during the 14th cent. BC the archaeological evidence is meagre (Ussishkin 2004a, 73 f.). Yet at Gezer, nearly 60% of its Cypriot pottery arrived during LB IIA, and for Jerusalem, nearly 100% of its Cypriot pottery arrived during this period.[226] Thus, if the archaeological remains are taken as representative that these sites were not as prosperous as the historical records may imply, then the majority of the Cypriot pottery at all three of these sites arrived during a period when they may not have been as affluent. This would indicate that, despite this, they were still able to acquire Cypriot pottery in large or relatively large amounts, indicating that the Cypriot pottery itself must have been of modest value.

There also remains the question of how these objects arrived at these inland sites. Given the lack of knowledge of how these items were exchanged, even if one assumes that the items were initially bought at a port such as *Tell el-ʿAǧūl*, Ashkelon, or *Tell Abū Ḥawām* in the north, it does not answer the question of the means by which these items travelled to other sites. Were they traded down the line, gifted, bartered, taxed or any of the other forms of exchange one can imagine? Thus, if one were to try and tie an economic significance to the non-local pottery, it would only have been at the few port towns where these items arrived *en masse*. However, even in this case, it has generally been assumed that sites all along the coast benefited from this interregional exchange. Thus, a small coastal site such as Tel Michal has been assumed

---

226 The historical records from the 14th cent. BC describe these sites as more powerful than the archaeological record would indicate (Na'aman 2011, 289). If one takes the archaeological information into account, these sites are meagre or in the case of Lachish not as powerful as it was in the 13th cent. BC. However, if one takes the historical records into account only, these sites are powerful centres. Na'aman suggests that while the archaeological evidence is useful, the historical records should take precedent over the physical remains (Na'aman 2011, 289). It is likely that the answer to this problem lies somewhere in the middle as historical texts are not always trustworthy in and of themselves, nor is what has been preserved archaeology always representative of the reality of the situation at the time. Thus, as with all things, future excavations and documentary finds will likely nuance this picture or give weight to one view or the other.

to exist because of exchange with Cyprus. Moreover, it has been assumed that the reason the site was abandoned in the early 13th cent. BC was because of the decline in interregional exchange (Negbi 1989, 62; Herzog 1993b, 1041; 2001, 28). However, it is unlikely that exchange with Cyprus played any part in the society of Tel Michal, as only 31 sherds of Cypriot pottery were uncovered from the site over a 200 year period. Small inland sites such as the Amman Airport Structure or *Tell Abū Hurēre* yielded more Cypriot pottery than Tel Michal. Moreover, 32 other sites in the Southern Levant, including other large and small coastal sites, had vastly more Cypriot pottery than Tel Michal. It is, therefore, unlikely that interregional exchange with Cyprus, at least from this archaeological evidence, played any major role at the site, as Tel Michal would have had access to another valuable resource above exchange with Cyprus: the Mediterranean Sea.

Coastal sites had access not only to interregional exchange but to this valuable resource, as von Rüden has demonstrated for Ugarit (von Rüden 2015) or that fishing gear was an important part of some burials at *Tell el-ʿAǧūl* (Sparks 2013). Other resources were available to coastal sites outside of interregional exchange in non-local pottery, even as Mediterranean fish have appeared at inland sites such as Megiddo, Lachish, Tel Harassim, and Tel el-Wawayat during the LBA, demonstrating intraregional exchange also as part of these societies (van Neer/Zohar/Lernau 2005, 148). The same can be said of the Iron I period, as Mediterranean fish too appeared at inland sites (Routledge 2015, 219). Therefore, during the LBA, coastal sites or 'Ports of Trade' should not been seen only as sites for importing and exporting goods but as part of a wider ResourceComplex which certainly would not have ignored the abundant local resources. Moreover, if this is the case that such pottery vessels were of little value, it would indicate that their virtual disappearance at the end of the 14th cent. BC for Cypriot pottery, and 13th cent. BC for Mycenaean pottery, would not have had any devastating effects on the Southern Levant.

This argument, however, is based on only examining the non-local pottery, not taking into consideration the other goods which might have

been exchanged along with these pots. As the shipwrecks from the LBA have demonstrated, at least two of the four carried pots as part of a larger cargo, mainly copper.[227] Moreover, it is generally considered, as discussed above, that these pottery vessels were not valuable enough to be exchanged in and of themselves, either for their contents or for the pottery itself. Thus, it is generally assumed that this is evidence of other types of exchange. Even with the small pottery finds, such as the Northwest Anatolian Grey Ware, it is assumed that it indicates: '… commercial connections with north-western Anatolia which may have lasted for an extended period of time' (Ussishkin 2004a, 65). Or, for Mycenaean pottery, that it is a: '… clear marker of large-scale commodity trade' (Steel 2002, 30) and that Cypriot pottery is only a marker for exchange in other goods such as copper or lumber. This is a general assumption concerning pottery exchange; however, as discussed in this chapter and in the previous chapters, this is not necessarily the case. Moreover, this exchange in other goods and the failure of this exchange at the end of the LBA is taken as a reason for the collapse of the societies of the Eastern Mediterranean (Monroe 2009, 294–296).

There are a number of problems with this assumption, the first being it is not known whether pottery truly was only a backseat cargo to other more important commodities. Taking an example from later in history, recently a Roman shipwreck was uncovered which yielded 3,000 jars of guram, with the fish sauce being the only apparent cargo of the ship.[228] Or, closer in time to the LBA, two Phoenician shipwrecks were found off the coast of Ashkelon dating to the 8th through 6th cent. BC, both of which carried several hundred amphorae as their cargo (Abdelhamid 2015, 1). From the LBA itself is the Point Iria wreck, which also held only pottery, and presumably the contents of this pottery, as cargo. Moreover, as discussed in chapter 4, there is no other strong evidence of exchange in other types of material between Mainland Greece

---

227 See chapter 4, section Ships, Shipping and Shipwrecks.
228 <http://www.thelocal.it/20151211/sunken-haul-of-roman-fish-sauce-found-off-italy> (last access: 01.03.2016).

and the remainder of the Eastern Mediterranean than the pottery, mainly in small transport vessels. It is only an assumption that there was a larger commodity exchange; however, at the moment, this suggestion is not attested in the archaeological record. Furthermore, as discussed here and previously, the exchange with Mainland Greece was likely intermittent, and did not have a large-scale impact on the local economies. If there was any, it would have been at *Tell Abū Ḥawām* and in the north of Cisjordan given the concentration of this material; however, even here it is unlikely.

This is not to say these items did not have a value; however, this would have been a use-value. The items would have been integrated into the local societies and would have acted as a resource, influencing feasting practices at some sites with the incorporation of open Mycenaean forms, or with the ceramics incorporated into cultic and temple contexts. Thus, these Aegean ceramics did act as a resource; however, given the lack of evidence for any other type of exchange, it would have only been in the use-value of the objects and their local appropriation into palatial, cultic, or mortuary practices. Similarly, for the Northwest Anatolian Grey Ware, there is so little of this material, and given that it appears in the same distributional area as Cypriot pottery, it is unlikely that there was direct contact between northwestern Anatolia and the Southern Levant, and if there was, it would have been infrequent and unsubstantial. It is more likely that these objects arrived as part of Cypriot cargoes. These too would have likely been valued for their use-value as non-local objects much the same as the Aegean ceramics; however, it is highly unlikely that exchange between northwestern Anatolia was a significant resource for any place in the Southern Levant.

The only likely candidate for exchange in other materials which may be indicated by pottery exchange is with Cyprus and Cypriot copper. However, if exchange in Cypriot copper was the main resource for the Southern Levant, and if this was a main part of the economic sphere for the Southern Levant, then the collapse of the Southern Levant should have taken place at the end of LB IIA. With the drastic decrease in the amount of Cypriot pottery in the Southern Levant during

LB IIB, if this had been an important part of the economic life of the region as a whole, or as part of the local elite or sub-elite population, then they would have had to have suffered an immediate effect. Again, this is taking the general assumption that pottery is an indicator for other types of exchange. However, this is not the case. For Lachish, the site with the most Cypriot pottery in the entire Southern Levant, there are no signs of crisis until the mid-12th cent. BC 150 years after Cypriot exchange drastically decreased (Millek 2017, 128–131). Moreover, while archaeologically speaking, 100 years may not be a long time, for an economic system dependent on a given factor, it is several life times. Therefore, if exchange with Cyprus and in particular in Cypriot copper was a dependent part of the Southern Levantine system, whether that be economically, or maintaining a sub-elite population, or for access to copper, if any of these were the case, then there should have been an immediate negative effect within the first years of LB IIB. However, the process of the 'collapse' in the Southern Levant began some 100 years later, and some sites such as Megiddo, Lachish, and Beth-Shean continued their LBA culture into the Early Iron Age.

What can be concluded is that it is likely that Cypriot exchange was a resource for the Southern Levant during the LBA. This would have been both in the use-value of the ceramics objects, and also with the exchange in copper. However, it cannot be said that this was a critical part of the Southern Levantine economic system, and indeed if it was, it would have only been in the Southern Coastal Plain. Unfortunately, it is not known what happened at *Tell el-ʿAǧūl* toward the end of LB IIA, whether the site was abandoned, whether it was a more meagre settlement than before, or whether the remains have been washed away given the poor state of preservation (Kempinski 1993, 52 f.; Tufnell 1993, 49–52; Fischer/Sadeq 2008, 1566). Thus, the one port site which may have been affected by this decrease cannot be accounted for. Therefore, when considering the question of 'collapse', the break in Cypriot exchange is a doubtful cause, and indeed the break in exchange represented by any of these non-local pottery groups. Exchange in non-local pottery was an important

resource during the LBA, one which did not continue into Iron I;[229] however, it would have been in the use-value of these objects rather than an economic or exchange value, either of the objects themselves or of the supposed exchange in other goods represented by the pottery. The societies appropriated these materials when available, and in this way they became part of a ResourceComplex. However, given the evidence from the Southern Levant, the break in the ResourceComplex which brought about the end of this exchange was not in the Southern Levant. For Cypriot exchange, it is likely that some political, cultural, or economic change took place on the island, which broke the ResourceComplex and interregional exchange between the two regions at some time near the end of LB IIA or the beginning of the LC IIC. Mycenaean exchange, too, likely broke not because of changes in the Southern Levant, but because of the situation on the Greek mainland toward the latter half of the 13th cent. BC. Thus, the Southern Levant benefited from these exchanges, while a ResourceComplex existed to facilitate the exchange between these regions; however, the break in exchange was unlikely to have been a major blow to the culture or economic spheres of the Southern Levant bringing about the cultural changes seen in Iron I.

---

229 This is not the case however for Egyptian pottery. See the following chapter.

7. The Egyptian Objects in the Southern Levant

7.1. Introduction

Four classes of objects can be securely linked to Egypt and will be presented together in this chapter. These are: Egyptian pottery (Martin 2011a), Egyptian stone vessels (Sparks 2007), Egyptian amulets (Herrmann 1994; 2002; 2006), and Nile perch (Routledge 2015) which have been extensively examined, catalogued, and researched by the authors noted. The purpose of this section is to examine these finds in the relations between Egypt and the Southern Levant, both between the regions but also the Egyptian influence in the Southern Levant during the LBA and the Early Iron Age. Therefore, the spatial distribution of these objects and their relation to sites with Egyptian influence or perhaps an Egyptian presence will be taken into consideration.

7.2. Egyptian Pottery: Results

True imported Egyptian pottery produced in Egypt has been extensively studied by Mario Martin (2011a), and the information presented here is a general summary of his work. This survey also includes the recent study of the Egyptian pottery from *Ḫirbet el-Burǧ* (Tel Dor) (Waiman-Barak/Gilboa/Goren 2014), and some smaller recent finds (see *table 28* and *maps 12–13*). Egyptian pottery has been found at 27 sites in the Southern Levant; however, for several key sites, there is as of yet no quantifiable data available. For Acco, *Tell Abū Ḥawām*, and *Ǧezīret en-Nāmī* (Tel Nami), Martin reports that there is a fine collection of Egyptian storage jars; however, these finds remain as of yet unpublished (Martin 2011a, 253 note 359).[230] At *Dēr el-Balaḥ*, a large collection of Egyptian-style pottery was uncovered at the site (Gould 2010;

Martin 2011a, 209–215). However, only a small sample was studied by Neutron Activation Analysis (NAA) in order to determine the provenience of the objects. The majority were found to be locally manufactured Egyptian-style pottery, though the handled storage jars and flasks which were tested were of Egyptian origin (Yellen/Killebrew 2010, 63–73). It still remains a possibility that more imported Egyptian pottery is at the site.[231] Similarly, at *Tell el-ʿAǧūl*, while it is likely there is a body of imported Egyptian pottery at the site, the current published information has focused on the early New Kingdom pottery and not the late 18th and 19th Dynasties (Kopetzky 2011, 201–209).[232] Thus, what information is lacking from *Tell el-ʿAǧūl* and how many imported Egyptian vessels are at the site is not currently known. Finally, Jaffa, which was originally excavated by Kaplin and has undergone a renewed excavation which has been co-directed by Burke and Pfeilstöcker, is the last site to have a large body of Egyptian-style pottery with no exact data on the amount of imported Egyptian pottery at the site. The Egyptian-style pottery uncovered in both excavations is currently being studied by Jacob Damm. However, at the time of writing, this work is still in progress. The lack of information from these key coastal sites makes a distributional and chronological discussion difficult and perhaps misleading, at least for coastal sites. It must be remembered that the publication of this material would very likely alter the general picture presented here, both in the regional distribution and the chronological distribution of the material.

From the currently available data, true imported Egyptian pottery is rare in the Southern Levant, with only two sites having a high concentration of this pottery (see *fig. 7.1.*). The first is Ashkelon which yielded the most imported Egyptian pottery and, secondly, *Ḫirbet el-Burǧ* which has the second most based on sherd count. These two sites together represent 72% of all imported

---

230 However, as Gilboa has recently reported, Egyptian ceramics from *Ǧezīret en-Nāmī* and *Tell Abū Ḥawām* are extremely scarce. For *Tell Abū Ḥawām*, this may be in part because of Hamilton's excavation in the 1930's and if this pottery would have been recognised or kept (Gilboa 2015, 252).

231 Martin, personal communication 17. 11. 2015.

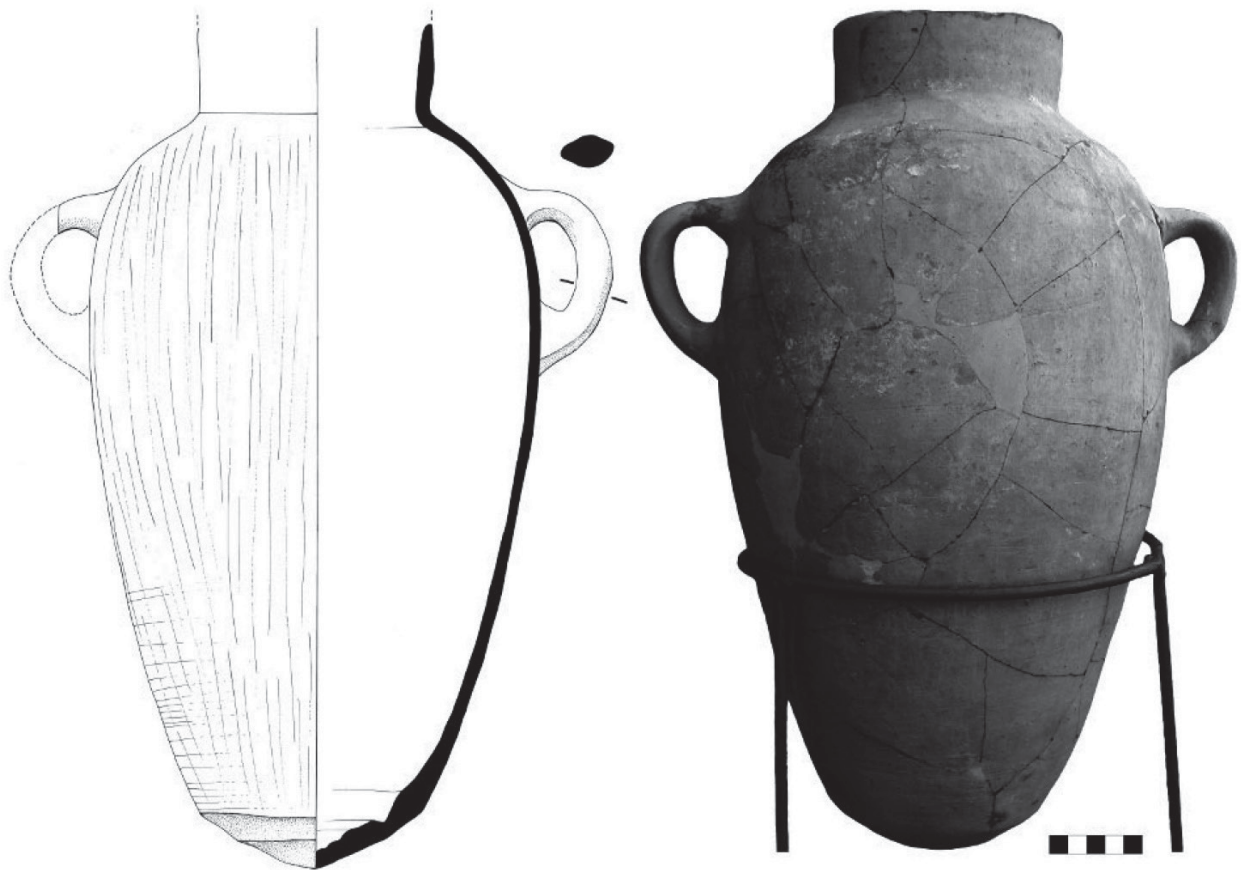**232** See note 282 by Martin 2011a on page 209.

Fig. 7.1.   Imported Egyptian Marl D amphora from Tomb 315 in Ashkelon (Mario Martin 2005, fig. 9; courtesy of Österreichische Akademie der Wissenschaften).

Egyptian pottery in the Southern Levant currently published. Of the other 25 sites, none have yielded more than 20 sherds or vessels of imported Egyptian pottery, though this is likely to change if any of the six sites mentioned above are fully published and examined. Thus, from the currently available information, there is a concentration of imported Egyptian pottery mainly at two coastal sites, Ashkelon in the south and *Ḥirbet el-Burǧ* in the north. Moreover, Egyptian imported pottery is mainly concentrated at the coast with few objects moving further inland. Only two sites in Jordan, *Tell Zerāʿa* and *Tell es-Saʿīdīye*, have yielded imported Egyptian pottery, and other than Beth-Shean, *Tell el-Qāḍī*, and Megiddo, all other inland sites yielded one to two examples of imported Egyptian pottery. Thus, unlike other non-local pottery from Cyprus or Greece, the imported Egyptian pottery had a fairly limited distribution.

Imported Egyptian pottery, while having a relatively restricted distribution, is also limited in its regional distribution. The appearance of this type of pottery is generally constrained to coastal sites and to sites in the Jezreel valley. Some imported Egyptian pottery does appear in the Shephelah and the northern Negev region: however, this is generally associated with 'Egyptian' sites such as *Tell eš-Šerīʿa* (Tel Sera') or sites with Egyptian influence such as Lachish. Imported Egyptian pottery does appear at every 'Egyptian' site[233] except for *Tell el-Fārʿa* (South) which yielded locally made Egyptian-style pottery but no imported Egyptian pottery (Martin 2011a, 229–235).

The chronological development of imported Egyptian pottery is mainly tied to the beginning of the 13th cent. BC and the start of the Ramesside period. During LB I and LB IIA, imported Egyptian pottery does appear in small quantities at *Tell el-Qāḍī*, Ashkelon, Megiddo, *Tell Qēmūn*, Jaffa, *Tell*

---

233 *Tell el-Fārʿa* (South), *Dēr el-Balaḥ*, *Tell eš-Šerīʿa*, *Tell el-ʿAǧūl*, Jaffa, *Tell Ḫēdar*, Aphek, Beth-Shean, and *Tell es-Saʿīdīye*.

Ḫēdar (Tel Mor), Acco, and Beth-Shean; however, not until LB IIB does imported Egyptian pottery appear in larger quantities, mainly at Ashkelon and *Ḫirbet el-Burǧ*. Moreover, this increase is not seen until the mid-13th cent. BC at *Ḫirbet el-Burǧ*, and until the end of the 13th cent. BC at Ashkelon (Martin 2008; 2011a, 195–200; Stidsing/Salmon 2011, 174–180). In all, imported Egyptian pottery appeared at 23 sites during the LBA, though again, this is generally in very small amounts.

With the transition from the LBA to the Early Iron Age, imported Egyptian pottery does not stop appearing in the Southern Levant; however, the distribution of this material is severely limited. Imported Egyptian pottery only occurs at twelve sites, reducing the distribution by more than half. There is a concentration of imported Egyptian pottery at *Ḫirbet el-Burǧ* which continues through Iron I and into Iron II. While there is a gap between the LBA settlement and the Early Iron Age settlement at *Ḫirbet el-Burǧ*, the presences of imported Egyptian pottery before and after this gap suggests a degree of continuity, and that *Ḫirbet el-Burǧ* played a major role in Egyptian exchange in Iron I. It is possible that more Egyptian pottery was uncovered at the site; however, due to the collection methods this is not apparent (Waiman-Barak/Gilboa/Goren 2014, 317 f., 339). However, Egyptian pottery was uncovered in nearly every locus from the Early Iron Age levels (Gilboa 2015, 251). At *Tell Abū Ḥawām*, only two Egyptian jars have been found from the Early Iron Age; however, this again may be due to Hamilton's excavation methods. Acco too may have Egyptian jars and amphorae from the Early Iron Age; however, this has not yet been substantiated. One further Egyptian jar was uncovered in Tomb ZX at *ez-Zīb* (Achzib) (Gilboa 2015, 253). Moving further south, imported Egyptian pottery still appears at Jaffa, though as of yet in an unknown amount,[234] and at Ashkelon (Martin 2008, 265–267).[235] At Ashkelon, the exact number of true Egyptian pottery over Egyptianised pottery

is not yet known for the Iron I period; however, imported Egyptian pottery still appears in Grid 38 Phases 20–17 the early 'Philistine' layers. The majority of this pottery comes from Phase 20 or the early 12th cent. BC, and some of the pottery may be residual during Iron I from the 'Egyptian' Phase 21. However, some of this pottery does seem to come from the Iron I, suggesting some kind of continued exchange with Egypt during the appearance and establishment of the 'Philistines' at Ashkelon (Martin 2011a, 201; Gilboa 2015, 253). Later in the Iron IB period, three examples of imported Egyptian pottery were also found at *Tell el-Qasīle* (Evian 2011, 110). One Egyptian jar, one amphora, and a whole mouth jar were found at the site (Gilboa 2015, 253). Further south and inland, one small rounded jar was found at Tel Esdar, and two amphorae where found in the 'Philistine' temple at Nahal Patish with one other Egyptian vessel uncovered at *Qubūr el-Walēyide*.

7.3. Egyptian Pottery: Discussion

Martin, in his examination of both imported Egyptian pottery and locally made Egyptian-style pottery in the Southern Levant, has noted several important trends comparing these two groups. The first is, the vast majority of the locally produced Egyptian-style pottery imitated utilitarian Egyptian forms which were made from Nile clays, while the imported Egyptian pottery was made mostly of marl or mixed clay wares.[236] Secondly, the majority of the imported Egyptian pottery are closed vessels such as amphorae, handled cups, meat jars, and large ovoid to globular storage jars used as transport containers,[237] whereas the locally produced Egyptian-style pottery were mainly household wares such as bowls, 'beer jars', spinning

---

234 Damm, personal communication 6.01.2016.
235 In the Iron IA layers typically associated with the Philistines, six rim fragments of imported storage jars were uncovered. These objects may be residual from the previous phase; however, this type of jar was not found in the LBA strata and may indicate the arrival of some imported Egyptian pottery at 'Philistine' Ashkelon (Martin 2008, 261, 268).

236 Martin notes that the Iron Age layers at *Ḫirbet el-Burǧ*, yielded a large amount of imported Nile clay pottery mainly amphorae. He states this is a reflection of the changes in Egyptian pottery practices as in the late New Kingdom forms, which were previously made in marl clays, were being produced in Nile clays such as amphorae made of Nile Clay (Martin 2011a, 97).
237 Some imported Egyptian bowls were also uncovered, although these make up a small percentage of the total imports (Martin 2011a, 176 f., 237 f.).

bowls, and 'flower pots' (Martin 2005; 2011a, 252). A similar pattern has been seen in the preliminary analysis of the Egyptian and Egyptian-style pottery from Jaffa.[238] Thirdly, Martin notes that while large amounts of Egyptian-style pottery were found at inland sites like Beth-Shean and *Dēr el-Balaḥ*, there is generally a very low percentage of actual imported Egyptian pottery at sites with Egyptian influence or perhaps an Egyptian presence. In fact, outside of Ashkelon,[239] true imported Egyptian pottery, mainly transport containers, appear at sites with no Egyptian influence or locally produced Egyptian pottery such as *Ḥirbet el-Burǧ*, *Tell Abū Ḥawām*, Acco, and *Ǧezīret en-Nāmī*.[240] He argues that these imported Egyptian transports vessels most likely arrived in the Southern Levant not to supply the Egyptians stationed there, but as part of the exchange between Southern Levantine sites and Egypt (Martin 2011a, 253). However, for one specific type of imported Egyptian pottery, this trend is reversed.

The distribution of the Egyptian handled cups differs from the other Egyptian transport containers, as they are only found at sites which may have had a direct Egyptian presences, being: Beth-Shean, *Tell es-Saʿīdīye*, Aphek, Ashkelon, *Tell eš-Šerīʿa*, *Tell el-ʿAǧūl* and possibly *Tell Ḫēdar*. Only Megiddo, and possibly *Ḥirbet el-Burǧ*, have yielded handled cups outside of these Egyptian influenced sites. The handled cups appear in small quantities, generally only with one example from a site, and they were likely to contain a valuable substance like honey. Martin concludes that the handled cups were likely personal possessions of those who had higher social status at these sites. He states the example from Megiddo could have been a gift from Beth-Shean (Martin 2011a, 253); however, it is also possible the object arrived at the site directly from Egypt, as Megiddo played a prominent role in the consumption of Egyptian materials in the Southern Levant. What can generally be concluded is that, during the LBA, mainly during and after the

second half of LB IIB, imported Egyptian pottery made its way into the Southern Levant as shipping containers. These containers were presumably meant for exchange with Southern Levantine sites not directly under the presence of Egyptian control, such as *Ḥirbet el-Burǧ*, *Tell Abū Ḥawām*, Acco, and *Ǧezīret en-Nāmī*. However, for some special containers found almost exclusively at sites with Egyptian influence, the handled cups, while examples of interregional exchange, they most likely represent personal possessions, gifts, or some other type which is not linked to economically motivated trade. Thus, what can generally be taken from this, is that Egyptian imported pottery was not a widely used item during the LBA, nor was it widely utilized at 'Egyptian' sites. The only exceptions to this are the Egyptian handled cups which appear only at 'Egyptian' sites, with the exception of Megiddo.

One other important aspect of the imported Egyptian pottery is its continuation into Iron I. In LB IIB, Ashkelon yielded the most imported Egyptian pottery; however, with the change to the Iron Age Egyptian imports to the site did not cease to appear. While exactly how much imported Egyptian pottery arrived at site during the Early Iron Age is unclear, there does appear to be some continuity at the site from the LBA through Iron I. Moreover, Egyptian imported pottery continues to arrive seemingly with a focus at *Ḥirbet el-Burǧ*, from the current available evidence, throughout the Iron I period and lasting well into the 9th cent. BC (Waiman-Barak/Gilboa/Goren 2014, 318). Furthermore, during the Iron IB period, several examples of Egyptian imported pottery arrived at *Tell el-Qasīle* (Evian 2011, 113; Gilboa 2015, 253). Gilboa has suggested that the finds at *Tell el-Qasīle* may have arrived at the site through a Phoenician port, perhaps *Ḥirbet el-Burǧ*. The reason for this suggestion is that *Tell el-Qasīle* also yielded Phoenician ceramics made on the Carmel coast (Gilboa 2015, 253 note 10).[241] However, this may not be the case given the other imported Egyptian finds

238 Damm, personal communication 6.01.2016.
239 And presumably Jaffa.
240 And also the newly published finds from the site on the southern beach of Ashdod which yielded mainly jars with two examples of imported Egyptian bowls (Nahshoni 2013, 95).

241 She also suggests that the single find at Tel Esdar and the two from Nahal Patish also arrived in the same manner, as Phoenician ceramics from the Carmel coast were also found at Nahal Patish and the Egyptian jar at Tel Esdar was found with a sole Phoenician jar of unknown origin.

at the site, which will be examined later in this chapter. Nevertheless, the evidence from the imported Egyptian ceramics suggests that, unlike the exchange with Cyprus and the Aegean, exchange with Egypt did not come to a halt neither at the end of the 13th cent. BC nor with the withdrawal of Egyptian presence at the end of Beth-Shean Level VI ca. 1130 BC. For the contents of these jars, Gilboa has proposed that the Egyptian amphorae likely were used to transport a variety of items such as lentils or grains, though a wide range of possibilities exist, and the exact contents of the jars is not yet known (Gilboa 2015, 254 f., see references therein).

Despite the common statements that interregional exchange ended with the LBA, there is still interregional exchange during Iron I between Egypt and the Southern Levant. This exchange may have been concentrated in the Carmel and Acco Plain, representing a development from the LBA; however, it is important that interregional exchange did not end. Given the nature of these finds and the problems with the collection methods, it is difficult to say whether there was more or less exchange between Egypt and the Southern Levant from the LBA to Iron I. However, it is likely that, from the evidence of the Egyptian imported pottery, there was a development of a concentration and exchange relationship beginning at the end of the LBA (Stidsing/Salmon 2011, 174–180) between *Ḫirbet el-Burǧ* and Egypt, which continued into Iron I. This development will become clearer with the evidence from the Nile perch seen later in this chapter.

Finally, under the definition for interregional exchange used in this work,[242] there is one set of locally made Egyptian-style pottery which, under this definition, is evidence of interregional exchange. The region defined as the Southern Levant in this work does not include Lebanon; however, of interest is that the locally made Egyptian-style pottery found at *Tell el-Qāḍī* (Tel Dan) was not produced in the vicinity of the site. Rather, this pottery was apparently made on the Lebanese coast and brought to *Tell el-Qāḍī* (Martin/Ben-Dov 2008, 191 f., 200). Therefore, while not exchange with

Egypt, the small assemblage of Egyptian-style pottery at *Tell el-Qāḍī* does indicate exchange with the Lebanese coast.

7.4.   Egyptian Stone Vessels: Results

Egyptian stone vessels in the Southern Levant have been extensively studied by Sparks (2007) who published a catalogue including what she believes to be true imported Egyptian stone vessels. However, much as with many of these material classes, there is the question of authenticity and if the object under consideration is truly imported or not. In the case of stone vessels, the question is whether many of the stone vessels were locally manufactured, as Lilyquist has argued (Lilyquist 1996), or whether the mainly calcite vessels were of true Egyptian workmanship from Egypt, as Sparks has argued (Sparks 2007, 88–91, 153–170). For the purpose of this study, the material presented here is mainly based on the material given by Sparks which she states as being a true Egyptian import, based on her examination of the manufacturing technique and the material. However, further provenience studies may change the results of this study.[243] Moreover, of the vessels included in Sparks' work, she was able to physically examine only 40% of the stone vessels (Sparks 2007, 88–91, 153–170). Thus, further study will inevitably change this picture.

321 stone vessels of likely Egyptian origin have been uncovered from the Southern Levant. Of these, 201 or 63% are made of calcite, and if one includes the 'alabaster'[244] objects likely made of calcite, this number increases to 252 or 79% of all Egyptian stone vessels.[245] Serpentine[246] and

---

242 The exchange of objects between two diverse regions.

243 See for example the work by Testa/Lilyquist (2011) using strontium isotopes to determine the provenience of calcite.

244 The term 'alabaster' is misleading as the majority of the vessels made of 'alabaster' were made from the mineral calcite differing from geological alabaster. Thus, in many older reports, the term alabaster is used when it is likely that the actual stone is calcite (Lilyquist 1996, 136–142; Sparks 2007, 5, 159 f.)

245 Sparks notes that in the Levant, as a whole, 82% of Egyptian stone vessels were made from calcite, and this number would increase if the 'alabaster' vessels were also included.

246 9% of the assemblage.

limestone[247] are the second and third most common materials respectively, with a handful of vessels made from other materials such as basalt,[248] diorite, gneiss, gypsum, hematite, marble, porphyritic stone, schist, steatite/soapstone and three vessels whose material was unable to be identified. The shapes range from alabastra to tazza, bowls, and goblets. However, many of the Egyptians stone vessels are closed shapes such as jars/bottles, jugs or juglets, indicating that they may have been brought to the Southern Levant not only for the vessel but also for the contents (Sparks 2007, 159). In the letter EA 14, it is noted in the shipment from Amenhotep III to Burnaburiash in Babylon that 1,000 stone vessels are filled with 'sweet oil', nine or ten are filled with oil, and some 160 stone vessels were shipped empty (Lilyquist 1996, 156). Thus, for the shapes which could not hold a liquid, it is likely that the stone vessels were brought in and of themselves; however, for those which were closed vessels, they may have been brought rather for their contents. Yet, given that 160 stone vessels were shipped to Burnaburiash empty, this may not have always been the case, and some closed vessels may also have arrived in and of themselves.

Egyptians stone vessels were found at 26 sites throughout the Southern Levant. However, much as with other material classes, 72% of all Egyptian stone vessels were found at five sites: *Tell el-ʿAǧūl*, Amman Airport Structure, Lachish, Megiddo, and Beth-Shean with 26% of all stone vessels coming from *Tell el-ʿAǧūl* (see *table 29* and *map 14*). Of the remaining 21 sites, only Hazor, Gezer, *Ṭabaqāt Faḥil* (Pella), and Beth-Shemesh produced more than ten examples of Egyptian stone vessels. Ten sites had only one Egyptian stone vessel. Therefore, while Egyptian stone vessels did arrive throughout the Southern Levant, the concentration of the items is again in only a few choice locations. However, unlike the Egyptian imported pottery, the distribution of Egyptian stone vessels is less dense than the Egyptian pottery. While Egyptian pottery mainly appeared at coastal sites

and in the Jezreel Valley, Egyptian stone vessels are more widely dispersed. No imported Egyptian pottery was uncovered in the Central Hill Country; however, Egyptian stone vessels were found in sites such as Jerusalem, Shiloh, and Shechem. Moreover, Egypt stone vessels also had a wider distribution in Transjordan as they were uncovered at five sites, yet the two sites *Tell Zerāʿa* and *Tell es-Saʿīdīye*, which had imported Egyptian pottery, had no Egyptian stone vessels. Additionally, while Egyptian imported pottery had a high concentration on the coast, Egyptian stone vessels have a concentration in the Shephelah. Thus, while appearing at a similar number of sites, Egyptian stone vessels had a generally wider distribution than imported Egyptian pottery.

The chronological development of this material class is further complicated by the difficulty in dating the material itself (see *tables 30–32*). Of the 321 stone vessels, 96 can only be dated to LB II, and this must be taken into consideration when discussing the development of this material class. Like other non-local materials, Egyptian stone vessels began being imported into the Levant beginning in MB IIA, steadily increasing throughout MB IIA–C (Sparks 1996, 66; 2007, 269 f.). This trend continued in LB I, with 86 of the 321 stone vessels dated to the LB I period at eight sites. However, the concentration of this material was at one site, *Tell el-ʿAǧūl*, where 60 of the 86 Egyptian stone vessels were found. Another eleven stone vessels were uncovered at Megiddo, and nine at *Ṭabaqāt Faḥil*. The other five sites have two finds or fewer. For the following LB IIA and LB IIB, there is difficulty in separating these two periods, as many of the finds can only be dated to LB II. Thus, the LB II period as a whole yielded 146 Egyptian stone vessels at 16 sites, nearly doubling their distribution from LB I. The Amman Airport Structure yielded the highest concentration in LB II with 53 Egyptian stone vessels. Lachish yielded 22, Megiddo 19, *Tell el-ʿAǧūl*, Hazor, and Beth Shean all having eleven Egyptian stone vessels. The remaining ten sites had three or fewer finds. Only 16 Egyptian stone vessels could be securely dated to the Iron I period, found at six sites, representing a drastic decrease from the LBA, matching the trend Sparks noted for the entire Levant (Sparks 2007, 269). *Tell el-Qasīle*, Megiddo, and Beth-Shemesh each yielded

---

247 5% of the assemblage.
248 This basalt vessel from Gezer is the only one listed in the Southern Levant as manufactured in Egypt. The majority of basalt vessels were produced locally in the Levant (Sparks 2007, 163).

four Egyptian stone vessels, with the other three sites having two or one finds. However, without being able to determine the difference between LB IIA and LB IIB, it is difficult to say exactly when or if there was an increase in stone vessels over the LB I period. Moreover, again because of this problem, it remains difficult to determine when the decrease took place, whether it truly was at the end of LB IIB or before. An additional 74 of the Egyptian stone vessels could not be securely dated to one period. Of these, 52 are dated to sometime in the LBA, and the remaining 22 date from the LBA through Iron I.

7.5.   Egyptian Stone Vessels: Discussion

The Egyptian stone vessels follow a fairly diverse pattern of distribution, mainly appearing in small regional clusters. This distribution is, however, generally more widespread than that of the imported Egyptian pottery. Several regions do stand out, having small clusters of sites with Egyptian stone vessels, such as the Shephelah and the Jezreel Valley. However, the general distribution is throughout the Southern Levant, including both Cisjordan and Transjordan. Certain sites do stand out from this general pattern, such as Hazor, Shiloh, and Shechem. At these three sites, Egyptian stone vessels were not found in the surrounding region, and they likely represent specific use of these objects. For example, Hazor is the only site in Galilee which yielded Egyptian stone vessels. Thus, finding these vessels at Hazor demonstrates a specific use of these objects which could have arrived as gifts.

It is likely that, for those stone objects in the south, they arrived through the port at *Tell el-ʿAǧūl*. However, there is no northern coastal site in the Southern Levant which has yielded a large amount of Egyptian stone vessels,[249] leaving open the possibility they generally entered at *Tell el-ʿAǧūl*, travelled north by land to Megiddo, and then headed further inland to Beth-Shean and into

Transjordan. However, given that the majority of Egyptian stone vessels at *Tell el-ʿAǧūl* are dated to LB I, it leaves open the possibility that they arrived at another port in the north during LB II. Regardless, the distribution of these vessels is not wide, with the vast majority of Egyptian stone vessels (89%) appearing at nine sites: *Tell el-ʿAǧūl*, Amman Airport Structure, Lachish, Megiddo, Beth-Shean, Hazor, Gezer, *Ṭabaqāt Faḥil*, and Beth-Shemesh. The Amman Airport Structure is again a strange inclusion in this list, the same as with the Mycenaean pottery, as it has the second most Egyptian stone vessels for a site in the Southern Levant from the LBA and Iron I period. 53 Egyptian stone vessels were found at the site, 63% made of calcite, but surprisingly with 29% made of serpentine. Almost one third of all Egyptian stone vessels made of serpentine found in the entire Levant were found at the Amman Airport Structure (Sparks 2007, 240). The site also yielded surprisingly old Egyptians stone vessels dating to the Egyptians Predynastic or Early Dynastic Periods (Sparks 2007, 241; Mumford 2015, 95). When these objects arrived at the site is unclear, though it remains a possibility that these antique stone vessels made their way to the site after they were robbed from tombs in Egypt, and much of the material may date to LB IIA (Sparks 2003, 42; Mumford 2015, 95). Moreover, much like with the Mycenaean pottery, there is no clear answer why these objects were brought to the site, other than that there is a clear concerted effort to bring these non-local items to this location.

Examining the Egyptian stone vessels in the wider Levantine region, Sparks has noted that the Southern Levant is generally devoid of inscribed stone vessels. The vessels with the names of pharaohs like Amenhotep III and Ramesses II are generally found in the Northern Levant at Ugarit during the LBA (Sparks 2003, 52). Only at Gezer has a fragment of an inscribed Egyptian stone vessel been uncovered, a fragment of a cartouche of Ramesses II (Sparks 2003; 2007, 219). Moreover, many of the finds from the Southern Levant are small cosmetic containers and small piriform jars. Only a few examples of monumental forms were uncovered in the Southern Levant such as at Megiddo (Sparks 2007, 223). Sparks has concluded that the lack of inscribed Egyptian stone

vessels in the Southern Levant may be an indicator of Egypt's differing relations with its vassals in the Southern Levant during the LBA compared to others, such as Byblos during the Egyptian Old and Middle Kingdoms, and Ugarit from Amenhotep III to Ramesses II. In this view, there may have been no need to seal a relationship between Egypt and the vassals of the Southern Levant with a gift of an inscribed stone vessel, which may have been the case with Ugarit in the north (Sparks 2003, 51 f.). Thus, Sparks goes on to say the Egyptian stone vessels found in the Southern Levant may have arrived via trade either for containers themselves or their contents and they possibly could have arrived as personal possessions of Egyptians. They were used in places which either possibly housed Egyptians or had some Egyptianisation such as *Tell el-ʿAǧūl*, Lachish, and Beth-Shean (Sparks 2007, 265–268). According to Sparks, the possible exceptions to this are the monumental forms uncovered at Megiddo which may have arrived as part of a diplomatic mission (Sparks 2007, 223 f.).

It is possible that the lack of inscribed stone vessels is due to a difference in power held by the Egyptians and their vassals, and that the stone vessels found in the Southern Levant do not represent gifts from Egypt. However, it may also be the case that if there was a difference in the relationship between Egypt and the Southern Levant compared to the Northern Levant, it is also a possibility that some of these objects are still gifts, just of 'lesser' value for a 'lesser' king. Moreover, as Sparks herself notes, some of these objects may have been personal items. Thus, it is not exactly clear how these objects arrived in the Southern Levant, either as gifts, personal possessions, commodities or as containers for commodities. However, there is another aspect that must be taken into consideration, that is, the local stone vessel industry in both gypsum and ground stone vessels. The use of Egyptian stone vessels is in many ways also about access to these stone vessels or the local stone vessels. At *Tell el-ʿAǧūl* where there is no clear evidence of a local stone vessel industry, there is a large quantity of Egyptian stone vessels likely acquired from oversea exchange. However, at Beth-Shean, even with its strong Egyptian influence and likely presence at the site, locally made gypsum stone vessels and ground stone vessels significantly outnumbered

the Egyptian stone vessels during the LBA and Early Iron Age. The local Palestinian gypsum stone vessels were likely made in the Beth-Shean region, and the ground stone vessels were likely produced around Beth-Shean or Hazor (Sparks 2007, 227–230, 247). Thus, even with a strong Egyptian influence, the access to local stone vessels fit the needs of the site. Likewise, at Hazor, even though it was one of the most important sites in the region and the largest in the Southern Levant, Egyptian stone vessels made up only a small part of the stone vessel assemblage. The majority of the stone vessels at Hazor were basalt likely produced in the region (Sparks 2007, 244–246). Thus, these objects were likely to have been 'little luxuries' not having any kind of economic impact, but rather holding some kind of social value, perhaps as a prestige item or as a personal possession.

The chronological development of Egyptian stone vessel exchange in the Southern Levant must also be taken into closer consideration. From the work Sparks has presented, there is a major decline at the end of LB II in the amount of stone vessels found in the Levant, with them appearing at only a handful of sites in the Southern Levant in the Early Iron Age. She explains this as a result of the loss of much of Egypt's international trade network during the reign of Ramesses III (Sparks 2007, 269 f.). However, the sharp decline is made sharper by the inability to split the material from LB II into LB IIA and LB IIB. Taking most any non-local material group as an example, if everything from LB II is lumped together because it is impossible to give a more exact dating, there will always be a sharp decline into the Iron I period with few exceptions. Moreover, with items like Cypriot pottery, it is clear the decline did not occur at the end of LB II, but rather at the end of LB IIA, and the same may indeed be true for Egyptian stone vessels. For example, at the Amman Airport Structure, if the reinterpretation of the site's stratigraphy holds, many of the Egyptian stone vessels at the site would have been from LB IIA not LB IIB (Mumford 2015). Taking into account those vessels that can already be securely dated to LB IIA, 69 of the 146 vessels dated to LB II can be assigned to LB IIA, nearly half. Of the remaining vessels, 34 can already be securely assigned to LB IIB, leaving only 43 stone vessels to LB II. If one

splits this number evenly into LB IIA and LB IIB, this would create a peak in LB IIA, with a decrease in LB IIB which continued into Iron I. This is most assuredly uncertain, as the 43 LB II vessels could all date to LB IIB creating the peak in this period; however, what this demonstrates is that how these numbers are divided will create the chronological peak and dip in either LB IIA or LB IIB, which has interpretive consequences for the following Iron I period. That being said, this does not mean there was not a decline; however, how the data is presented may create a greater decline than was actually the case. Moreover, what remains important is that Egyptian stone vessels continued to make their way into the Southern Levant during the Early Iron Age, even if in smaller amounts. Additionally, taking into consideration the other local stone vessel industries, there is a general decline in the use of stone vessels in the Iron I period. For both the locally made gypsum stone vessels and ground stone vessels, there is a marked decline at the end of the LBA similar to the decline seen in the Egyptian stone vessel use (Sparks 2007, 272–275). Thus, it may also be that the decline seen in the utilization of Egyptian stone vessels is not inherently related to the diminishing of Egyptian exchange with the Southern Levant. Rather, it may be due to a general decline in the use and consumption of stone vessels in the Southern Levant and thus the utilization of Egyptian stone vessels.

7.6. Egyptian Amulets: Results

Egyptian amulets made of faience in the Southern Levant have been extensively studied and catalogued by Christian Herrmann and presented in three volumes (Herrmann 1994; 2002; 2006 and personal communication 2013). Herrmann has argued that the Egyptian amulets found in the Southern Levant were manufactured in Egypt given the limited evidence for production outside of Egypt, whereas there is ample evidence for their production in Egypt (Herrmann 2006, 5). While it is possible that some Egyptian amulets were manufactured in the Southern Levant (McGovern/Fleming/Swann 1993, 9, 22 f.), this material class will be taken as non-local and as Egyptian, as Herrmann has argued.

634 Egyptian amulets have been found at 29 sites throughout the Southern Levant, with a higher distribution in the southern half of Cisjordan and a concentration in the region of the Jezreel Valley (see *table 33* and *map 15*). In the southern half of Cisjordan, two large clusters appear, the first being around the region of *Dēr el-Balaḥ*, *Tell el-ʿAǧūl*, and *Tell el-Fārʿa* (South), and the second in the region of the Shephelah. 75% of all Egyptian amulets were found at only four sites: *Tell el-Fārʿa* (South), Beth-Shean, Megiddo, and Lachish.[250] 15 of the 29 sites have five or fewer amulets. Again, much as with every group, the concentration of Egyptian amulets is high at a few sites, while having a wider overall distribution. Despite this, there are several general trends in the distribution. First, like the imported Egyptian pottery, very few Egyptian amulets arrived in Transjordan, as Egyptian amulets only appeared at *Tell es-Saʿīdīye* but no other sites. Egyptian amulets were not even found at the Amman Airport Structure, which yields the most Egyptian stone vessels in all of Transjordan and the second most in the whole Southern Levant. Moreover, the distribution of Egyptian amulets is heavily weighted to the south of Cisjordan, as 20 of the 29 sites are situated south of the Yarkon River. Thus, even though Beth-Shean yielded 20% of the amulets, the general distribution is not in the Jezreel Valley, Mount Carmel or the Acco Plain, but in the Southern Coastal Plain and the Shephelah. Some common examples of Egyptian amulets are Bes amulets (*fig. 7.2.*) as well as the Udjat eye (*fig. 7.3.*).

The chronological development of Egyptian amulets is quite limited (see *tables 34–36*). Beginning in LB IIB, 249 amulets were uncovered at nine sites. However, 101 were found at *Tell el-Fārʿa* (South) and another 97 at Beth-Shean, or 80% of all Egyptian amulets, indicating a general concentration at these two 'Egyptian' centres. In the following Iron I period, 246 Egyptian amulets were uncovered at 22 sites. While the concentration of amulets is less than in LB IIB, the distribution of these objects increased greatly. *Tell el-Fārʿa* (South) still yielded the highest amount of amulets, with

---

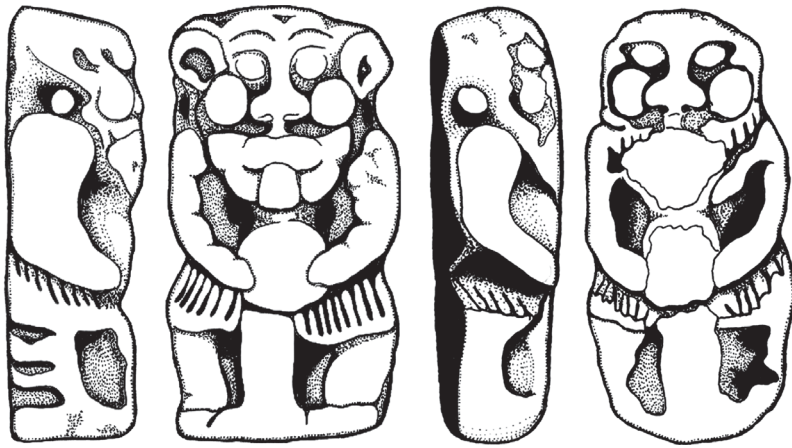**250** 208, 129, 91, and 45 amulets respectively.

Fig. 7.2.   Bes amulets from *Tell el-Fār'a* (South) (Herrmann 1994, 340 KatNr. 371–372; Courtesy of Christian Herrmann).

Fig. 7.3. The Udjat eye from *Tell Ğerīše* (Herrmann 2006, 223 KatNr. 429; Courtesy of Christian Herrmann).

79 found in Iron I; however, Megiddo replaced Beth-Shean with the second most, having 71 amulets, and Beth-Shean, 22. This is a general reversal of the situation in LB IIB. The distribution of these objects is generally in the southern portion of Cisjordan, with material also moving along the Jezreel Valley. Of the 246 amulets from the Iron I period, 45 can be securely dated to Iron IA. Another 139 amulets are dated between LB IIB and the Iron I period. These amulets have been found at 21 sites. This may indicate one of two things. The first is that, because of the dating issue, the distribution of amulets may have been higher in LB IIB, or it means that the distribution of these objects more closely reflects the Iron I reality, and thus some of these amulets may be dated to Iron I. Either of these two answers will alter the results. It may be that there is either a generally wider distribution in both the LB IIB and the Iron I, but if this is the case, and more sites in the LBA had amulets, then there would be a great decline in the amount from one period to the next. Or, there are more amulets in Iron I than in LB IIB. Which of these answers is correct I cannot say; however, they must be taken into consideration.

7.7.   Egyptian Amulets: Discussion

As Herrmann (2006, 33 f.) and Kamlah (2016) have previously presented, the popularity of Egyptian amulets in the Southern Levant did not decrease with the transition from the LBA to the Early Iron Age. Rather, it seems that, with the beginning of the Iron Age, Egyptian amulets became more poplar, as their distribution increased, peaking in the Early Iron Age.[251] Moreover, in the LBA, Egyptian amulets were concentrated at two sites *Tell el-Fār'a* (South) and Beth-Shean, whereas in the Iron Age, while there is still a strong focus at *Tell el-Fār'a* (South), and in this case Megiddo, the general distribution is wider than in LB IIB. What is of interest is that, in this distribution, there is a general focus on the southern half of Cisjordan. While Megiddo and Beth-Shean both yielded large amounts of Egyptian amulets, they are outside of the general distribution area for these items. Thus, the Egyptian amulets at these sites likely demonstrate an intentional consumption for the people

---

251 Based on the securely dated amulets.

at Beth-Shean, either because they were Egyptians living there or, for both sites, because there was an influence of Egyptian practice on the people, and they adopted these amulets into their local cultures. Moreover, given the nature of these objects, it is unlikely that they were part of the economic system for the sites that they were found at. Rather, what these small objects demonstrate, is that these amulets were likely moved as personal positions or small items. Additionally, this material class, much like the Egyptian imported pottery, demonstrates that exchange with Egypt did not end with the LBA, but again continued well into the Early Iron Age.

7.8.   *Lates niloticus* (Nile perch): Results

Lates niloticus, commonly known as the Nile perch, is the final Egyptian material class presented here. The data concerning the Nile perch in the Southern Levant have been assembled in two different studies, the first by van Neer *et al.* (2004), and the second more recent study was conducted by Routledge (2015). Both examined and gathered the published data on the Nile perch[252] where fish remains have been uncovered and analysed. Thus, the presented information is of course dependent on the excavation strategy, whether fish remains were collected, and subsequently studied and published. Much as with anything in archaeology, gaps are inevitable.

Nile perch remains have been uncovered at 22 sites in the Southern Levant with a much stronger focus in the northern half of Cisjordan (see *table 37* and *map 16*). While this non-local material is perishable, it did not remain only at coastal sites, travelling inland as far as Jerusalem and *Tell el-ʿUmērī*. There are only six sites south of the Yarkon River which yielded any Nile perch, three on the Yarkon River, and one site in Transjordan. The remaining twelve sites are all in the Mount Carmel region, the Jezreel Valley, the Acco Plain,

---

252 With van Neer *et al.* 2004 also examining other fish remains besides the Nile perch. Routledge also has a short discussion of other fish (Routledge 2015, 219).

and in Galilee. Thus, the general distribution of Nile perch is within the northern half of Cisjordan.

Describing an exact chronological development for this type of material is an impossible task given collection methods and state of publication (see *tables 38–40*). For nine of the 22 sites, there is no more information than that Nile perch has been found which date to sometime in the LBA through Iron I. Moreover, at other sites like Acco which yielded a large amount of Nile perch, the finds are dated from the LBA through the Iron I, and at Ashkelon, another large group of Nile perch was uncovered which is dated from the Iron I through the 'Islamic' period (Routledge 2015, 232 f.). However, despite this problem, some general trends do appear. As Routledge has demonstrated, there is no decline in the amount of Nile perch from LB II through to the Iron I period. Moreover, it is likely that Nile perch appeared in greater quantities beginning in Iron IA and growing further in Iron IB (Routledge 2015, 218). During Iron I *Ḫirbet el-Burǧ* yielded the most Nile perch remains, with this find group representing 51% of all fish remains recovered from the Early Iron Age levels (Routledge 2015, 216). Other sites, such as *Tell el-Qasīle* and the nearby site of *Tell Ǧerīše*, also yielded large amounts of Nile perch dated to Iron IB along with the inland site of *Tell el-ʿOrēme* (Tel Kinneret) (Routledge 2015, 232 f.). Moreover, as Routledge notes, there is no decrease in the amount of Nile perch with the end of Egyptian hegemony over the region and suggests that Egyptians may not have been the principle consumers of these products (Routledge 2015, 218).

7.9.   *Lates niloticus* (Nile perch): Discussion

The appearance of Nile perch in the Southern Levant during the Iron I period, particularly in Iron IB, has led Routledge to conclude that Nile perch was one of the products which kept the knowledge and networks for interregional exchange alive until interregional exchange could be resumed at the end of Iron I and the beginning of Iron II (Routledge 2015, 225). He claims they were likely a modest luxury: 'Desirably and unusual, but also not impossible to attain' (Routledge

2015, 225). The Nile perch moved as whole fish evidenced by the appearance of all three major skeletal zones at inland sites (Gilboa 2015, 255; Routledge 2015, 215, 232 f.). Evian has suggested that these fish were shipped in the Egyptian ovoid amphorae (Evian 2011, 111). However, as Gilboa has pointed out, some of the examples of Nile perch uncovered at *Ḥirbet el-Burǧ* would have been as long as 2m and far too large to fit into the amphorae. She goes on to point out that the fish were likely shipped in baskets both over sea and inland, similarly to how it was recorded in the Tale of Wenamun. Moreover, while the Nile perch have been found inland, the Egyptian amphorae have not been found at these inland sites, and she concludes there is no connection between the shipment of the Nile perch and the Egyptian amphorae in Iron I (Gilboa 2015, 255). From the distribution and the chronological development, the Nile perch is a good indicator of the continued exchange between Egypt and the Southern Levant during the Iron I period. However, from the distribution pattern of these remains, there is a general preference in the region of Mount Carmel, the Akko Plain and the Jezreel Valley, with Nile perch likely coming to the port sites of *Ḥirbet el-Burǧ, Tell Abū Ḥawām*, and Acco, and moving inland as little luxuries (Gilboa 2015, 255).

7.10. The Egyptian Objects in the Southern Levant: Distribution Conclusions

The four sets of Egyptian objects presented here (pottery, stone vessels, amulets, and Nile perch), certainly do not represent all of the non-local finds in the Southern Levant originating in Egypt.[253] These four examples represent four well-studied material classes which can be compared and contrasted. Nevertheless, the patterns listed here are likely to change in the future with further study and examination of the material. Taking these four material types together reveals several distributional patterns. First, while Egyptian objects were found at 62 sites in the Southern Levant,

even taking these four classes together, Egyptian objects did not receive the same level of distribution as the Cypriot and Mycenaean pottery. Moreover, the general distribution of this material is not the same for each material class. Egyptian pottery imported from Egypt is mainly found at coastal sites with some penetration into Cisjordan, but here it is mainly at 'Egyptian' sites or sites under the influence of Egypt. Only two sites in Jordan yielded any Egyptian pottery, *Tell es-Saʿīdīye* and *Tell Zerāʿa*; however, both sites yielded only one example each of Egyptian pottery. For the Egyptian stone vessels, there is a more even distribution in the Southern Levant as a whole. Egyptian amulets have a general concentration in the southern half of Cisjordan. However, for the Nile perch the opposite is true. While some sites in the southern half of Cisjordan have yielded Nile perch bones, the majority of these finds are in the region of Mount Carmel, the Jezreel Valley and Galilee. Thus, while all items originated in Egypt, the consumption of these objects differed for each class. This can be put in greater contrast, as 39 of the 62 sites with Egyptian objects have only one type of Egyptian object. Moreover, the consumption of Egyptian objects is limited in comparison to other non-local items such as Cypriot or Mycenaean pottery. Egyptian items, when taken all together, appeared at only about half the sites Cypriot pottery was distributed. Thus, even though access to Egyptian items was likely easier than other non-local items, according to the distance the items needed to travel and because of the connection between the Southern Levant and Egypt, consumption of Egyptian items was nevertheless limited mainly to the larger regional centres, coastal sites, 'Egyptian' sites, or sites with Egyptian influence.

Examining the sites which have more than one type of Egyptian object reveals some additional patterns in the distribution. Of the 64 sites, only five yielded all four types of Egyptian objects. These are: Acco, Beth-Shean, Lachish, Megiddo, and *Tell Abū Ḥawām*.[254] Beth-Shean is not surprising, being perhaps the site in the Southern Levant

---

253 For example: see Mumford 1998. See also Ussishkin 2004a, 65.

254 If one includes the Egyptian pottery found at the site on the southern beach of Ashdod to the items found at Ashdod, this would also place Ashdod as one of the sites with all four types of Egyptian objects.

with the most Egyptian influence (Mazar 1993; 2008b). However, as seen with the stone vessels, even though there was a strong concentration of Egyptian material at the site, local products were still used, such as the local Palestine gypsum vessels and ground stone vessels, and locally produced Egyptian-style pottery. Both Acco and *Tell Abū Ḥawām,* likely in association with *Ḫirbet el-Burğ,*[255] probably acted as ports of exchange with Egypt, and thus, these objects likely made their first stop at one of these sites before moving inland.

Lachish is also not surprising, given that it is one of the sites in the Southern Levant with the widest variety of non-local items. Moreover, given the evidence of the Egyptian influence at the site and Egyptianisation (Ussishkin 2004a, 59–65), the consumption of a variety of Egyptian products can be expected, as more items originating from Egypt not included in this survey were also found at the site (Ussishkin 2004a, 65). However, while there was a strong consumption of Egyptian items at the site, this was generally concentrated to LB IIB and the Early Iron Age other than for the stone vessels, which have a higher concentration before LB IIB, perhaps supporting the suggestion that Egyptian stone vessel use already dipped in LB IIB. Nevertheless, the two ceramic Egyptian jars were dated to LB IIB, the Egyptian amulets were found in their range of production from LB IIB through Iron IA, and Nile perch dated from LB IIB through Iron IA as well. Thus, at Lachish, there was a general consumption of Egyptian goods during LB IIB and Iron IA and it is likely that this exchange continued until its eventual destruction and abandonment ca. 1150/30 BC (Ussishkin 2004a, 64). If these items were brought directly from Egypt, or if they were obtained as a general acquisition from a Southern Levantine port, is unknown. Moreover, for some of these objects, such as the Egyptian stone vessels, their presence as possible gifts cannot be ignored.

Megiddo is the final site which yielded all four types of Egyptian objects presented here, and it too was a large consumer of Egyptian products during the LBA and Iron I. Both Egyptian pottery and Egyptian stone vessels appear at Megiddo, beginning in the LB I period,[256] both continuing to appear throughout the LBA. Conspicuously, Megiddo is one of the rare sites in the Southern Levant to have Egyptian stone vessels in monumental forms, and also an Egyptian handled cup which, according to Martin, was restricted to sites with a strong Egyptian presence during the LBA. Sparks suggested that the monumental stone vessels arrived at Megiddo as part of a diplomatic mission to the site, and Martin suggested that the handled cup may have arrived at the site as a gift either directly from Egypt or more locally from Beth-Shean. Both of these suggestions may be correct, and the reason may have been the important position Megiddo played in the interregional politics. In a letter found at Boğazköy, Megiddo is mentioned in relation to Egyptian and Hittite envoys, likely acting as a staging point (Genz 2011, 316). Thus, the appearance of these special Egyptian objects at Megiddo may not be evidence of commerce, but point more to the special role Megiddo played in the Southern Levant, with these objects perhaps arriving as gifts directly to the site. Furthermore, the consumption of Egyptian objects also did not stop with the end of the LBA, as Egyptian amulets are more abundant at the site during Iron I than in LB IIB, and Nile perch begins to appear in the Iron I period as well. Moreover, Megiddo is one of the few sites in Iron I to have Egyptian stone vessels. Whether these are residual from the LBA cannot be said; however, the appearance of Egyptian objects at Megiddo from the LBA through Iron I indicates a continued consumption of Egyptian products at the site.

Eight sites have yielded three kinds of Egyptian material: Ashdod, Ashkelon, *Dēr el-Balaḥ, Ḫirbet el-Burğ*, Jerusalem, *Tell eš-Šerīʿa, Tell el-ʿAğūl*, and *Tell el-Qasīle*. The appearance of a variety of kinds of Egyptian material at *Tell el-ʿAğūl*, Ashdod, and Ashkelon is again not surprising. *Tell el-ʿAğūl* was likely the main port in the Southern Coastal Plain where Egyptian objects appeared during LB I, and LB IIA. It is possible that, during LB IIB, *Tell el-ʿAğūl's* role

---

255 Which yielded three of the four Egyptian material types only missing Egyptian stone vessels.

256 Though an early date of MB IIC is possible for one Egyptian vessel.

in interregional exchange in the Southern Coastal Plain with Egypt was taken over by Ashkelon. Ashkelon yielded a large amount of imported Egyptian pottery, mainly transport vessels which likely continued into Iron I; however, to what extent is unknown. Egyptian pottery does appear during the Iron I, though more strongly in the Iron IA period; yet, the available information is not clear enough to make a strong conclusion. Moreover, Nile perch bones appear at Ashkelon during Iron I; however, again, the exact quantities are unknown, as the 115 Nile perch bones are dated from Iron I though the 'Islamic' period. Given the available information, it is likely that Ashkelon maintained some exchange with Egypt during the Iron I period, but to what extent is unknown.

The same may be true of Ashdod; however, it is more likely that Ashdod played a secondary or tertiary role. While one Egyptian stone vessel, four Egyptian amulets, and two Nile perch bones were found at the site, and – if one includes the finds from the small site on Ashdod's southern beach – 15 sherds of Egyptian pottery, the site is overshadowed by neighbouring sites. *Tell el-ʿAǧūl* yielded the most stone vessels in the Southern Levant, Ashkelon yielded the most Egyptian pottery, and *Tell el-Fārʿa* (South) yielded the most Egyptian amulets. Thus, while it is possible Ashdod had some exchange with Egypt, from the current evidence it is likely that, if there was exchange, it was not intense, or it is possible the site received its Egyptian items from another port. Moving further inland, at Jerusalem, three types of Egyptian objects were also uncovered. One Egyptian amulet, four Egyptian stone vessels, and five bones from Nile perch were found at Jerusalem. It is likely that these objects arrived at the site due to the Egyptian influence at Jerusalem as evidenced by several fragmentary Egyptian statues and inscriptions (van der Veen 2013). The importance of *Ḫirbet el-Burǧ* has already been presented, as it is likely that, during the Iron I period, it was the main port of exchange with Egypt, perhaps in the entire Southern Levant, continuing exchange which had begun in the LBA.

Tell el-Qasīle also yielded three of the four Egyptian object types, only missing Egyptian amulets. Interestingly, given that *Tell el-Qasīle* was founded in the Iron I presumably as a 'Philistine'

settlement, is the fact that these three types of Egyptian objects do appear at the site. As discussed above, Gilboa proposed that the Egyptian pottery at *Tell el-Qasīle* likely reached the site via a Phoenician port such as *Ḫirbet el-Burǧ* as Phoenician pottery found at *Tell el-Qasīle* was produced on the Carmel coast (Gilboa 2015, 253 note 10). However, *Tell el-Qasīle* is one of the few sites in the Southern Levant to have Egyptian stone vessels during the Iron I period. Moreover, given that the site was established in Iron I, it is likely that these objects arrived during this period. This is also in conjunction with the evidence from the Nile perch which also appeared at the site during Iron IB. Nile perch also was found in considerable quantities at the nearby site of *Tell Ǧerīše*, where Egyptian amulets were also uncovered dating to the Iron I period, and which was also under the influence of the 'Philistine' culture.

Taking both of these sites into consideration, there are three possible answers for why a variety of Egyptian material appeared at these sites during Iron I. The first are the suggestions given by Gilboa, that it arrived at *Tell el-Qasīle* through a Phoenician port and travelled south again to *Tell el-Qasīle*, and then it would have travelled inland to *Tell Ǧerīše*. Second, this material arrived first at a more southerly port such as Ashkelon, although a 'Philistine' site, and travelled north to *Tell el-Qasīle*. Thirdly, and what would appear to be more likely, is that these objects arrived directly at *Tell el-Qasīle* and travelled inland to *Tell Ǧerīše*. The reason this third option would be more likely is that the connection between the Egyptian objects and the Phoenician objects from the Carmel coast is not strong. It demonstrates that *Tell el-Qasīle* was exchanging with a site on the Carmel coast, but this does not equate with the Egyptian objects arriving at the site from the Carmel coast. Moreover, *Tell el-Qasīle* yielded four Egyptian stone vessels the one object type that *Ḫirbet el-Burǧ* has none of, and *Tell Ǧerīše* yielded four Egyptian amulets in the Iron I period, whereas *Ḫirbet el-Burǧ* yielded only one. While these differences may be small, it likely indicates that *Tell el-Qasīle* had some contact and exchange with Egypt, as small amounts of material moved from Egypt to the site and then further inland to *Tell Ǧerīše*.

The consumption of Egyptian items at 'Egyptian' sites is not unanimous or even intense at all sites. At both *Dēr el-Balaḥ,* and *Tell eš-Šerīʿa,* these two 'Egyptian' forts yielded three kinds of Egyptian items. However, much like Ashdod, neither site yielded great amounts of Egyptian items, though for *Dēr el-Balaḥ,* it is possible, because there remains an unknown amount of imported Egyptian pottery. Both had one Egyptian stone vessel each, and together 13 Egyptian amulets. From the known Egyptian pottery, there is a total of eleven examples from both sites. This demonstrates that Egyptian sites in the Southern Levant may not have had a strong exchange with Egypt itself again according to the definition used in this study as the exchange of objects between two diverse regions. Of the 'Egyptian' sites in the Southern Levant, most yielded few actual Egyptian objects. Aphek, and *Tell Ḫēdar* (Tel Mor), only yielded nine examples of Egyptian pottery between them, even though *Tell Ḫēdar* was a coastal site and yielded a large amount of Cypriot pottery. Indeed, the small settlement on Ashdod's southern beach yielded more imported Egyptian pottery than *Tell Ḫēdar.* *Tell es-Saʿīdīye* yielded only one example of Egyptian pottery, a handled cup, and one Egyptian amulet. Ashkelon, under Egyptian influence, did yield Egyptian pottery in large amounts; however, the Nile perch arrived during the Iron I period, likely after the Egyptian phase at the site came to an end, and the Egyptian amulets also likely arrived at the site after the end of the Egyptian presence; however, the dating of these objects makes this an unknown. Only *Tell el-ʿAǧūl* and Beth-Shean yielded large amounts of Egyptian items. However, for *Tell el-ʿAǧūl,* the exact amount of Egyptian pottery at the site from the LBA is unknown. Beth-Shean is the only 'Egyptian' site in the Southern Levant which yielded each type of Egyptian object discussed here. However, despite being the site in the Southern Levant with the 'most' Egyptian influence (Higginbotham 2000, 128 f.), in terms of both Egyptian stone vessels and Nile perch, Megiddo yielded more, and Ashkelon and *Ḫirbet el-Burǧ* yielded far more imported Egyptian pottery. Thus, the Egyptian items found at these 'Egyptian' sites likely played a small role complementing what was available locally or that which could be locally manufactured, such as the Egyptian-style pottery or gypsum stone vessels.

This is more likely to be the case for the small 'fort' sites like Aphek, *Tell Ḫēdar, Tell eš-Šerīʿa,* and *Dēr el-Balaḥ,* where Egyptian items were infrequent. It is likely that the Egyptian items at these sites did not arrive via trade under the traditional economic definitions, but rather as personal possessions or gifts. It is also likely that many of the Egyptian items which made their way into the Southern Levant were not meant for Egyptians. This may also be the case with *Tell el-Fārʿa* (South), where Egyptian-style architecture was uncovered along with Egyptian-style pottery, though also yielding the greatest amount of Egyptian amulets in the Southern Levant. According to Martin, there appears to be no actual imported Egyptian pottery at the site despite the locally made Egyptian-style pottery (Martin 2011a, 229–235).[257] Only two Egyptian stone vessels were found at the site; however, *Tell el-Fārʿa* (South) did yield the highest amount of Egyptian amulets, with the majority of these originating from burial contexts which also yielded other Egyptian objects not discussed here (Braunstein 2011, 19). Braunstein has suggested that these Egyptian objects were used by local 'Canaanites' as additions to the standard Canaanite burial practice during the period of intensified Egyptian presence during LB IIB through Iron IA (Braunstein 2011, 24–29). As she notes, *Tell el-Fārʿa* South's cemetery has yielded by far the most Egyptian amulets in funerary contexts in the Southern Levant, indicating a specific consumption of these goods at this site different from that of other sites in the Southern Levant (Braunstein 2011, 19). Thus, *Tell el-Fārʿa* (South) stands out like other 'Egyptian' sites such as *Tell el-ʿAǧūl,* and Ashkelon, as there is a specific consumption of certain, but not all, true Egyptian objects, likely indicating the specific availability of certain types of Egyptian objects in certain regions. For *Tell el-Fārʿa* (South), there is a generally wider distribution of Egyptian amulets south of Gezer, and with amulets found at *Tell Abū*

---

257 However, it must also be mentioned that Martin was not able to examine all of the Egyptian-style pottery from *Tell el-Fārʿa* (South).

Salīma, it is possible that Egyptian amulets, being small and easily transported overland, may have arrived in the south *via* a land route with many of these objects arriving at *Tell el-Fārʿa* (South).

The Nile perch has only been found in small quantities at Beth-Shean with no other evidence at 'Egyptian' sites.[258] During Iron I, the main period when the Nile perch was brought to the Southern Levant, fish remains have been found at sites which have no evidence of Egyptian influence or after Egyptian influence left the site, such as at Ashkelon. Moreover, Egyptian imported pottery, other than the handled cups which seem to have been mainly for 'Egyptian' sites, was exchanged with sites that had no visible Egyptian influence such as *Ḫirbet el-Burǧ*, Acco, *Tell Abū Ḥawām*, and *Tell el-Qasīle*. The same can be said of the Egyptian stone vessels which had a wider circulation among the prominent centres in the Southern Levant, more so than at 'Egyptian' sites. Only the Egyptian amulets had a higher concentration at 'Egyptian' sites. In this case, 51% of all Egyptian amulets were found at *Tell el-Fārʿa* (South) and Beth-Shean combined, indicating a specific consumption of these objects at these two 'Egyptian' sites. However, from this survey, this is the only case where Egyptian objects were seemingly consumed more so by 'Egyptian' sites.

Two other sites, Gezer and Beth-Shemesh, must be mentioned for their importance in the consumption of Egyptian objects and their role along with Lachish in the Shephelah. While both Gezer and Beth-Shemesh yielded only two of the four categories of Egyptian objects, stone vessels and amulets, both sites had significant amounts, with Gezer also yielding the only Egyptian stone vessel in the Southern Levant with a cartouche of an Egyptian pharaoh. Indeed, from the Amarna letters, Gezer stands out as one of the important centres in the Shephelah along with Lachish and Jerusalem (Na'aman 2011, 282–286). Moreover, in EA 369, a letter written to Milkilu the ruler of Gezer, Milkilu is sent silver, gold, linen garments, carnelian, all sorts of precious stones and a chair

of ebony, all in exchange for 40 extremely beautiful female cupbearers (EA 369; Moran 1992, 366). This exceptional letter indicates the importance of the site in the Egyptian system that cupbearers were not simply demanded, but rather at times were purchased. It is perhaps this importance which would give cause for the only Egyptian stone vessel with a cartouche to be found at the site along with a high concentration of Egyptian objects. However, this then indicates that these objects could have arrived at the site in a number of different manners, either as payment or perhaps also as gifts. Moreover, the concentration of Egyptian material in the Shephelah demonstrates the importance of this region, as Egyptian amulets are clustered in two regions in the south of the Southern Levant, the first being the region *Tell el-ʿAǧūl* and *Tell el-Fārʿa* (South), and the second around Gezer and Beth-Shemesh, with Egyptian stone vessels also concentrated in the region near Gezer. As Na'aman has demonstrated, while the archaeological remains for many of these sites during LB IIA, the time of the Amarna period, are not well known, the Amarna Letters demonstrate the importance of this region (Na'aman 2011, 295–297). This too is reflected in the archaeological record, with a general concentration of Egyptian material culture in this region at such centres as Lachish, Gezer, Beth-Shemesh, and Jerusalem.

7.11. The Egyptian Objects in the Southern Levant: The Chronological Development

For each of the Egyptian objects under consideration, there are slightly different chronological developments. However, as mentioned for each material class, each has certain chronological difficulties, leaving any discussion open for further elaboration with the publication of new data. Beginning in LB I, the main Egyptian items to arrive in the Southern Levant were Egyptian stone vessels, mainly at *Tell el-ʿAǧūl*. Some Egyptian pottery was brought to the Southern Levant; however, only in small amounts. The same may be true of the Nile perch; however, the chronological certainty for sites which yielded Nile perch in the LBA makes it difficult to know this for certain. In the LB II period, as mentioned before, it is often

---

258 However, this again may be due to the collection methods and also to the state of publication from several of the 'Egyptian' sites.

times difficult to separate the Egyptian material into LB IIA and LB IIB. The Nile perch may have arrived at several sites during LB IIA; however, the only site which it is certain is at Tel Harasim. Egyptian pottery too appears in LB IIA; however, this is again in small quantities. It is only Egyptian stone vessels which appear in any great amount during LB IIA.[259] What is apparent is the increase at the start of the Ramesside period during LB IIB, at least in the imported Egyptian pottery and the Egyptian amulets. The Egyptian pottery, however, seems to have increased in the second half of the 13th cent. BC, seen at both *Ḫirbet el-Burǧ* and at Ashkelon (Stidsing/Salmon 2011, 178 f.; Martin 2011a, 195–200). For the Egyptian stone vessels, it is possible there was a decrease in LB IIB; however, this is uncertain. The Nile perch is also attested to in LB IIB. Yet, the general problem of dating the Nile perch remains in the LBA, again makes it uncertain whether there was any sort of increase during this period.

The transition to the Iron Age did not bring about the end of exchange with Egypt; rather, it is likely that it concentrated in the northern half of Cisjordan. Imported Egyptian pottery, mainly transport vessels, increase at the site of *Ḫirbet el-Burǧ*; and Egyptian pottery is found also at a handful of other sites in the Iron Age but not in any great amounts. Egyptian amulets also appear in as large a quantity in Iron IA as they did in LB IIB, though with a wider distribution. Nile perch too increases in distribution during the Iron Age, mainly in the regions of Mount Carmel, the Akko Plain and the Jezreel Valley. Moreover, it is likely that Nile perch increased in frequency during Iron IB. Egyptian stone vessels are the only non-local Egyptian items considered here which greatly decrease during the Iron I period. A handful of Egyptian stone vessels do appear in Iron I, with four appearing at *Tell el-Qasīle* which was founded in Iron I, indicating that these vessels likely arrived during the period rather than being reused from a previous phase. What the temporal development of these four objects of Egyptian origin indicates is that, despite exchange with other regions such

as Cyprus and Mycenaean Greece coming to a halt during LB IIB, exchange with Egypt did not stop. Moreover, exchange with Egypt did not stop upon the withdrawal of Egyptian influence from the region around 1130 BC. Rather, it is likely that exchange with Egypt did not only continue but concentrated at *Ḫirbet el-Burǧ* and the surrounding region. Thus, despite the traditional notion that interregional exchange ended with the close of the LBA, this is simply not the case, as demonstrated by the Egyptian material culture.

7.12. The Egyptian Objects in the Southern Levant: Exchange with Egypt as a Resource

Exchange with Egypt is not only a question for the LBA and the Iron I period, as exchange with Egypt and Egyptian influence on the Southern Levant had been an ongoing situation, beginning to greater or lesser degrees since the EBA and continuing after Iron I (Mumford 2014, 69–83; Gilboa 2015, see references therein). Thus, to try and speak only of this period and ignore the continued relations before and after these two periods would be to ignore a crucial factor in this discussion. While Egyptian influence in the Southern Levant was perhaps more direct during the New Kingdom and specifically during the Ramesside period, exchange with Egypt during this period is neither new, nor is it surprising that exchange with Egypt continued after the end of the LBA, as it only continued a tradition going back to the EBA. This is not to underscore the importance of the exchange with Egypt during this time span of the LBA to Iron I, or to ignore the special circumstances of Egyptian influence and presences at sites such as Beth-Shean, Aphek, *Tell eš-Šerĭa*, and others. Nonetheless, given the history between these two regions, their close proximity to one another, and the land and sea routes which connect them, it should not be surprising that the end of the LBA did not bring about the end of exchange between these two regions. Thus, when asking the general question whether exchange with Egypt was a resource during the LBA and Iron I period, the answer would be, yes. However, this is with the caveat that this was likely true long before the LBA began, and after Iron I ended.

---

259 If the Egyptian stone vessels from the Amman Airport Structure are dated to the LB IIA.

The changes which occurred in both Egypt and the Southern Levant between 1200 BC and 1130 BC may have altered the exchange between Egypt and the Southern Levant; however, it did not end it, and it likely caused a development for the continued exchange at *Ḫirbet el-Burǧ*. There are, however, two types of interregional exchange between Egypt and the Southern Levant during the LBA, and each would have had a different effect on the development of the societies of the Southern Levant. The first is the interregional exchange of things, that is, the material objects which originated in Egypt and were brought to the Southern Levant. These material objects have been the subject of this chapter. The second is the interregional exchange of people and ideas. These two different aspects of interregional exchange would have affected the development of the societies differently and would not have played the same role as a resource in the LBA. Yet, during the LBA, these two forms of interregional exchange were at times intertwined.

During the LBA, the campaigns of Thutmoses III had brought about the Egyptian hegemony of the Southern Levant which lasted until near the end of the 12ᵗʰ cent. BC. During the time of Egyptian rule over the Southern Levant, there began a processes of elite emulation or Egyptianisation and the direct presence of Egyptians in the Southern Levant (see Redford 1992, 192–240; Higginbotham 2000; Martin 2011a; Mumford 2015, 89–130). It was this exchange of both peoples and ideas which caused a development in the societies of the Southern Levant. This is seen either as elite emulation or Egyptianisation, where aspects of Egyptian architecture, writing practices, and the production of local Egyptian-style were incorporated into the daily lives of the 'Canaanite' population (Higginbotham 2000, 74–128), whether this involved 'Canaanites' using the knowledge and ideas brought from Egypt, or it was utilised by 'Egyptians' living in the Southern Levant, which was likely the case in conjunction with the locally made Egyptian-style pottery (Martin 2005; 2011a). This interregional exchange of ideas and people truly caused a development in the societies of the Southern Levant during the LBA, seen in the incorporation of

Egyptian architectural styles,[260] the use of Egyptian Hieratic in the southern half of Cisjordan as evidence of offering or taxation levied on the Canaanites by the Egyptians (see Sweeney 2004). Thus, while it may have been forced on the 'Canaanite' population, the interregional exchange of people and ideas acted as a resource for social change and development during the LBA, as aspects of Egyptian culture were incorporated in the Southern Levant. In this way, too, it caused the interregional exchange and consumption of some of the Egyptian objects brought to the Southern Levant during the LBA. It is in this way that the two types of exchange were intertwined; however, not all Egyptian objects arrived because of this other type of interregional exchange. Some, like the Egyptian amphorae and the Nile perch, likely arrived because of economic ventures or exchange with Egypt outside of the overarching Egyptian hegemony. Thus, because there existed a form of interregional exchange in objects which existed outside of this system, interregional exchange with Egypt neither ceased with the end of the LBA nor with the withdrawal of Egyptian presence. Therefore, because of this, the interregional exchange of Egyptian objects is not completely connected to the exchange of ideas and peoples. It then would have acted as a different resource than just the interregional exchange of ideas, peoples, and practices.

Firstly, while the interregional exchange of Egyptian objects was a resource during the LBA and Iron I, if considering only these four types of Egyptian objects, exchange with Egypt was not a resource for the entire Southern Levant. Egyptian items, even small things such as the amulets which were easily transported, did not have nearly the distribution of other items such as Cypriot or Mycenaean pottery even when Egyptian transport vessels served a similar purpose to those from Cyprus and Greece. Rather, it is more likely that exchange of objects with Egypt was important to some key sites such as *Tell el-ʿAǧūl*,

---

260 Which in the case of *Tell Ḥēdar* likely was part of the reason for the continued collapse of the building as the sand foundation was not suited for the Southern Levant.

Ashkelon, *Ḫirbet el-Burǧ*, Megiddo, Lachish, and Beth-Shean. During the LBA, this is likely due to the Egyptian presence or influence at sites such as Beth-Shean, or the political influence Egypt had on regional centres such as Gezer, Lachish, and Megiddo. Thus, for many of the items uncovered at these sites during the LBA, the exchange mechanism which brought them there is unclear. It is likely, for many of the Egyptian objects, particularly those at sites with strong Egyptian influence, that they arrived not *via* traditional economic exchange of buying and selling. Rather, they came by way of personal possessions, gifts, or in the case of many of the sites, by way of a secondary exchange, with the original item arriving in one local and being exchanged intra-regionally within the Southern Levant. This is not to ignore the fact that some of this material did arrive in terms of an economic exchange, as demonstrated by EA 369, the letter written to Milkilu the ruler of Gezer in which he was given a list of goods in exchange for female cupbearers. However, during the LBA after Egyptian hegemony was brought to the region by Thutmoses III and intensified during the Ramesside period, economically motivated exchange with Egypt was likely minimal.

This may be seen in the Canaanite jars found in Egypt which have undergone petrographic analysis. While *Tell el-ʿAǧūl* yielded many Egyptian stone vessels and Ashkelon during LB IIB and Early Iron Age yielded many imported Egyptian vessels, according to the provenience study performed on the Canaanite jars from Memphis, there is no real evidence of Canaanite jars being shipped to Egypt from the Southern Coastal Plain (Ownby/Smith 2011, 273–279; Bavay 2015, 128 f.). While this provenience study is still underway, it does present a conundrum that two coastal sites in the south which received a large amount of Egyptian items have no evidence of shipping Canaanite storage jars back as part of the exchange. This may be due to several reasons, with the first being that the objects sent back were archaeologically invisible such as the 40 cupbearers sent from Gezer, or to a number of other factors. However, it may also indicate a difference between the ports in the Southern Coastal Plain and those from Mount Carmel and the Acco Plain.

As discussed in chapter 4, the exact nature of the merchants or traders in the Southern Levant is unknown, as the information about merchants during the LBA is derived from Egyptian and Ugaritic resources. Thus, while it may be assumed that the merchants of the Southern Levant acted as their neighbours to the north, this may not be the case, particularly for those ports under Egyptian influence or control such as *Tell el-ʿAǧūl*, Ashkelon at the end of the 13th cent. BC, and Jaffa. If these sites operated more like the temple and palace which controlled Egyptian merchants to the south, there may have been less economic exchange with Egypt and more exchange between vassal and ruler (Naʾaman 1981, 172–184). This may be further illustrated by the fact that Canaanite jars made in the region around *Tell Abū Ḥawām* and also the region around *Ḫirbet el-Burǧ* and Acco have been found at both Memphis and Amarna (Ownby /Smith 2011, 273–279; Bavay 2015, 128 f.). Thus, while the exact situation remains unclear, it is likely that the ports of the Southern Coastal Plain and those of Mount Carmel and the Acco Plain had differing exchange relations with Egypt, which is further illustrated in Iron I.

As mentioned above, exchange with Egypt did not cease with the end of the LBA, nor with the exit of Egyptian influence over the region ca. 1130 BC. However, while it did not cease, it did develop. In the LBA, *Tell el-ʿAǧūl* likely was the Egyptian port of trade, with Ashkelon also taking part in the exchange during the latter half of the 13th cent. BC, and Jaffa to an as of yet unknown extent. With the exit of Egyptian influence from the Southern Levant, exchange with Egypt is focused at one site, *Ḫirbet el-Burǧ*. This is not denying that exchange with Egypt also occurred to some extent at Ashkelon and *Tell el-Qasīle*. However, only *Ḫirbet el-Burǧ* has so far yielded strong evidence of exchange with Egypt, as almost every *locus* from the Early Iron Age levels has Egyptian pottery, and 51% of the fish remains from these levels are Nile perch (Gilboa 2015, 251, Routledge 2015, 216). Given the lack of Egyptian influence at *Ḫirbet el-Burǧ* during Iron I, and its position as seemingly the main port of trade with Egypt during Iron I, it is likely that the majority of the exchange between *Ḫirbet el-Burǧ* and Egypt was economically

motivated. Therefore, when considering exchange as a resource, at *Ḫirbet el-Burǧ*, exchange with Egypt was likely valued for its economic importance rather than for the symbolic or social meaning or the use-value of the objects.

Exchange with Egypt was certainly not the only resource at *Ḫirbet el-Burǧ*; however, it did likely play an important part in the site's economic ventures. Nevertheless, when considering other sites during the Iron I period, while sites may have consumed Egyptian items such as the Nile perch, it is unlikely that many of these sites had direct contact with Egyptian merchants or agents of exchange.[261] Rather, they consumed the Egyptian items either as modest or little luxuries brought to the sites *via* Sothern Levantine agents of exchange. For these sites, during Iron I, the Egyptian objects were more likely valued because of their use-value as modest luxuries and indicators of some status (Routledge 2015, 225). However, it is unlikely that these objects were consumed in order to demonstrate some sort of affiliation with Egyptian culture. Nevertheless, in a time when in the northern half of the Southern Levant interregional exchange was limited mainly to Egypt, if one wanted to use an object not from the Southern Levant in social activities, Egyptian objects were likely the only choice. Thus, the reason why Nile perch has a wider distribution during Iron IB may be due to an increased demand for non-local objects, and Egypt was one of the few remaining source for these objects. Therefore, it may have been a consumption and incorporation into the social life more out of necessity than actual desire for these objects, as Cypriot or Mycenaean pottery and other small objects likely played this role during the LBA.

Taking all this into account, while interregional exchange of objects with Egypt was likely a resource during the LBA, it was more so one valued for the use-value of the items, that is, objects carrying prestige, personal meaning, or an association of the owner with the power of Egypt. It is unlikely that exchange with Egypt played a strong positive economic role, rather, it may have been

that the exchange with Egypt was rather one-sided, with objects leaving the Southern Levant such as silver or grain without any tangible return (Na'aman 1981, 172–184). At sites like Megiddo, Lachish, Gezer, Jerusalem, amongst others, the Egyptian objects are likely representative of the strong political Egyptian influence. However, at 'Egyptian' sites such as Beth-Shean, Aphek, *Tell eš-Šerīʿa*, *Tell Ḫēdar*, and others, the few Egyptian objects found there are more the evidence of an Egyptian presence which mainly relied on the local materials. However, this situation likely changed in the Iron I period, particularly after the withdrawal of Egyptian influence in the region, as exchange with Egypt was seemingly focused at *Ḫirbet el-Burǧ*, which was likely more economically motivated, with some possible exchange taking place at *Tell el-Qasīle* and Ashkelon as well. While the Nile perch made its way to many sites in the Iron I period, mainly in the northern half of the Southern Levant, these objects were likely valued as being minor foreign luxuries. However, it is doubtful they were consumed to present any affiliation with Egypt or Egyptian power, which was likely the case in the LBA. Therefore, the interregional exchange of objects with Egypt acted as a resource in the Southern Levant both during the LBA and in the Iron I period. Exchange continued, though the use of these objects and their value likely changed in the mid-12th cent. BC compared to that of the LBA. Nevertheless, what cannot and should not be ignored is that exchange with Egypt did not cease at the end of the LBA nor at the withdrawal of Egyptian hegemony from the region. It developed differently at *Ḫirbet el-Burǧ* during Iron I than what had developed in the Southern Coastal Plain during the LBA; however, when making blanket statements that trade ceased at the end of the LBA, this is simply not the case with exchange with Egypt.

Finally, the question of 'who' used these objects and how this differed between the LBA and the Iron Age is an important aspect to examine. Of course, the question of who used these objects is one which will inadvertently suggest something of an ethnic background to those people. However, this is a question too large to address here, and each of the ethnic identifiers will be placed in quotation marks to indicate a general cultural

---

261 Some exceptions would be *Tell el-Qasīle* and Ashkelon which may have either created or maintained some exchange with Egypt during Iron I.

affiliation for that site related to a documented assemblage of material culture given such names as 'Canaanite' or 'Philistine'. Even with the strong presences of 'Egyptians' at Beth-Shean, it remains an impossibility to say whether or not a 'Canaanite' person owned an object, or an 'Egyptian' or a 'Canaanite' person who identified as 'Egyptian'. It is with this consideration in mind that one can examine the differences in how these Egyptian objects were consumed.

In the LBA, the two main groups one can discuss are 'Canaanites' and 'Egyptians'. As pointed out in the previous discussion, the main consumers of Egyptian items in the Southern Levant were not necessarily 'Egyptians'. Rather, major 'Canaanite' sites under Egyptian influence such as Megiddo, Lachish, Gezer, and Beth-Shemesh seemed to be the main consumers of Egyptian items during the LBA. This is the case for every material type, other than for the Egyptian amulets which were found in large amounts both at *Tell el-Fārʿa* (South) and Beth-Shean. However, according to the suggestion of Braunstein, the consumers of these amulets at *Tell el-Fārʿa* (South) may have been local 'Canaanites' as well. Therefore, the consumption of Egyptian products during the LBA was likely only a resource to the local 'Canaanite' populations and not the 'Egyptians' stationed in the region, as far as these four materials classes are concerned.

The Iron I period represents a more diverse field of actors according to material culture assemblages. 'Egyptian' material culture still appears at sites like *Tell eš-Šerīʿa*, *Tell Ḫēdar*, Jaffa, and Beth-Shean, ending approximately around 1130 BC. 'Philistine' monochrome and bichrome pottery appears, as well as shifts in the Central Hill Country which have been deemed 'Israelite'. In the region of Mount Carmel and the Acco plain there is either the appearance of 'Phoenicians' (Gilboa 2015) or 'Northern Sea Peoples' (Stern 2013). Thus, a wide variety of people groups could have had access to this material, and indeed the only region to specifically avoid the Egyptian material culture in the Iron I period are the inhabitants of the Central Hill Country, as they did with most non-local materials (Faust 2006, 49–64). 'Egyptians' at those sites which still yielded evidence of an Egyptian presence continued to marginally use items brought from Egypt, similar to in the LBA. Moreover, the 'Canaanite' population too continued to use Egyptian items, and the people of *Ḥirbet el-Burǧ*, be they 'Canaanites', 'Phoenicians' or 'Northern Sea Peoples', continued to consume Egyptian pottery as they had during the LBA. The 'Philistines' too, to a lesser extent, consumed Egyptian products. What this indicates is that, other than with the people of the Central Hill Country, there was no avoidance of Egyptian material culture in the Southern Levant.

Taking together both the interregional exchange of Egyptian objects and the interregional exchange of Egyptian ideas, people, and practices there is no one clear development. While the interregional exchange of ideas in the LBA had a great impact on the development of the society, the exchange of Egyptian items would have only been a part of this. For some, displaying an Egyptian stone vessel or being buried with an Egyptian amulet did involve at times both types of exchange with the knowledge of practice or to show association with an Egyptian identity. However, at times, it may also have been because the objects themselves were non-local, costly, precious or valued culturally for a reason outside of it being Egyptian or representing the Egyptian power. This was likely that case with many objects during the Iron Age, as they were consumed for being non-local modest luxuries, but it is doubtful that the people of *Tell el-ʿUmērī* were identifying with Egyptian power through the consumption of Nile perch. Thus, throughout the LBA and Iron I period, interregional exchange with Egypt did not always act as the same type of resource for everyone. For some, it showed affiliation to Egypt, or that one was an actual Egyptian living among local people. For others, it was perhaps for economic trade or to demonstrate prestige when other non-local materials had become unavailable. Yet, despite the changes at the end of the LBA, the ResourceComplex which allowed for interregional exchange to take place between these two regions never broke down as a whole. It may have concentrated on direct contact at *Ḥirbet el-Burǧ*, but other sites in the south and inland could still obtain Egyptian products either directly or indirectly, thus continuing a tradition which stretched back to the EBA and continued well after Iron I.

8. Precious Metals (Gold and Silver), and Non-Local Varia (Cedar Wood, Hittite Objects, Stamp Seals, and Tin)

8.1. Introduction

Precious metals, gold and silver, is the last major group of artefacts which will be presented here. A sample of 45 sites ranging from the LBA through the Iron I, and geographically spread throughout the Southern Levant, were selected to examine the regional concentration and chronological development of these materials as a resource. A full examination was not possible due to time restrictions. Thus, it should go without saying, that major finds from these categories are not included in the database, and await another project which could encompass every site which yielded these materials and a closer examination of the find contexts and the specific types and shapes of the objects. Because of this limitation, it was not possible to do a typological discussion of the precious metal objects. Much like with the Cypriot and Mycenaean pottery, while there are a number of different types and forms, because this work examines the general trends, these could not be taken into consideration. The same can be said of the find contexts. It was not possible to include an in-depth discussion of the find context other than one special case, the hoards. This typological and contextual study must wait until it can be examined as a project in and of itself, as this general overview of the regional and chronological development cannot take these into great consideration.

Apart from the precious metals, there are several other smaller groups of objects which have either been included in the Tübingen database or which are clear examples of interregional exchange or the lack thereof. The first is cedar wood which arrived in the Southern Levant from the north, either Lebanon, Cyprus or from parts of Anatolia. Second, there are a small handful of Hittite objects which have been uncovered in a few rare instances in the Southern Levant. Finally are two groups: stamps seals, which have been catalogued by Othmar Keel, and tin. The stamp seals are at the time of writing being included into the Tübingen database and, as of this point, no clear

conclusions can be drawn from the material; however, they do warrant a brief discussion. Lastly there is tin, which has left very few objects in the ground as it was readily combined with copper to form bronze; however, it is an important marker when examining the supposed break in interregional exchange at the end of the LBA.

8.2. Precious Metals (Gold and Silver): Results

8.2.1. Distribution

Gold, silver, and by proxy electrum[262] are not local to the Southern Levant, as there are no natural sources for the material in the region (Golani 2013, 16–18). Gold likely came from Egypt and Nubia; however, sources of gold are also found in Anatolia and Arabia (Golani 2013, 16–18). The source for silver is not as clear. During the LBA, much of the silver is believed to have come from southeastern Anatolia; however, silver from the Aegean, Iran, and Spain may also have arrived during the LBA through the Early Iron Age. All silver finds tested by Lead Isotope Analysis at *Tell el-ʿAǧūl* were found to originate from southeastern Anatolia, and the silver finds from Area S Stratum S-4 at Beth-Shean also had their provenience in southeastern Anatolia, though some finds also originated from Aegean sources of silver (Thompson 2009, 606). Thus, unlike pottery which can be made locally, any object of gold or silver is materially non-local. Its craftsmanship, motif, style, and type of object need not be non-local, as these materials, either in the raw form or as previously worked objects, were fashioned and refashioned for specific use in the Southern Levant. This is one of the difficulties with dating the precious metal finds. While the find context can be dated, often times to two or more periods, the exact date of arrival of the material

---

262 An alloy of gold and silver which has 20% or more silver in it (Golani 2013, 18).

Fig. 8.1. Gold objects from the Yavneh-Yam shipwreck (Golani/Galili 2015, 8, fig. 2; Courtesy of the Israel Antiquities Authority).

is uncertain. A gold ring from LB IIB could have arrived in the Middle Bronze Age passed down through generations, or it could have arrived freshly from Egypt or Nubia. Likewise, scrap gold such as that found in the Yevnah-Yam wreck is material which was meant for reuse (*fig. 8.1.*), meaning the original date of arrival of the material in the Southern Levant is an unknown. This is a caution which must be taken into consideration when thinking of the chronological development of this material witnessed in this sample.

From this sample of 45 sites, which yielded 1963 objects, 87% of all precious metals are concentrated in ten sites: Megiddo, *Tell el-ʿAğūl*, Beth-Shean, Gezer, *Tell el-Fārʿa* (South), *Dēr el-Balaḥ*, *Tell es-Saʿīdīye*, Beth-Shemesh, *Ḍahret el-Ḥumrēye*, and the Amman Airport Structure. Taking all sites with ten or more objects of precious metals,[263] representing 96% of all precious metals in this sample, reveals a general regional distribution (see *tables 41–43* and *map 17*). Sites in northern Israel, mainly concentrated at Megiddo and Beth-Shean,

have 34% of all precious metals (*fig. 8.2.*).[264] Likewise, the sites in the Southern Coastal Plain also yielded 34% of precious metal objects with concentrations at *Tell el-ʿAğūl. Tell el-Fārʿa* (South) and *Dēr el-Balaḥ*. The Shephelah yielded 19% with a concentration at Gezer, and sites in Jordan yielded 8% with concentrations at *Tell es-Saʿīdīye* and the Amman Airport Structure. The remaining 4% were scattered throughout the Southern Levant in small amounts.[265] Conspicuously, Hazor only yielded eight objects of precious metal; however, this may be due to the current state of publication, as the results from the renewed excavations of the LBA city have yet to be published and will be discussed more below.

Breaking this material into gold and silver reveals similar patterns with some minor changes. However, it must first be stated that, in general, gold finds are more common than silver. While 1,377 pieces of gold and gold jewellery were found, only 491 objects of silver were found, roughly a

---

263 16 sites in total.

264 It should be noted here and will be discussed shortly, that Hazor has so far only eight published objects of precious metal.
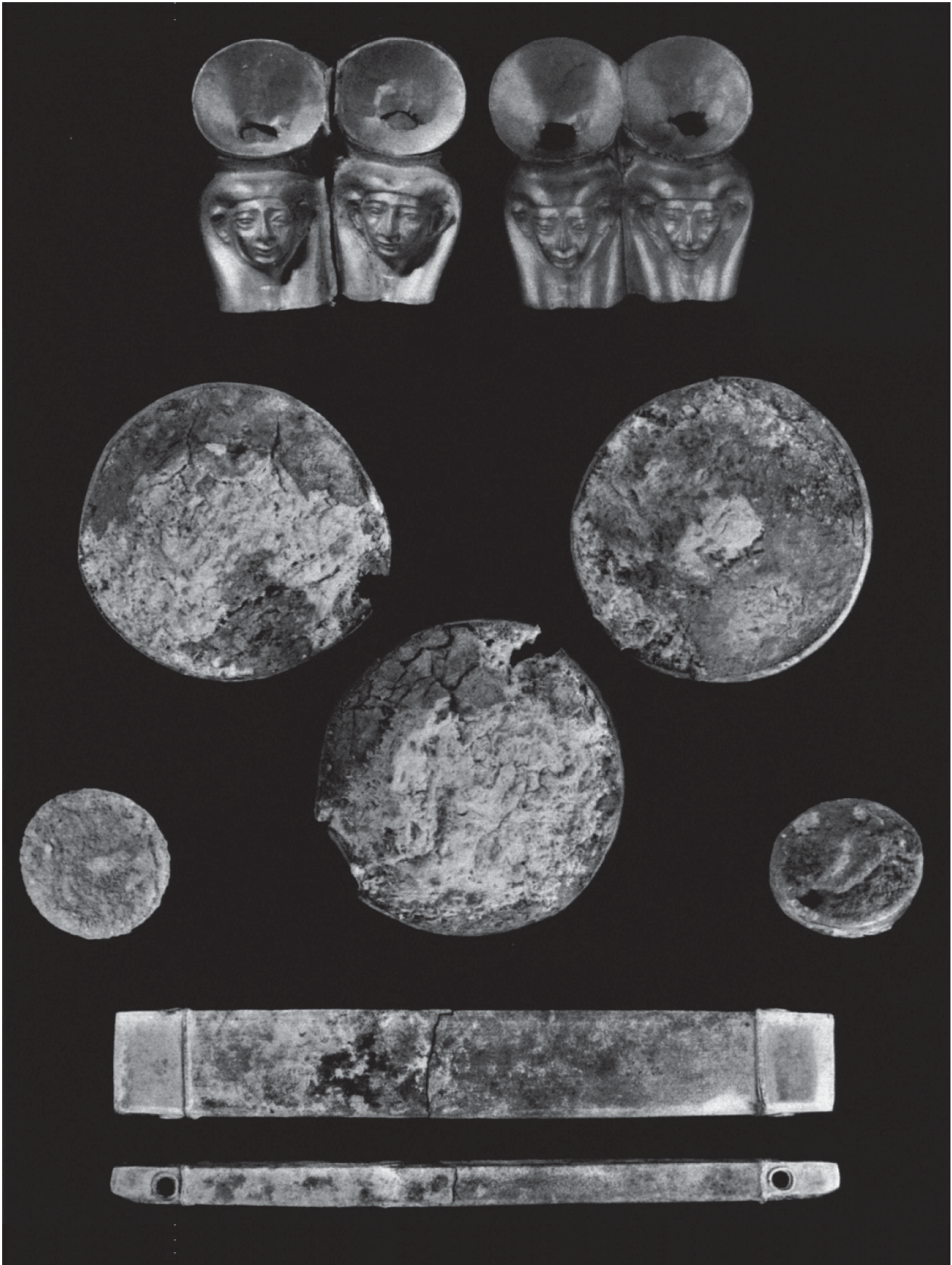**265** Less than ten finds.

Fig. 8.2. Gold objects from the Megiddo Stratum VIII treasure hoard (Loud 1948, Plate 232; Courtesy of the Oriental Institute of the University of Chicago).

quarter of the gold finds. This may be due to several reasons, from the liquidity of silver as a type of moneystuff, to the corrosive nature of silver which may mean the objects simply disintegrated over time. The answer is unclear, and it is a question which awaits another study.

With gold finds, there is a slightly higher concentration in the Southern Coastal Plain of 42%, which is largely due to the hoards (Negbi 1970) at *Tell el-ʿAǧūl* and other gold finds at the site, while sites in northern Israel yielded 32%. Sites in the Shephelah yielded 17%, while sites in Jordan yielded 6%. The remaining 3% was again scattered throughout the Southern Levant in small amounts. For silver objects, there is a concentration in northern Israel at 47%. This is largely due to the *hacksilber* hoards which will be discussed later on. The Southern Coastal Plain yielded far less silver than gold, at 17% of all silver finds, while the Shephelah yielded 30%, again mainly due to several hoards found at Gezer. Jordan yielded only 2% of all silver. Again, the remaining 4% of silver finds were scattered in small amounts throughout the Southern Levant.[266] Electrum finds are rare, possibly because of the difficulty in identifying the metal. However, of the 95 electrum finds found in this sample, 74 were uncovered at *Tell es-Saʿīdīye*. The remaining electrum finds were found in small amounts at: *Tell el-ʿAǧūl, Tell el-Fārʿa* (South), Megiddo, Lachish, *Dēr el-Balaḥ,* and Ashdod.

8.2.2. Chronological Development

The chronological development of precious metal during the LBA to the Iron I period again must be seen in the light of the fact that the exact date of arrival for the material, whether close to the time of deposition or several hundred years before, cannot be clarified by the data presented here. Likewise not all objects could be given a clear depositional date, with objects having a date range from the Middle Bronze Age through the Iron I or covering over multiple periods. This material will

be presented as best as it can be within these limitations (see *tables 44–49).*

Beginning in LB I, 76 objects of precious metal were uncovered at ten sites, with the main concentration at Megiddo and *Tell el-ʿAǧūl.* However, if we take into consideration the metal finds which are dated from the end of the MBA to LB I, this number is increased to 352 or 18% of the total assemblage. Much of this material, 253 objects, comes from the hoards and other finds, mainly of gold, from *Tell el-ʿAǧūl* (see Negbi 1970). Moving into LB IIA, there are 73 finds at eight sites found in this sample which date to this period. The concentration in this case is at Acco, with 29, and *Ḍahret el-Ḥumrēye*, with 30 finds. In the LB IIB period, there is an increase in datable finds, with 201 finds found at eight sites. Here, the concentration is fairly evenly divided between three sites: Beth-Shemesh in the Shephelah with 69 finds, the Amman Airport Structure in Jordan with 65 finds, and Beth-Shean in the Jezreel Valley with 48 finds. Moving into the Iron I period, 469 objects of precious metals were uncovered at 14 sites with the concentration at Megiddo, Beth-Shean, and Lachish. This relative 'explosion' of finds with more than twice that of LB IIB is mainly the result of several hoard finds at Megiddo and Beth-Shean. Breaking the material down further in the Iron I, 99 objects can only be identified as coming from the Iron I period at eleven sites. 227 originate from the Iron IA from eight sites, with 169 of those objects coming from Megiddo and Beth-Shean. In the Iron IB, only finds from Beth-Shean and Megiddo could be clearly identified with this period. However, 143 gold and silver objects were uncovered in this period, representing a decrease from the Iron IA.

Taking into consideration the material which does not neatly fit into one period reveals several trends. First, as mentioned above, including the material which spans from the end of the MBA to LB I demonstrates that the period as a whole was not depleted of precious metals, though much of this was concentrated at *Tell el-ʿAǧūl.* Taking the material which spans from LB II to Iron I also demonstrates a concentration of material during the periods of LB IIB and Iron IA. There are 117 objects which date from LB II through Iron I,

---

[266] In the case of silver this is five finds or fewer as there are in general far fewer silver finds.

95 objects which date from LB IIB through Iron I, and 147 objects which date from LB IIB to Iron IA. Taking the material dated to LB IIB, Iron IA, and LB IIB through Iron IA, this comprises 575 objects or 29% of all precious metal in this sample. Taking the material that is dated to Iron I, Iron IB, and LB IIB through Iron I into consideration as well, the number of objects increases to 912 or 46% of all precious metal from this sample. Thus, given this, there is a clear concentration of material both in LB IIB and Iron IA but also in LB IIB and Iron I as a whole.

Regarding even wider trends, precious metal appears at 32 sites during the LBA in this sample of 45 sites. Moving to the Iron I, there is a decrease to 14 sites. However, taking the material which is dated to LB II through Iron I, this increases the number of possible sites to 21. Thus, there is a decrease from the LBA to Iron I in the number of sites which have yielded precious metals in this sample. Nevertheless, it should be noted that breaking down the data by periods such as LB I, LB IIA, LB IIB, Iron I, and Iron IA reveals a general dispersion between eight to ten sites per period, with specific concentrations such as *Tell el-ʿA̱ğūl* in LB I and Megiddo and Beth-Shean throughout Iron I. Many sites yielded finds from only one period such as Acco which only has LB IIA, or the Amman Airport Structure which has only LB IIB. Only certain sites such as Megiddo, Beth-Shean, and *Tell el-ʿAğūl* yielded finds from multiple periods.

Looking at the gold and silver objects separately, there is a decrease in the amount of gold from the LBA to Iron I. In the sites of this sample which have material dated to the LBA, there are 526 objects; however, moving to Iron I, this number drops to 281, decreasing by roughly 50%. Silver, on the other hand, increases by more than 50% from the LBA to Iron I. From sites dated to the LBA, there are 75 silver objects; however, from the Iron I sites, this number increases to 196. While silver in the Iron Age still numbers less than gold, this should not be surprising, as there is four times as much gold in this sample as there is silver. However, while gold decreased by some 50% in the transition to the Iron Age, silver increased by more than 50% in this sample.

8.3. Precious Metals (Gold and Silver): Discussion

The regional and chronological distribution of precious metal in the Southern Levant reveals several trends which can be seen in this sample. However, before further commenting on these trends, it must be remembered that this is a reflection of the sample of 45 sites. A full investigation of precious metal during the LBA and Early Iron Age will surely change some of the results presented here.

Speaking generally, the precious metal finds were uncovered in a variety of contexts from tombs, domestic settings, hoards, temples, a shipwreck, and palaces. A wide variety of types of finds were also discovered, with amulets made of gold, beads, pendants, earrings, rings, signet rings, to other forms of jewellery[267] along with foil, fragments, ingots, wire, and gold leaf, some of which was used in temples or to cover over the bronze statue of a god. There is obviously a wide variety of combinations for the types of finds and the find contexts; however, an in-depth look at this factor cannot be given here and must await another study.

One straightforward observation is that there is a general disparity between the number of gold finds and those of silver, with gold objects occurring nearly four times as often as silver. One possible explanation for this difference is silver's use as a type of money or means of payment. This is likely to be the case for some of the silver from the hoard finds as will be discussed below, and it may be possible that silver was readily chopped up and used as a payment. The gold objects may have still been used at times as a sort of money, but with silver likely taking up this role generally, it may have been reused more often and thus kept out of the archaeological record. Another possible reason is the corrosion of silver over time which may make it more archaeologically invisible than gold, as the quality of the preservation is different for the two materials. Moreover, one other possibility, which

---

267 For an in-depth discussion of pendants during the LBA in the Southern Levant, see McGovern 1985. For a more general discussion of jewellery in the Levant during the LBA and Iron I, see Maxwell-Hyslop 1971, 132–157, 224–231.

will be discussed more below, is that because gold was more readily available than silver in the LBA, and the LBA spans 150 more years than Iron I, it could simply be a reflection of our chronological markers, as there is an increase in the amount of silver in Iron I; however, this period is shorter than the LBA as a whole. Whether any of these three options are the cause, or if there is another reason, is not clear and awaits further study.

From the regional distribution, it is clear that the Southern Coastal Plain and the Jezreel Valley were the major concentrations of precious metals. This is particularly true of *Tell el-ʿAǧūl* in the south, which yielded several hoards of gold along with other gold finds, and Megiddo and Beth-Shean in the north which also yielded several hoards, both during the time of Egyptian influence and outside of it, during the 11th cent. BC. Thus, these major centres were also the centre for the accumulation of gold and silver objects. However, not every major centre yielded large amounts of precious metals.

Hazor, for example, was the largest LBA city in the Southern Levant and arguably one of the most important, however, it yielded only eight objects of precious metal. This may be for several reasons such as the state of publication, as the recent excavations on the acropolis have yet to be published, or it may also be because of the state Hazor was in before its monumental structures and temples were burned. With Hazor under a time of crisis and partial abandonment before the final destruction event, this may have also led to a situation where many of the precious objects made of gold or silver were taken out of the city before the multi-building destruction ever took place. Thus, a possible explanation as to why such a large site has so few precious finds may be because they were taken out of the city before its eventual abandonment. This of course may be changed with further publications from Hazor. However, a similar situation can be found at Lachish which also yielded fewer precious metal finds than ten other sites, with only 56 objects. Even the Amman Airport Structure, a small single building, yielded more precious metal finds than Lachish. This too may be due to the nature of the finds and what has been preserved in the archaeological record; however, it may also be because Lachish, like Hazor, was also undergoing a period of crisis before its destruction. However, what is clear is that, from the three sites with the most objects of precious metal with Megiddo, *Tell el-ʿAǧūl*, and Beth-Shean having together 49% of all precious metal finds in this sample, one of the main factors in this are the multiple hoards uncovered at the sites. These special contexts will be examined in more detail below.

For the chronological development, there are several trends which emerge from this sample. The first is that, at the beginning of the LBA, precious metals, and in this case mainly gold, were concentrated at *Tell el-ʿAǧūl*. This, along with its large amount of Egyptian stone vessels and Cypriot pottery, indicates the importance of the site as one of the major harbours in the Southern Coastal Plain and indeed in the entire Southern Levant. However, while moving forward in time to the end of the LBA and Iron I, there is a shift, with the main concentration of the precious metal from this sample appearing at Megiddo and Beth-Shean. This is particularly true in Iron I, both during Iron IA and Iron IB, as both sites yielded large amounts of precious metals particularly silver in the form of hoards. However, this may also be due to the size of the sample, as Ashkelon, a site not included in this sample, at the end of the 12th cent. BC, after the exit of Egyptian influence from the site and region, has also yielded a hoard of *hacksilber* where two bundles of silver objects wrapped in linen were uncovered (Thompson 2003, 97).

This issue aside, what is clear is that the main period where precious metals are most common in this sample is during LB IIB through Iron IA or, generally speaking, covering the reigns from Ramesses II to Ramesses III. The reason why this period has yielded the greatest amount of precious metal from this sample is unclear, as it could be related to the increased Egyptian presence in the region. However, precious metals, in particular silver, were still available after the reign of Ramesses III, and with the measure of power Egypt truly had over the region during the early part of Iron I in question, the precise reason why these two periods yield the most precious metals in this sample is not clear.

Given that both LB IIB and Iron IA have the greatest concentration of material in this sample, what is surprising is the general evenness through time in the distribution of the material. While in Iron I, the material is concentrated at fewer sites, in terms of relative numbers, there is a generally even spread across the various periods spanning from the beginning of the LBA to the end of Iron I. Thus, the consumption of precious metals decreased in terms of the number of sites it was available at, going into the Iron I; however, the amount of precious metal seems to have remained relatively the same. Nevertheless, there does appear to have been a change over time which precious metal was favoured.

In the Iron I, there was a nearly 50% decrease in the amount of gold available from what was found in the LBA, while there was a 50% increase in the Iron I in the amount of silver. This finding supports an earlier suggestion by Golani who notes that, during the LBA, most precious metal jewellery was made of gold, while silver was relatively underrepresented in jewellery production. He proposes that, because of the interconnection between the Southern Levant and Egypt during the LBA and the relative wealth of gold in both regions, the Southern Levant received its gold from Egypt (Golani 2013, 50). Golani proposes that gold coming from Egypt may have been cheaper than silver from the north, thus creating a preference for gold in the Southern Levant for jewellery production over the more costly silver. He notes as well that, coming into Iron I, while gold becomes more scarce, silver is much more common in jewellery and also in the amount of hoards comprised mainly of silver (Golani 2013, 51). The data from this sample appears to agree with this observation. Silver was far less frequent in the LBA, but increased in Iron I, while gold, which was common during the LBA, decreased in Iron I. This may indicate that the troubles in Egypt during the 20th dynasty (see Lesko 1992) may have led to an overall reduction in the amount of available gold in both regions, which Golani suggests, as only a small amount of jewellery has been found in Egypt from 1200–1050 BC (Golani 2013, 51). However, exchange with the north continued and perhaps became less encumbered than during the LBA, thus increasing the amount of available silver, as it would have likely travelled south along with the continued exchange in tin which I discuss below.

This leads to one other general indication of this material. Unless one assumes all gold and silver from the entire Iron I period was recycled material, the interregional exchange of these metals and objects continued to some degree from the LBA to the Early Iron Age. For gold, this should not be surprising, as exchange with Egypt continued in a number of different forms, as seen in the previous chapter. However, for silver, it indicates that exchange with regions to the north, likely southeastern Anatolia, continued and perhaps increased. Thompson has argued that it is unlikely that much of the silver found from the 12th through the 9th cent. BC came from the Aegean. She argues that the limited number of Aegean silver finds from Beth-Shean Stratum S-4 were likely residual from the LBA, and while this may be likely, it cannot be entirely ruled out that some Aegean silver did find its way to the Southern Levant during the Iron I period (Thompson 2009, 606). Thus, despite the fall of Ugarit, interregional exchange with the north likely continued during the Iron I period just as it continued to the south with Egypt, though doubtless without changes as discussed in the previous chapter. However, who the agents were that brought this material to the south is not known. This is true from both the LBA and Iron I, as silver could have arrived directly from southeastern Anatolia; however, it could have arrived *via* exchange with Ugarit, Cyprus, Lebanon, or elsewhere. Given the nature of silver acting as a kind of moneystuff, it becomes difficult to assess by whose hands the material arrived in the Southern Levant, either during the LBA or Iron I. Gold poses a similar problem, as gold objects too could have been brought from other regions, but with the supply of gold going out of Egypt likely running through the Southern Levant, much of this material could have arrived in exchange directly with Egypt. However, as discussed at length in chapter 3, this is one of the inherent problems when tackling interregional exchange.

8.3.1. Hoards

One specific find context must be taken into greater consideration, being the hoard finds[268] from the LBA and Early Iron Age.[269] A hoard can be defined as: 'A hidden or stored collection of precious objects whose owners, for some reason or another, never returned to claim them' (Golani 2013, 12). The reason why the objects were not recovered could be because of a catastrophe or destruction, killing the owner or the location of the hoard being lost. Alternatively, the owner of the hoard could have died or been deported amongst a variety of other options (Kletter 2003, 147). Another possibility is that a hoard was deposited in a specific ritual act which may have been the case for the hoard found at Kral Tepesi/Vasili on Cyprus (Bartelheim *et al.* 2008). However, not all hoards, or assemblages of objects called a hoard, are actually a hoard. For instance, a LBA Canaanite merchant hoard was found off the coast of Yevnah-Yam south of Tel Aviv (Golani/Galili 2015). The assemblage consisted of gold artefacts and hematite weights; however, these items originated from a shipwreck (Golani/Galili 2015, 16). Thus, this hoard is not actually a hoard, as it was not purposefully hidden or stored: it was a collection of items lost at sea. Likewise, the hoards from Beth-Shean are also questionable in their being hoards or not. The three groups of broken silver, *hacksilber*, found in Stratum S-4 in Area S Locus 88866 were neither hidden nor buried for later recovering. They seem to have lain on the floor and were never recovered for an unknown reason, and were covered over by a wall collapse. The reason this is called a hoard is, as Thompson states: 'They are referred to here as hoards in the generic sense that the individual pieces were purposefully complied into groups and survived as such until the time of excavation' (Thompson 2009, 597). Another example

from Beth-Shean comes from Stratum V. Two 'foundation deposits' were uncovered in Rowe's Ramesses III Temple (Rowe 1940, 19, 26). These assemblages could be defined either as foundation deposits, or it could also be argued that they are indeed hoards and not foundation deposits. Thus, not all hoards are hoards, and in some cases the decision to classify the collected assemblage of items as a hoard is merely for semantic ease.

Given these considerations, hoards are generally thought of as an accumulation of wealth, whether that be in the added value of worked materials such as gold and ivory objects, or the value of the metal by weight. Knapp attempted to distinguish three types of hoards: personal, merchants, and founder's hoards (Knapp 1988b, 235–327). However, as Kletter notes, Knapp does not take into consideration the weight of the metals found in his different hoard types, which would have been the method of measuring the value of the material. He goes on to say that the value of the metal and the intrinsic value of an object made of a precious metal is not so clear. The value as a lump of silver was likely the same value as a worked piece of silver of the same weight (Kletter 2003, 140). Thus, in the case of the *hacksilber* hoards from Beth-Shean and Megiddo, it can be assumed that these likely acted as a form of stored capital or wealth, though it also remains a possibility that the traditional view, that these hoards belonged to jewellers or silversmiths, cannot be so quickly disregarded (*fig. 8.3.*).[270]

Thompson argues that at Beth-Shean, in the hoard found in Area S Stratum S-4, there is clear evidence that at least some of this was meant to act as a type of money. One ingot of silver in particular has been argued to be the first counterfeit silver in the ancient Near East. While the exterior of the small ingot is a high quality silver, the core of the ingot is copper, suggesting that this material of lesser value was added to the silver to dupe a buyer or seller when this ingot of 'silver' was used as part of an exchange (Thompson 2009, 605 f.).

---

268 For a theoretical discussion of hoards, see Knapp 1988a; Philip 1988; Kletter 2003; Thompson 2009.
269 Again, this is not a complete examination of hoards from either period. For hoards from the Iron Age, see Kletter 2003, Thompson 2003, and Golani 2013, 51 who also includes Iron II hoards.

---

270 See discussion in Kletter 2003, and for the hoard from Beth-Shean Stratum S-4, see Thompson 2009.
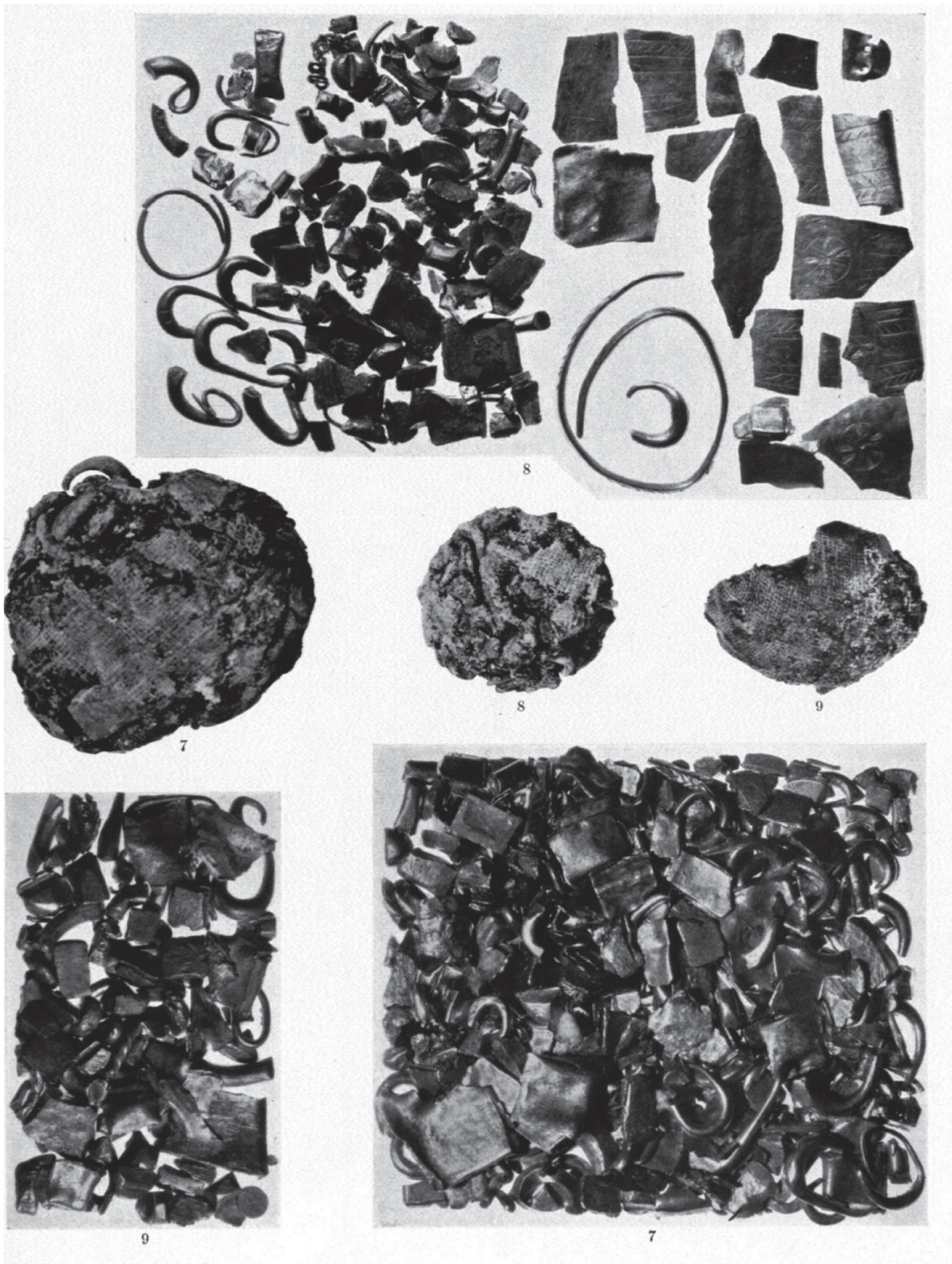
Fig. 8.3 Three 'bags' of silver fragments from Megiddo Stratum VIA (Loud 1948, Plate 229; Courtesy of the Oriental Institute of the University of Chicago).

Thus, the purpose of the hoards from the LBA and Early Iron Age likely represent a variety of meanings. Some may have been personal collections of items hidden to save them from being stolen, and were lost. Those assemblages of *hacksilber* from Beth-Shean and Megiddo may represent the accumulation of wealth, or simply items which for one reason or another were never recovered. As Kletter points out, however: 'Perhaps hoards... in Palestine were perfectly logical for a world in which banks were scarce and violent threats common. The age of plastic credit cards and virtual reality, still full of conflicts and wars, does not mark the end of the phenomenon of hoarding' (Kletter 2003, 150).

These hoard finds are one of the reasons for sites like Megiddo, Beth-Shean, *Tell el-ʿAǧūl*, and Gezer having such large amounts of precious metals. For both Megiddo and Beth-Shean, the hoards uncovered in Stratum VIII and VII at Megiddo and Beth-Shean Stratum S-4 can be seen in the context of the LBA or the continuation of the LBA culture at these sites. However, hoarding was not only restricted to the sites while under the influence of the LBA culture, as both sites also yielded hoards from the 11th cent. BC (see Thompson 2003, 97–100; Kletter 2003, 141 f., 144 f.). Indeed, the hoards uncovered at Megiddo from Stratum VIA contained three 'bags' of numerous pieces of cut up jewellery made of silver, a gold earring, a silver, dish, and beads, along with other precious materials such as ebony wood and iron rings (Loud 1948, 157, 187; Kletter 2003, 145). Thus, hoarding was not only limited to the LBA at either of these sites, and both sites still had access to these materials in Iron I while under the reign of Ramessess III and afterwards, demonstrating a continuity from the LBA to Iron I.

Indeed, taking into consideration some sites not selected here, there is a wealth of mainly silver hoards from Iron I. As Thompson and Golani have shown, at Ashkelon two hoards of *hacksilber* and jewellery were uncovered dating to the late 12th cent. BC, while at *Ḥirbet el-Burǧ*, a large ceramic jar filled with *hacksilber* was also uncovered dating to the 11th–10th cent. BC. Another hoard which may date to the 11th cent. BC was also found at Eshtemoa and another at Shechem which contained some 200 pieces of *hacksilber*, likely dating

to Iron I but perhaps to the LBA as well. From the Judean Desert at Wadi el-Makkuk, another *hacksilber* hoard with some gold pieces dating to Iron I was found. Finally, another hoard was uncovered at *Tell Kēsān* dating to the second half of the 11th cent. BC (Thompson 2003, 97–100; Golani 2013, 51). However, moving back in time to *Tell el-ʿAǧūl* to the end of the MBA and the beginning of the LBA there was also a wealth of hoards showing that, throughout the course of history, 'hoarding' in all of its definitions was a way to accumulate and store wealth and valuables as a cultural practice which continued from the LBA through Iron I in the Southern Levant. Thus, what must also be remembered is that it is these very finds which have made sites like Megiddo and *Tell el-ʿAǧūl* stand out in this sample. It may very well be that, if a hoard was uncovered in the excavations at Hazor or Lachish, these too would increase their standing in this sample. However, hoards were not meant to be found by those who did not own them, and it is likely that most hoards were taken out of a site and split up or moved someplace else before by accident, happenstance, or misfortune they were preserved in the archaeological record.

8.4.   Cedar of Lebanon (*Cedrus libani*): Results

Cedrus libani commonly known as Cedar of Lebanon has been extensively studied by Liphschitz (Liphschitz/Biger, 1991; Liphschitz 2007, 116–127), and the material presented here is based on her study (see *table 50*). Despite the name, Cedar wood was not only available in Lebanon, as varieties also grew in the Taurus and Amanus Mountains in Turkey and the Troodos in Cyprus (Rich *et al.* 2012, 796).[271] Thus, the Cedar wood uncovered in the Southern Levant does not have an exact point of origin, though the general point of origin is to the north. Cedar wood has been uncovered at nine sites in the Southern Levant dated from the LBA through Iron I. Based on the limited sample size and the limitation of the sampling done in the field, little can be said of the spatial distribution

---

271 See also for a discussion of using strontium isotopes to determine the origin of the timber.

of the material other than that Cedar wood was available throughout Cisjordan. In the north, Cedar wood was found at Hazor, down to the Jezreel Valley at Beth-Shean, along the coast from *Tell el-Qasīle* to Jaffa, in the Shephelah at Lachish, and in the Negev at *Tell eš-Šerīʿa* (Tel Sera') and *Ḥirbet el-Mšāš* (Tel Masos). Due to the current state of research, there is no detailed chronological distribution of this material. Seven sites have yielded cedar wood dated to the LBA,[272] while only three sites have yielded cedar wood dated to Iron I.[273]

8.5.   Cedar of Lebanon (*Cedrus libani*): Discussion

The limited sample of cedar of Lebanon makes any conclusions tentative. However, from the limited sample it is demonstrated that cedar wood travelled throughout Cisjordan in the far north at Hazor and also in the Negev at *Tell eš-Šerīʿa* and *Ḥirbet el-Mšāš*. The main use for the cedar wood in this case was in the construction of large structures such as at Hazor and Lachish (Ben-Tor/Rubiato 1999, 36; Carmi/Ussishkin 2004, 2510, 2512); however, cedar wood was also prized for its use in shipbuilding, as in the case of Uluburun which was likely a ship from one of the sites in the Mount Carmel region (Rich *et al.* 2016, 517). In Egypt, cedar wood was also used in the construction of buildings and boats, but also for sarcophagi and other burial appurtenances (Liphschitz/Biger 1991, 168).

Unfortunately, the textual evidence which describes the exchange and transport of cedar wood comes either from outside of the Southern Levant during the LBA and Iron I, or from later periods as described in the Biblical texts. Thus, the means of exchange can only be inferred from these exterior sources. The Egyptian sources from the LBA describe how Thutmoses III had cedar wood shipped from Byblos as a tribute, while Ramesses III maintained access to the material for use as masts for ships and beams and logs (Liphschitz/Biger 1991,

168). Likewise, the Tale of Wenamun dated to the 11th cent. BC is in essence a text about obtaining cedar wood from Byblos to bring back to Egypt.

From the Biblical sources, one of the most detailed accounts comes from 1 Kings chapter 5 which describes a conversation between Solomon and Hiram king of Tyre (see also 2 Chronicles 2:3–16). Solomon first asks:

'(5) Behold, I intend to build a house for the name of the Lord my God, as the Lord spoke to David my father, saying, 'Your son, whom I will set on your throne in your place, he will build the house for My name.' (6) Now therefore, command that they cut for me cedars from Lebanon, and my servants will be with your servants; and I will give you wages for your servants according to all that you say, for you know that there is no one among us who knows how to cut timber like the Sidonians.' (1 Kings 5:5–6 NASB).

Hiram's response details how the wood was to be brought to the construction site of the temple at Jerusalem, as it goes on to say:

'(8) So Hiram sent word to Solomon, saying, 'I have heard the message which you have sent me; I will do what you desire concerning the cedar and cypress timber. (9) My servants will bring them down from Lebanon to the sea; and I will make them into rafts to go by sea to the place where you direct me, and I will have them broken up there, and you shall carry them away. Then you shall accomplish my desire by giving food to my household.'' (1 Kings 5:8–9 NASB).

From the text in 2 Chronicles 2:16, it is stated that the cedar wood was brought to Jaffa before being taken inland to Jerusalem. Given this description, the transportation and cost of the materials, particularly to inland sites, must have been vast. This makes the appearance of this wood at sites like Hazor, Beth-Shean, *Tell eš-Šerīʿa*, Lachish, and *Ḥirbet el-Mšāš* stand out, as the cost of obtaining and transporting the material for use in construction must have been great. As Liphschitz and Biger describe it: 'Such a system [as transporting cedar wood] could have been inaugurated only in a period in which there was a strong economy and

---

272 Aphek, Beth-Shean, Hazor, Jaffa, Lachish, *Tell eš-Šerīʿa*, and Ta'anach.
273 Lachish, *Ḥirbet el-Mšāš*, and *Tell el-Qasīle*.

well-organized administration' (Liphschitz/Biger 1991, 175; see also Liphschitz/Biger 1995).

Concerning the chronological distribution of the cedar wood, again, because of the limited size of the sample, few concrete conclusions can be drawn from the material. What is clear is that, during the LBA, the major centres had access to cedar wood. In some cases, as I will demonstrate below, this may have been to cedar wood brought to the site during the MBA regardless, it speaks of the use of non-local materials during the LBA which has been presented at length before. Iron I, on the other hand, cannot be discounted. Only three sites yielded cedar wood, based on Liphschitz's work. The cedar wood found in Lachish Level VI remains part of the city under the influence of LBA. Its presence at the site in Iron I demonstrates the site's importance and economic prowess before it underwent a period of crisis and finally abandonment. This leaves two sites, *Tell el-Qasīle* and *Ḫirbet el-Mšāš*, which yielded cedar wood from Iron I. Both sites have their origins in Iron I, which makes it unlikely that the wood was reused, though it could be possible they salvaged it from somewhere else to bring it to the site. However, with the prominence of *Ḫirbet el-Mšāš* in the region (see Tebes 2003), it is likely that this site fulfilled the qualities Liphschitz and Biger described above. Thus, while it should not be overstated that Iron I was a direct continuation of the cedar exchange seen in the LBA, it cannot be understated, as other types of evidence point to continued exchange with northern regions, already seen in the continuation of silver to be brought to the Southern Levant, and as will be seen in the continued exchange in tin.

One issue with this material which must at least be mentioned is, of course, the old wood problem, that is, the reuse of the wood from previous buildings in newer structures which creates a problem of knowing when the material actually arrived in the Southern Levant. This problem is witnessed at both Lachish and Hazor. In the Acropolis Temple at Lachish, the cedar wood samples were ^{14}C dated, with many of the samples found to date to the LBA; however, one of the samples dated to the MBA and was likely a reused

beam from the MBA palace (Carmi/Ussishkin 2004, 2510, 2512; Liphschitz 2007, 122). A similar situation is true of some of the cedar wood uncovered in the final destruction of LBA Hazor, which was dated to the 18th cent. (Ben-Tor/Rubiato 1999, 36). Thus, it must be taken into consideration that some of the cedar wood was recycled from older buildings and does not represent interregional exchange in the LBA but rather in the MBA. This is not to underscore the presence of cedar wood in the LBA; it is however a caution when taking this data into consideration.

8.6.   Hittite Objects: Results

The Hittite objects found in the Southern Levant have been collected by Genz (2011; see also Gilan 2013b) and amount to a handful of objects (see *table 51*). Hittite objects have been found at four sites in the Southern Levant. An ivory plaque of Hittite origin was uncovered at Megiddo along with a biconvex seal made of steatite bearing the name of Anu-Ziti, a charioteer (Genz 2011, 316). At *Ǧezīret en-Nāmī* (Tel Nami), a bronze signet ring was uncovered in a grave of a man named Ushe, a Hurrian name who was possibly a high ranking priest or official, likely originating from Syria (Gilan 2013b, 42). Two other signet rings made of silver were uncovered at *Tell el-Fārʿa* (South) bearing the names of Zazuwa and Ana, possibly a married couple (Gilan 2013b, 42). The final Hittite find comes from Aphek, where a bulla bearing part of a royal seal belonging to an unknown Hittite prince as the name cannot be reconstructed (Genz 2011, 316).

8.7.   Hittite Objects: Discussion

When discussing interregional exchange during a given period and region, it is as important to discuss which regions were not exchanging with each other according to the archaeological record as it is which regions were exchanging. This is of course taking the definition for exchange and interregional exchange used in this work

into consideration.[274] Hittite Anatolia is a perfect example of this, concerning LBA interregional exchange. Despite its size, power, and influence, within Anatolia and northern Syria 'trade' or interregional exchange does not seem to have been important to the Hittites. As Genz states: 'One is left with the impression that trade did not play a prominent role in Hittite society and economy' (Genz 2011, 323). This is reflected by the handful of Hittite finds from the Southern Levant. The objects, mainly seals or signet rings, are not likely to be evidence of traditional trade, demonstrating some kind of economic connection. Rather, these objects likely represent to some extent the movement of people during the 13th cent. BC. The bronze signet ring belonging to Ushe, a Hurrian name, was likely a personal possession which was buried with the man. As Gilan points out, one can only speculate why he was buried at *Ğezīret en-Nāmī*; however, he like his seal likely originated from Syria (Gilan 2013b, 42).

The same is likely true of the other signet rings (Genz 2011, 323). For Megiddo, the site was mentioned in a letter found at Boğazköy, mentioning Megiddo as a staging point for envoys heading to Egypt. Thus, the find of the ivory plaque at the site may be evidence of one of those envoys passing through the site (Genz 2011, 316). Likewise, the partial royal Hittite bulla found at Aphek can be associated with an Akkadian letter found at Aphek, sent from Ugarit to an Egyptian official concerning the purchase of wheat (Gilan 2013b, 42). Given all this, there is little evidence of any kind of exchange between the Southern Levant and the Hittites, which Genz does not see as surprising, stating: 'The southern Levant was under Egyptian domination during most of the LBA, Hatti naturally had no direct relations to the rulers of Canaanite cities' (Genz 2011, 316). However, even considering that political relations may have been different between the Hittites and the rulers of the Southern Levant, as Genz goes on to point

out, there is little evidence to suggest the Hittites exchanged with any region to any great extent, including Egypt (Genz 2011, 317–323). What should be taken from this evidence is that, in spite of the term 'international age', given to describe when the LBA was a period of constant flow of interregional exchange – that is, movement of objects from one region to another – this was not always applicable. Indeed, even taking a large and powerful culture such as the Hittites who were part of the 'Club of the Great Kings', they likely did not partake in much interregional exchange other than in gift exchange, as Anatolia and the regions conquered and controlled by the Hittites were already rich in natural resources (Genz 2011, 323). Thus, there was no need to exchange with the outside world, and in the case of the Southern Levant, there was either no need or ability to exchange with the Hittites. What it demonstrates is also, again, the question of contact versus connection. In this case, while there was likely contact between these two regions, it is doubtful whether there was a connection.

8.8.   Other Non-Local Objects and Materials

8.8.1.   Stamp Seals

There exist, of course, other non-local objects and materials which have not been included into this study. One such group of objects are stamp seals in the Southern Levant. This large body of material has been rigorously catalogued by Othmar Keel, a work which is still under way. While this object group could not be examined fully in this work, there are some general observations which can be made about these relatively common small objects and how they too reflect interregional exchange. Many of the seals catalogued by Keel are made of steatite or enstatite.[275] Steatite is very soft measuring a 1 on the Mohs hardness scale. It has a soapy

---

274 Exchange is defined as: **The movement of an object from one location to another**. Interregional exchange can be defined as: **The exchange of objects between two diverse regions**.

275 Enstatite is formed when steatite is heated above 900° C increasing the hardness of the material from a 1 on the Mohs scale to a 7 (Bar-Yosef *et al.* 2004, 496).

texture and is mainly composed of talc, making it easy to carve and shape, and leading to its use for scarabs and other small objects (Golani 2013, 35). The importance of this is that, while many of the small stamps seals recorded by Keel are made of steatite or enstatite, steatite is a non-local material. Raw steatite is found in Egypt's eastern desert and near Aswan, the Indus Valley, Mesopotamia, and Syria; however, there are no local sources of steatite in the Southern Levant (Bar-Yosef *et al.* 2004, 497; Golani 2013, 35). From the current state of knowledge, it is not known from where exactly the steatite came from to produce the stamp seals, though for many of the scarabs and scarboids, it is likely that these were sourced from the steatite in Egypt proper. However, there remains the question if these objects were brought to the Southern Levant as completed pieces, or if the raw material was brought and then worked in the region.

An example of this are several seals from Aphek which Keel has identified as 'local' in their style; however, as they are made from enstatite, they can only be stylistically local, as the steatite must have come from another region.[276] Thus, while the seal may be in a local style, it begs the question if there is an exchange of raw steatite, a question which warrants future examination. This is true not only for the plain and seemingly worthless material steatite, but also for other precious stones such as carnelian and agate, which could have originated from multiple regions but, as of yet, have not been thoroughly studied (Golani 2013, 31 f.). Thus, future research looking at the chemical composition and therefore the origin of these materials may reveal another side of interregional exchange in the LBA, but also in Iron I.

8.8.2. Tin

Tin is another non-local metal, with possible origins in Iran, Central Asia, Western Iberia, Afghanistan, and perhaps Anatolia, along with the far-flung source of Cornwall, England (Galili/

Gale/Rosen 2013, 21; 2011, 71). As discussed previously, tin was uncovered both on the Hishuley Carmel wreck and the Uluburun wreck, whose shipment likely had its origins in the Southern Levant. It is assumed that much of the tin in the Eastern Mediterranean came from the east, and arrived in the Levant through Ugarit and was shipped from there to other regions (Bell 2009, 33 f.). While tin is a relatively archaeological invisible material, as it would have been readily combined with copper to make bronze, bronze itself speaks to the continued interregional exchange of tin from the LBA through the Iron I period, even after the destruction and abandonment of Ugarit.

At *Ḫirbet el-Mšāš* in the Negev, copper and bronze production were seen throughout the Iron I period at the site (Gottlieb 2010, 95, 100). For the production of bronze, one of course needs a source of tin, and as Tebes has suggested, the tin from *Ḫirbet el-Mšāš* during the Iron Age may have come from Iran, though this is just a possibility (Tebes 2003, 70). Regardless of where exactly the tin came from for the bronze production, what this demonstrates is that, during the Iron I period, tin must have arrived in the Southern Levant, even in a southerly location such as *Ḫirbet el-Mšāš*. Moreover, this demonstrates that, even with the destruction of Ugarit in the north, this did not stop tin from arriving in the Southern Levant, no matter if it was from Iran or Central Asia, amongst other places. Indeed, recent archaeometallurgical investigations have shown that there was never a dip in the supply of tin during Iron I in the Southern Levant (Yahalom-Mack *et al.* 2014; Yahalom-Mack/Eliyahu-Behar 2015; Ashkenazi/Bunimovitz/Stern 2016). Yahalom-Mack and Eliyahu-Behar describe the situation from the transition from the LBA to the Iron Age by stating:

'With respect to the question of tin availability for the production of bronze, analysis of 95 copper based artifacts from LB II–Iron II contexts showed that tin-bronze was continuously used and that the average tin (Sn) content (5–6 wt%) was maintained throughout the periods. This supports earlier studies that showed there was no shortage of tin during the transition period – a shortage that

---

276 See for example seals number 5, 6, 10, 19, and 20 (Keel 1995, 80–87).

would have driven Iron Age smiths to shift to iron.' (Yahalom-Mack/Eliyahu-Behar 2015, 298).

Even more recently, Ashkenazi, Bunimovitz, and Stern have stated even more strongly that there was no shortage of tin during Iron I. They say:

'Archaeological and archaeometallurgical studies in recent decades have revolutionized our perceptions concerning the transition from bronze to iron in the southern Levant. Apparently, bronze – the commonly used metal during the Middle and Late Bronze Ages – continued to be produced through the entire Iron Age I, and iron became a utilitarian metal only at the beginning of the Iron Age II (about the ninth century BCE). Moreover, previous ideas about shortage in tin and copper due to the collapse of the eastern Mediterranean commercial network in the 'crisis years' of the twelfth century BCE, have turned out to be exaggerated if not completely erroneous. Tin was available in Iron Age I no less than before, and the Cypriote copper imported to Canaan during the Late Bronze Age seems to have been replaced by copper produced at the mining sites of Wadi Faynan and Timna in the Arabah' (Ashkenazi/Bunimovitz/Stern 2016, 170).

These recent evaluations which demonstrate there was no lack of tin are a further confirmation of the findings of Pickels and Peltenburg's study conducted in 1998. They too found that there was no evidence that the supply of tin was ever in question during Iron I. Indeed there appears that there might have been an increase in the use of bronze during the Early Iron Age, rather than a decrease which led to the change to iron tools (Pickles/Peltenburg 1998, 80 f.).

While it is likely that many bronze objects in the Iron I period found throughout the Southern Levant were recycled from the previous period(s), what is clear is that new objects were made from newly-arrived tin brought to the Southern Levant during Iron I. Thus, as both Yahalom-Mack and Eliyahu-Behar and Ashkenazi, Bunimovitz, and Stern pointed out, even a material like tin, which arrived from far off destinations, did not cease to be

exchanged in Iron I, despite claims in the past that this was case.[277] The exact development from the LBA to Iron I is unclear, but tin must have arrived *via* another route other than through Ugarit after its destruction and abandonment ca. 1185 BC. It is another material which testifies to the continuation of interregional exchange during Iron I.

8.9. Precious Metals and Non-Local Varia as Resources in the Late Bronze Age through Iron I

The six types of materials presented here (gold, silver, cedar wood, Hittite objects, stamp seals, and tin) each would have acted in a different way as a resource than the other. Even with materials that are similar, such as the metals, their importance, use, and value differ from one another. I begin with the precious metals, which are the best represented sample in this section.

Gold and silver played an integral role in the life and society of the people of the Southern Levant, both during the LBA and in Iron I. One way this is apparent is in the use of jewellery not only for personal adornment but also as symbols of gender and identity. As Golani describes it: 'Due to its intensely personal and visible nature, jewelry was and is still a method of proclaiming oneself ethnically or culturally. Jewelry is symbolic, and may be used to publicize an association or identification with a cultural group or a set of beliefs.' (Golani 2014, 270). Thus, while not all jewellery was made from precious metals, those which were likely fit into this role of helping the individual who adorned it to project something about themselves. The intrinsic nature of these precious metals, such as their colour or that gold does not tarnish, would also have been part of the symbolic meaning behind the jewellery. Given that these materials are also rare and thus expensive, it might as well have been a way of demonstrating wealth or prestige, or, as Green points out, they

---

[277] See Yahalom-Mack/Eliyahu-Behar 2015 for a discussion of the previous theories concerning the shortage of tin and copper in the Iron Age and the rise in the use of Iron itself.

may have acted as worn wealth, particularly during Iron I (Green 2007, 303 f.).

Green has suggested that, from his analysis of the anklets worn by the deceased in the cemetery from *Tell es-Saʿīdīye*, these may have been a type of marker to denote age and gender. He suggests that single anklets were worn by some men of high status, while anklet pairs were worn primarily by women, children, and infants, and he goes on to suggest that the size of the anklet might also be an indication of growing into or out of wearing anklets from infancy to adulthood (Green 2007, 283, 303 f.). Thus, for both the LBA and Iron I, jewellery made of precious metals were likely part of the social identification of various groups within the Southern Levant. However, the extent of this, and to what degree changes took place from the LBA to Iron I in terms of the use of jewellery and the types of objects made and worn, are beyond the reach of this project. No study has yet closely examined all forms of jewellery from the LBA to Iron I in the Southern Levant;[278] however, two volumes have been produced for jewellery in Iron II (Limmer 2007; Golani 2013). Combined, these two volumes total over 1,000 pages while covering only roughly 400 years.[279] Thus, like in Iron II, to fully understand the development and cultural significance of jewellery in the LBA and Iron I in the Southern Levant, particularly those made of precious metals, requires at least one if not more in-depth studies, and this does not even include the other applications of precious metals in temples, monumental buildings, as gold leaf on statues of the gods and so on.

Gold and silver were not limited, of course, to jewellery. Taking the example of the Acropolis Temple from Lachish during the first half of Iron I demonstrates the use of gold as part of the cult and cultic structure. In the temple, gold leaf was adhered to painted plaster which was adhered in turn to beams of cedar wood, demonstrating the opulence of the structure (Ussishkin 2004b, 238, 245, 266). Also found in the Acropolis Temple was a gold plaque depicting a naked goddess standing

on a horse (Ussishkin 2004b, 266 f.). These are only a few instances where gold was used in cultic contexts, symbolising its cultural significance as being at times the very image of the god, as gold too was used to cover over bronze sculptures of the gods such as some of the bronze statues from Hazor at the end of the LBA, though in this case, the gold was stripped off the statues (Ben-Tor 2006, 6 f.).

Silver too maintained several functions outside of personal adornment, which is made particularly clear from the 'hoard' finds from Iron I which mainly consist of *hacksilber*. Despite its use in jewellery, silver also acted as a form of moneystuff being exchanged by weight. This would explain the 'counterfeit' silver ingot with a copper core from Beth-Shean. However, as Green pointed out above, silver in the form of jewellery could also be considered worn wealth. Much as a gold wedding ring or other gold ornaments in the modern age can be exchanged for physical money based on the current market value, silver jewellery in the past could have been used in exchanges based on the weight of the object and not necessarily its shape. It is in all of these ways that gold and silver acted as resources to the people of the Southern Levant during both the LBA and Iron I. The precious metals acted as symbols to those who wore them; they represented the gods and part of the cosmological understanding of the world; they acted as stores of wealth which could be worn or hidden away, only to be lost then found by archaeologists in the future. How and what kind of developments took place and how they acted as a cultural resource from the transition from the LBA to Iron I cannot be greatly expounded upon, based on this small study of the material. However, some remarks can be made based on the chronological development witnessed in this sample.

As mentioned above, concerning the amount of precious metals in the Southern Levant from the LBA to Iron I, there is a fairly even distribution among the sub periods. The two periods which do stand out are the LB IIB and Iron IA. This again may be related to the intensified Egyptian presence in the Southern Levant during this time, but what is of importance is that, both before and after LB IIB through Iron IA, both gold and silver were available, with gold more prominent in the LBA and silver in Iron I. Gold objects were found

---

278 McGovern's book on pendants in the LBA is the major exception to this.

279 In the case of Limmer 2007 she only examines the period from 850–580 BC (Limmer 2007, 14).

in large amounts at *Tell el-ʿAǧūl* at the beginning of the LBA, while silver was plentiful at Megiddo and Beth-Shean during both Iron IA and Iron IB. While fewer sites in total during Iron I yielded precious metal when compared to the LBA as a whole, the individual periods do present again a fairly even spread of the material based on this sample. This is excluding the other hoard finds either dated or possibly dating to Iron I.

One point which does, however, stand out is the shift from the LBA to Iron I in the amount of gold and silver which were available. Gold seems to have been more widely available during the LBA, as there is a roughly 50% decrease moving into Iron I. Gold was certainly not missing from Iron I, but according to the results of this sample, it was not as common as in the LBA, which agrees with Golani's brief observation on gold jewellery from the LBA to Iron I. This of course could be tied to the exit of Egyptian influence over the region and the troubles Egypt faced during the 20th dynasty, or it could be because of a change in consumption habits for the material itself. Unfortunately, this study cannot give a clear answer to this question. Yet, it should also not go without saying that, with gold still likely coming from Egypt, this is another possible marker of the continued exchange with Egypt during Iron I, much as Egyptian pottery, Egyptian amulets and the Nile perch attested to in the previous chapter.

In the case of silver, from the transition to the LBA to Iron I, there was a 50% increase. Even if one counts Iron IA material from Beth-Shean and Megiddo as LBA, the finds from both of these sites alone in Iron IB point to the continued availability of silver during Iron I, not even including the other silver hoard finds not selected in this sample. What this indicates is that there was a continued exchange with the north during Iron I, even with the destruction of Ugarit and the fall of the Hittite heartland. This in some ways matches the recent finds that there was never a lack of tin in Iron I. It is likely that both metals would have travelled from the north to the south, that both of the metals were exchanged with the Southern Levant. Who was doing the exchanging is another question, as neither the disappearance of Ugarit nor the fall of Hattusa seems to have had a great effect on metal exchange, though silver may have

become more widely available. Whether or not the burgeoning Neo-Hittites were the ones to take over is also not known.

What this all points to are several suggestions. The first is that, for gold, without a further in-depth study to say otherwise, it is likely that it maintained its cultural significance from the LBA through Iron I as discussed above. However, with the decrease in the amount of gold, as this sample suggests, this may point to one of two options. The first is that gold actually lost some of its prominence and thus there was a cultural development away from the use of gold. The second, and in my opinion the more likely option, is that a decrease in gold would have made it more valuable and more desired. Generally speaking, the scarcer a valuable or desirable material is, the more value it holds, not only in terms of monetary value but also in its ability to project an identity of prestige, wealth, and power. Thus, gold in Iron I may very well have been more valuable than in the LBA because of its increased scarcity, and thus its role as a resource to show wealth and power may have increased during Iron I. Silver, on the other hand, may have undergone another type of transformation, becoming more a form of stored capital. The hoard finds from Beth-Shean and Megiddo which contained *hacksilber*, and from the other silver hoards not included in this sample, may well have been for silversmiths, but it is likely that at least some of this activity was the concerted effort to store and hide wealth in the form of silver. Thus, while it cannot be said definitively from this study if this is the case for silver in the Southern Levant during Iron I, it nevertheless remains a possibility. If this is the case, it may demonstrate a development in Iron I where silver became a resource to be stored and hidden as capital; however, this suggestion cannot be substantiated based on this sample.

From the very limited sample of cedar wood, it is difficult to come to any great conclusions as to how it acted as a resource during the LBA and Iron I, other than the obvious prestige which the material lent to the building it was used in and thus the builder as well. Like gold, cedar wood was scarcer during Iron I and could have increased in value, both in its worth, but also in its ability to project prestige. However, the limited sample is too small to come to any grand conclusions.

For inter-regional exchange with the Hittites, from the data presented here, it is unlikely that exchange with the Hittites had a large impact on the people of the Southern Levant. There are few Hittite objects found in the Southern Levant, and, as Golani has proposed, with gold from Egypt likely being cheaper than silver coming from the north, this may have led to preference in gold over silver for jewellery in the Southern Levant during the LBA (Golani 2013, 51). Thus, it may not have been that silver was unavailable through exchange with the people to the north, whether they were the Hittites, or one of the vassals of the Hittites, Cyprus, or Lebanon, but rather that gold was already plentiful and cheaper than silver, which created a preference for the material. Given this, it is unlikely that exchange with the Hittites ever acted as a resource for the people of the Southern Levant.

Concerning the tin, much like the cedar wood, it likely retained similar cultural values in Iron I to those it had in the LBA. From the recent archaeometallurgical studies of bronze objects, there is no indication that there was ever a lack of tin in the Southern Levant during the entirety of Iron I. Thus, tin would have continued to act as the crucial metal to make bronze as it had in the LBA before it. There also seems not to have been a lack in either tin or copper during the Iron Age based on these same studies, meaning, as the authors have pointed out, that this would not have been the crucial reason to turn to the use of iron as copper and bronze remained the utilitarian metal in the Southern Levant during Iron I (Yahalom-Mack/ Eliyahu-Behar 2015, 298; Ashkenazi/Bunimovitz/ Stern 2016, 170).

8.10. Summary

These finds groups present a varied picture of inter-regional exchange during the LBA and Iron I. While not all questions concerning these groups can be answered here, as the precious metals await a further in-depth study, there are some trends which do appear. The first is that, much like the non-local pottery, accessibility may have played a large part in the consumption of the non-local objects. In the case of the precious metals during the LBA, gold was likely more readily available and cheaper than silver coming from the north; however, during Iron I, once Egypt itself was in turmoil, this led to a reversal of the situation where silver became ever more the precious metal of choice. In both periods, the value of the metals may have reversed due to the availability of the material in one case or lack in the other. However, in both cases it demonstrates a development in the use of the materials. For gold, developments in Egypt likely played a large role in the decrease in gold during Iron I, a trend which continued into Iron II (Golani 2013, 51); however, it should be noted that gold was still available during this period. Likewise silver, which was not nearly as plentiful as gold during the LBA but grew in prominence during Iron I, perhaps showing a stronger development of exchange with the north over that of the LBA. For the non-precious metal, tin, there does not appear from the presently available data to have been a development. Rather, tin was accessible during the LBA, and continued to be during Iron I, which allowed bronze implements to be made with the same tin to copper ratio as it had been in the LBA. If a development did occur, it was likely in the agents of exchange to the north and who continued to transport tin south.

More along the lines of gold, cedar wood too may have increased in value from the LBA to Iron I. With more sites from the LBA having yielded samples of cedar wood than the three from Iron I, cedar during the Early Iron Age may have taken on greater importance if it truly was scarcer than in the LBA. However, this too is an area of research which warrants greater investigation. Finally, there are the Hittite objects which demonstrate that there need not have been inter-regional exchange between two regions during the LBA. With little evidence of exchange on either side, it is doubtful that exchange in physical objects with the Hittites had much of an impact on the economic development of the people of the Southern Levant. Thus, these various objects and materials demonstrate the complex development of different non-local materials, even those in the same class such as the precious metals. This too harkens back to the non-local pottery and Egyptian items, each of which had a different development both regionally and chronologically, which is also attested to in these finds.

9. Summary and Conclusions

9.1. Introduction

The aims and areas of discussion of this work have been many. From 'collapse' in the Eastern Mediterranean, to questioning trade and exchange in archaeology, the role that resources played in societies, contact or connection, destruction and the cessation of inter-regional exchange, to finally the development of inter-regional exchange seen in the regional and chronological development of various non-local materials. These topics as well as the conclusions based on the material presented have already been given in their respective chapters. As such, this chapter serves only to highlight some of these conclusions, reflecting back on these themes to come together to answer the questions asked at the beginning of this study.

9.2. 'Collapse' at the End of the Late Bronze Age?

One of the main questions of this work, presented in chapter 1, was: 'What role did the 'Sea Peoples' have in this transition, and did the destruction of cities and towns cause a breakdown in inter-regional exchange and thus its collapse?' To answer this, I turn to the results presented in chapters 2 and 5. From the historical and archaeological analysis presented in chapter 2, there is little evidence to support an invasion of the 'Sea Peoples', let alone a violent takeover of much of the coastal region in the Southern Levant. There is a lack of textual support for this hypothesis, as the Medinet Habu inscriptions never mention any sites in the Southern Levant affected by the 'Sea Peoples'. Moreover, the archaeological evidence does not support this hypothesis, as the evidence from destruction points rather to a peaceful introduction of 'Philistine' or 'Sea Peoples' material culture. Thus, it is unlikely from this evidence that the 'Sea Peoples' were either a) the cause of the 'collapse' of the Southern Levant and the Egyptian hegemony over the region, or b) the cause of the supposed breakup in inter-regional exchange.

Moreover, as I pointed out in chapter 5, but in more detail in chapter 6, the example of the Cypriot and Mycenaean pottery also demonstrates that much of the evidence of exchange between these two regions ended long before the destruction events at the end of the LBA. For Cypriot pottery, the major downturn in exchange occurred at the end of the 14th cent. BC, 100 years or more before most of these destruction events. Likewise, for Mycenaean pottery, the general halt in exchange occurred roughly between 1250–1225 BC. Thus, for these two regions, destruction events in the Southern Levant cannot account for the cessation of inter-regional exchange, as it is more likely that regional changes on Cyprus and in the Aegean played a stronger role than destruction in the Southern Levant. Even the destruction of Ugarit in the north, which is often times blamed for the breakup of some of the exchange networks, did not seem to hamper the exchange in either silver or tin. Silver may have increased in Iron I and tin was seemingly available in the same quantities as before, as presented in chapter 8.

There is also a lack of evidence when extending this question out to other causes of destruction which were said to have broken up or hampered the exchange networks. As presented in chapter 5, there is little evidence of massive earthquake storms destroying sites and cities, as only three sites have strong evidence of an earthquake.[280] Indeed the evidence from destruction is not strong for any of the cataclysmic disaster scenarios so commonly associated with the end of the LBA. Of the 54 sites commonly cited as destroyed, 17 – nearly one third – show no evidence of destruction. Of the remaining 37 destruction events, 13 of these only have evidence of a single building destruction, while six have evidence of a partial destruction, and six are so fragmentary their scale is unknown. Only six sites have evidence of a multi-building destruction, and five have evidence of site-wide destruction. Four sites have clear

---

280 Beth-Shean, *Tell Dēr ʿAllā*, and *Tell el-ʿUmērī* Phase 14.

evidence of human activity with warfare the likely cause of destruction at Aphek and *Tell el-ʿUmērī* Phase 12, while there is evidence of desecration at Hazor, and a sacred ritual termination at Lachish's Fosse Temple III. The view from destruction points out that this, along with the disaster sceneries generally attached to destruction,[281] cannot explain the changes and transition in inter-regional exchange at the end of the LBA and the beginning of the Iron Age.

This leads to the second question proposed at the beginning of this study: 'Did the disappearance of inter-regional exchange at the end of the LBA cause the 'collapse' of the Southern Levant, and did this bring about social change?' The first part of the question asks if the disappearance of inter-regional exchange was the cause of the 'collapse' in the Southern Levant, and in my opinion based on the evidence presented here, this was not the case. As I presented in chapter 4 and in chapters 6 through 8, there is little archaeological or historical evidence to back up this claim. In chapter 4, I went to great lengths to demonstrate there was no real connection to Mycenaean Greece during the LBA, and in chapter 8, I demonstrated the same is true of contacts with the Hittites. Thus, their respective 'collapses' would not likely have affected the Southern Levant to a great extent. For Cyprus, despite claims that the Southern Levant was dependent on Cypriot copper, the data from chapter 6 demonstrates that exchange with Cyprus died down at the beginning of the 13th cent. BC and only came to a final halt in the first decades of the 12th cent. BC. Indeed, even if Cypriot copper became more scarce or was rejected because there was an increase in cost, the people of the Southern Levant in Iron I began to focus on copper from Wadi Faynan (Levy *et al.* 2004; 2008) and Timna (Ben-Yosef *et al.* 2012) as I mentioned in chapter 8.

Exchange with Egypt continued even with the close of the LBA and the exit of Egyptian influence over the region. While exchange with Egypt in Iron I was seemingly concentrated in and around the region of *Ḫirbet el-Burǧ*, Egyptian products

were still available. Gold likely from Egypt was also present in Iron I, though in a reduced amount when compared to the LBA. Thus, while there was a reduction in exchange with Egypt, there was no collapse of exchange. These two regions were tightly connected in the LBA, and because of this, the connection never broke even with the changes in both Egypt and the Southern Levant moving into Iron I. Therefore, this too cannot explain the 'collapse'.

Even turning to Ugarit, the supposed 'great trading hub' of the LBA world, its disappearance ca. 1185 BC does not seem to have affected access to both silver and tin, which likely either were shipped from Ugarit or travelled through it, on the long journey from the East to the rest of the Eastern Mediterranean. Gilboa has said that the disappearance of Ugarit had profound effects on the coastal regions to the south; however, she does not qualify how (Gilboa 2014, 626). As I presented in chapter 8, recent studies have shown that there was never a shortage of tin stretching from the LBA through Iron II. Thus, if Ugarit was the greatest trader of tin in the Eastern Mediterranean during the LBA, someone else filled these shoes immediately in Iron I, as tin still flowed south into the furnaces of Iron I bronze manufactures in the Southern Levant. Likewise with silver, while it is not clear whether silver travelled through Ugarit to the south, during the LBA not much silver was used in the Southern Levant, as gold was likely easier to obtain and perhaps cheaper than silver. Moreover, during Iron I, after the abandonment of Ugarit, silver seems to have increased in frequency in the Southern Levant, and it is possible that whoever was shipping tin south also continued to ship silver, which may have become the precious metal of choice due to the decrease in the amount of available gold coming from Egypt.

Likewise, looking at the textual sources from Ugarit, there is little evidence that, in the last 50 years of the city's life, there was much commercial interaction between Ugarit and ports in the Southern Levant. As Arnuad pointed out, most of the texts from Ugarit which reference ports along the Levantine coast mentioned Sidon and other sites in Lebanon (Arnaud 1992, 179–194). Moreover, as Vidal has recently pointed out, there are relatively few mentions of ports in the Southern

---

281 See chapter 2 for a discussion of the 'Sea Peoples', peasant revolts, warfare brought on by climate change, and earthquakes amongst others.

Levant in the Ugarit texts. Of the six letters which mention Acco, only one refers to the site itself, and only in passing, as grain coming from Egypt was caught in a storm and the ship stayed at the port of Acco (Vidal 2006, 271 f.). Ashkelon is also only mentioned twice, and in both cases, the texts mention a man from Ashkelon (Vidal 2006, 273). These texts do not mention goods being exchanged between these two regions, but only mention people from the Southern Levant. It denotes the movement of people but not necessarily the movement of goods.

According to Vidal, the most prominent port with contacts to Ugarit in the Southern Levant was Ashdod, the only other Southern Levantine port mentioned in the texts. In several letters, cloth, clothing, and wool are recorded as shipped from Ashdod to Ugarit, causing Vidal to conclude that: 'Ashdod was, after the main Phoenician sea-ports, the city in the Levant with which Ugarit held the most intense trade relationship.' (Vidal 2006, 275). However, Na'aman has challenged this interpretation, as he believes that the distribution of cities in the texts from Ugarit would point to the city mentioned not being the Ashdod known from latter periods, as no city called Ashdod is known in the Egyptian sources from the same period. Rather, he views Ashdod as a city on Cyprus perhaps, located at Enkomi (Na'aman 2005, 156–159). Taking all of this together points out that, from the textual sources dating to the last 50 years of Ugarit, there is little evidence of exchange of objects and goods between these two regions. The only possible candidate is Ashdod which would only have been of minor importance compared to those sites in Lebanon such as Byblos, Beirut, Tyre, and especially Sidon, and it may not even be the Ashdod known from latter periods. Thus, from the textual sources, while the loss of Ugarit certainly would have affected the Southern Levant, there is no evidence that it would have caused a collapse. From the archaeological standpoint as well, tin moved freely to the Southern Levant before and after the destruction of Ugarit, as did silver.

The 'loss' of exchange with any one region cannot explain the 'collapse' at the end of the LBA; however, even taking all of these various regions into account together does not explain the 'collapse'. For some regions, exchange ended, but

this was likely not of supreme social or economic importance, while for others exchange continued into Iron I. The merchants or agents of exchange may have changed but the material continued to move inter-regionally.

One reason for this oft cited 'collapse' in trade and exchange at the end of the LBA are the types of evidence which are available. The first reason is one which Gilboa has pointed out, saying: 'As opposed to the LBA, when numerous classes of pottery move about the Mediterranean, this is not the case for the Early Iron Age' (Gilboa/Goran 2015, 74). Indeed, non-local pottery is the largest contingent of non-local material culture in this work, and the majority of this pottery, mainly Cypriot and Mycenaean, disappears at some point in the 13th cent. BC. Since it is often times assumed that pottery is only a stand-in for other types of exchange, the absence of pottery indicates the absence of exchange. However, as I discussed at length in chapter 6, it is not certain that pottery was a stand-in for other types of exchange. Nevertheless, the disappearance of pottery is often times taken as the end of all exchange, which leads to the conclusion there was an end to exchange in Iron I.

The second reason is in part because of the wealth of textual data from the LBA, and the virtual absence of any textual data referring to inter-regional exchange and contact in Iron I. The LBA, as discussed in chapter 4, has a trove of documents recounting the interactions of the Great Kings and the at times massive amounts of materials shipped between them. Iron I, on the other hand, is virtually silent, thus the outdated term 'Dark Age' given to it, as the only document which may relate to this period concerning inter-regional exchange in the Southern Levant is the tale of Wenamun which is in and of itself of dubious historicity. Thus, because of the lack of texts describing exchange, exchange is assumed to have ceased. However, as I demonstrated in chapters 7 and 8, exchange did not cease. Or, as Gilboa and Goran have also recently stated: 'Previous views... that the LBA/Iron Age transition exemplifies a complete cessation of Mediterranean interaction, have continuously been modified and in recent years ever-growing numbers of scholars argue for a considerable measure of continuity in this respect. Indeed,

cross-Mediterranean traffic and flow of goods did not come to a stand-still in the Early Iron Age' (Gilboa/Goran 2015, 74).

This is not to overemphasise trade and exchange in Iron I, as from what is known archaeologically and historically, there was more exchange and varied types of it in the LBA and it is likely that it acted as a more important resource during this period. However, trade and exchange in Iron I has for too long been underemphasised based partially on the two above points. Moreover, many objects which are non-local, such as a full list of precious metals, precious stones, non-local stones such as steatite and other not as obvious candidates of inter-regional exchange, must be taken into consideration to see in even greater detail the changes which took place between these two periods.

The second aspect of this question asks if the 'collapse' of inter-regional exchange brought about societal changes in Iron I, and the answer to this question is neither yes nor no, it is both. Changes in inter-regional exchange and the disappearance of certain types of exchange certainly had an effect on the population of Iron I. When copper was likely no longer available from Cyprus or was no longer wanted from Cyprus, the sources of copper in Wadi Faynan and to some extent Timna became the prominent source of copper, which would have affected how this material was exchanged intra-regionally and who was doing the exchanging. Rather than copper arriving at the coast and moving inland, the copper came from inland and moved towards the coast. Likewise with gold and silver, as I discussed in chapter 8, the way in which these materials were valued may have switched from the LBA to Iron I, as gold became rarer in Iron I while silver likely became more widely available or at least more widely used in jewellery and in hoards. Similarly, social practices would have been adjusted, as once available pottery like Cypriot and Mycenaean pottery were no longer accessible or wanted. These objects had been used in ritual, funerary, palace, temple, and residential contexts and were culturally appropriated by the various peoples of the Southern Levant, whether that be incorporating Aegean open vessels into local tableware, or using Cypriot juglets perhaps containing sweet

smelling oils as part of a burial. Once these objects became unavailable or unwanted during the 13th cent., other objects would have replaced them to show access to wealth or 'little luxuries'. It is in these ways the changes in inter-regional exchange would have affected the people of the Southern Levant. Social changes as one resource was replaced by another. There are however other larger changes of which this break is not the likely driving force.

Larger changes such as the appearance of the 'Sea Peoples' and 'Philistines' were not likely because of changes in inter-regional exchange. While I outlined Susan Sherratt's view that this was indeed the case in chapter 4, the archaeological evidence presented there and in chapter 6 does not support this conclusion. Other changes, such as the appearance of the 'Israelites', cannot be associated with these changes in inter-regional exchange, nor can the exit of Egyptian hegemony be blamed on these changes. The rise of Israel is still a matter of great debate and I cannot answer this question here; however, for the Egyptians, it is more likely they left because of troubles faced at home during the 20th Dynasty rather than changes in inter-regional exchange in the Southern Levant. Moreover, even the change to iron, the name given to the age after bronze, was not directly caused by the breakdown in the accessibility of tin and copper which was previously believed, as I discussed briefly in chapter 8.

The one major change which may be related to these shifts in inter-regional exchange is the rise of the Phoenicians and the independent merchants. I discussed this at length in chapter 4, and while this may indeed be the case, we simply do not know enough, or much of anything, about the LBA merchant in the Southern Levant. Most of the information is drawn from Ugarit which already apparently operated under a system of palace administered trade and private enterprise, and Egypt, which tightly controlled its merchants. With the Southern Levant under the hegemony of Egypt during the LBA, but more culturally similar to Ugarit during the same period, which if either of these two systems was in place during the LBA is not known. The changes in the Iron Age could have broken drastically with their forebears in the LBA, or they could have continued the trend

already seen at Ugarit, and took advantage of the changes taking place throughout the Eastern Mediterranean. Thus, all in all, while the changes and developments in inter-regional exchange in the transition from the LBA to the Iron Age did affect the people of the Southern Levant, these larger changes were not likely caused by these very same developments.

9.3.   Developments in Interregional Exchange

The last question I posed at the beginning of this study was: 'What was the development both regionally and chronologically of non-local materials brought to the Southern Levant during both the LBA and Iron I?' I presented at length in chapters 6 through 8 that what is clear is there is no single development of inter-regional exchange during the LBA. There are multiple developments which vary chronologically and regionally. All six of the non-local pottery types, Cypriot, Mycenaean, Minoan, Western Anatolian, Qurayyah ware, and imported Egyptian pottery, each have a different development. Cypriot pottery was exchanged the longest, starting in the MBA but largely ending at the beginning of the 13th cent. BC, and was concentrated in the south of Cisjordan. Mycenaean pottery was mainly exchanged during 14th and first half of the 13th cent., with its concentration in northern Cisjordan and in Transjordan, whereas imported Egyptian pottery was mainly exchanged from the 13th cent. through Iron I, with a concentration along the coast and at *Ḫirbet el-Burǧ* during Iron I. Even objects which come from the same point of origin do not have the same regional distribution, as I demonstrated in chapter 7, and the four types of Egyptian objects which vary in their areas of consumption. What this points to is, again, that there was no single development of inter-regional exchange during the LBA and into Iron I, nor were all non-local objects used and consumed in the same amounts in the same region. The distribution of non-local material is far from homogeneous and is generally concentrated in a handful of sites such as Lachish, *Tell el-ʿAǧūl*, *Ḫirbet el-Burǧ*, and the Amman Airport Structure amongst others discussed in chapters 6 through 8.

Many of these developments either began before the LBA or were inaugurated during its course, which demonstrates the importance this period played in the overall development in inter-regional exchange in the region. While exchange with Egypt began long before the LBA, it changed with Egypt's control over the region bringing with it more intense cultural exchange. Likewise, Cypriot exchange began in the MBA; however, it grew, peaked, and disintegrated during the LBA, and while Aegean exchange too may have begun in a limited way during the MBA, it grew and disintegrated during the LBA as well. It was these developments in the LBA which laid the groundwork for the exchange in Iron I. Thus, the importance of the LBA in the development of inter-regional exchange should not be understated. While exchange with certain regions continued in Iron I, many of the developments which led to this exchange were established during the LBA. With that said, the developments in Iron I should not be understated either, as the period has so often in the past been described as a dark age bereft of inter-regional exchange, which is not the case. The current archaeological evidence indicates that the exchange may have been to a lesser degree and with less variety than in the LBA; however, the Iron I Southern Levant maintained access to exchange with Egypt, the Levant, silver from southwestern Anatolia, and tin, from whichever point of origin it came. This exchange rested on the developments which took place during the LBA.

9.4.   Interregional Exchange as a Resource and its ResourceComplexes

One of the main focusses of this work was on inter-regional exchange seen as a resource and the ResourceComplexes which developed to facilitate the exchange between the Southern Levant and those other regions both near and far. Inter-regional exchange acted as a resource, especially during the LBA and to a lesser degree in the Early Iron Age. However, it was not necessarily in the traditional economic sense. While certain sites likely profited to a degree from inter-regional exchange, as I discussed above, the loss of any of these networks cannot be directly linked to a

'collapse' at the end of the LBA. Moreover, for certain items such as tin, the ResourceComplex which existed to bring this material to the Southern Levant, while it likely changed in Iron I, was maintained. Likewise, while Cypriot copper became scarce, the ResourceComplex did not fall apart; rather, it shifted, focusing on nearby sources of copper. The way inter-regional exchange acted as a cultural and transformative resource during the LBA in particular was through the exchange of ideas and cultures. Egyptianisation, non-local ceramics incorporated into burial and cultic practices, each point to the cultural transformative properties of inter-regional exchange as a resource. This resource was used and maintained, affecting the cultural development during the LBA in the Southern Levant and in the Early Iron Age as well, with the arrival of the 'Philistines' bringing with them a host of new ideas, though their origins remain unclear. These intermingled with other local styles and Egyptian motifs to produce the Philistine Bichrome wares as 'Canaanites' lived alongside 'Philistines'.

As I discussed in chapter 3, there was no single ResourceComplex during the LBA and the Early Iron Age for inter-regional exchange; there were ResourceComplexes. In some cases, as with the Cypriot and Mycenaean ResourceComplexes, these broke apart during the 13th cent., likely because of troubles or changes outside of the Southern Levant. For other regions, it is unlikely there was ever a ResourceComplex to begin with, such as with the Northwestern Anatolian Grey ware or with the Hittite heartland. There was no strong need on either part to exchange with the other, thus there was no break in exchange at the end of the 13th cent., as there was never a large amount of exchange to begin with. While there may have been some contact, there was certainly no connection. Other ResourceComplexes did not disappear at the transition from the LBA to the Iron Age, they were however modified.

The ResourceComplex of exchange between Egypt and the Southern Levant did not crumble at the end of the LBA nor with the withdrawal of Egyptian hegemony from the region. It did however change, as the ResourceComplex was

likely focused in the area around *Ḫirbet el-Burǧ*. Likewise, the ResourceComplex with entities to the north who exchanged silver to the Southern Levant likely adjusted at the end of the LBA as the actors in the exchange may have changed. However, the ResourceComplex did not fall apart and it may have even become stronger than in the LBA, as gold from Egypt became more scarce in the Early Iron Age. The same can be said of tin and its ResourceComplex, which too likely changed in the transition from the LBA to Iron I, but it continued to act during Iron I, bringing tin to the Southern Levant. Thus, for the ResourceComplexes of inter-regional exchange, some fell apart before the end of the LBA, others were concentrated in Iron I, and still others underwent changes and adjustments but were maintained to the same or greater degree than during the LBA.

9.5.   Conclusion: What about 'Collapse'?

Many pages ago in chapter 2, I stated I would not define 'collapse' for the Southern Levant until the evidence for 'collapse' had been presented. These included many of the cataclysmic theories of the 'Sea Peoples' and earthquakes, along with the main thrust of this work, the break of inter-regional exchange and its effect on the 'collapse'. The evidence has been presented in the previous chapters, and I will give some final thoughts on the 'collapse' and how it should be defined for the end of the LBA in the Southern Levant. In chapter 2, I quoted Tainter's definition of 'collapse' which is, again: 'A society has collapsed when it displays a rapid, significant loss of an established level of sociopolitical complexity.' (Tainter 1988, 4 f.). It is because of my leaning toward this definition that I question the use of the term 'collapse' for the end of the LBA in the Southern Levant, as this transition was hardly rapid. While the years 1200 or 1177 BC are frequently used to describe the end date of the Bronze Age, the process was by no means quick in the Southern Levant. Beginning with the destruction of Hazor in 1250 BC and ending with the earthquake and exit of the last vestiges of Egyptian presence at Beth-Shean in 1130 BC,

there is a span of over a hundred years. Even if one concedes to minor chronological adjustments, there is still likely to be a century between these two events. However, it is in my opinion that 100 years does not constitute a rapid loss of sociopolitical complexity. If one imagines the collapse of a society or certain political structure like a house falling apart, rapid would be like an earthquake striking, shaking the house by its foundation, undulating it up and down and, within only a matter of minutes, it turns to rubble. However, if one imagines the 'collapse' of the Southern Levant, it is more akin to a derelict house where, over years, windows break and fall out, doors rot away, the foundation sags, and finally, after an extended period of time, the house finally falls in on itself, collapsing for lack of a better word. This is the case for the Southern Levant.

The LBA ended at Hazor with the destruction and abandonment of the site around 1250 BC for reasons which are not yet clear. Roughly 120 years later the same happened at Lachish. However, these two events, while similar in that once prominent sites underwent a period of crisis and then were abandoned, are not connected. They are from different regions, different times, and the people who lived in them were different from one another as much as any people group is from itself when separated by a 120 years. While these events are put together as part of the LBA collapse, it is a concentration of time, in what Puglisi has dubbed the Atlantis Premise (Puglisi 2013, 177). Indeed, despite the so-called 'collapse' at the end of the LBA, LBA culture continues at sites like Lachish, Megiddo, and Beth-Shean, thus leading some to dub Iron IA as 'LBA III' instead. It is because of all this that I would not call the 'collapse' of the Southern Levant a 'collapse' at all based on Tainter's definition of the term. Rather, the transition from the end of the LBA to Iron I is just that, a transition. Some areas and sites can be called Iron Age before others, and there was no great sweeping change, but over 100 or more years there was a switch from what we call LBA to what we also call Iron Age. What caused this change is a question I cannot answer, as the goal of this work concerning the transition was only to see if the loss of inter-regional exchange or the wholesale destruction of cities brought about these changes.

As I presented above, I do not believe the archaeological and historical evidence points to either of these being causal factors in these changes. Other factors like climate change, migration, ethnogenesis, poverty, and the exit of Egyptian control over the region amongst other factors are likely components in this transition. However, much as I said in chapter 2, that there was no 'collapse' of the Eastern Mediterranean but 'collapses', there were also differing regional problems which affected these changes throughout the Southern Levant, as the region was not one unit controlled by one system of government. As each city or polity maintained itself, each could have reacted differently to the variety of factors they faced. In some cases this was to abandon a site leaving it emptied of goods, like at *Tell Ǧerīše* or *Ḫirbet Tell eḏ-Ḏurūr*, and in others it was to stay hanging on until it could not be maintained any longer, like at Lachish and Hazor. For others, it was to build new settlements in a sparsely populated area in the Central Hill Country, yet for others still, the answer lay in accepting new people groups and building and expanding over the old 'Canaanite' city like at Tel Miqne/Ekron. Indeed, because of all this, rather than having a direct cut-off point for the LBA or including a LB III, it may be better to deem the period from 1250 through 1150/30 as the LBA Iron Age transitional. However, this would be to join in the arguments over chronology, one which I would not enter here more than as a passing statement.

What all of this points to is that there is still a bright future for further investigations on the end of the LBA and the transition to the Iron Age. There remain other non-local materials to be investigated, regional interactions with specific studies of the remainder of the Eastern Mediterranean, and to investigate sub-regional changes which may have affected the transition from the Bronze Age to the Iron Age. This includes examining other resources and how developments in the use of these tangible or intangible resources brought about the changes at the end of the LBA and the beginning of the Iron Age.

Bibliography

Abdelhamid, S.

2015   Phoenician Shipwrecks of the 8th to the 6th Century B.C. – Overview and Interim Conclusions, in: R. K. Pedersen (*ed.*), On Sea and Ocean: New Research in Phoenician Seafaring. Proceedings of the Symposium Held in Marburg, June 23–25, 2011 at Archäologisches Seminar, Philipps-Universität Marburg (Marburger Beiträge zur Archäologie 2, Marburg), 1–8.

Agbe-Davies, A. S./A. A. Bauer

2010   Rethinking Trade as a Social Activity: An Introduction, in: A. S. Agbe-Davies/A. A. Bauer (*ed.*), Social Archaeologies of Trade and Exchange: Exploring Relationships among People, Places, and Things (Walnut Creek), 13–28.

Aharoni, Y./Y. Yadin/Y. Shiloh

1993   Megiddo, in: E. Stern (*ed.*), The New Encyclopedia of Archaeological Excavations in the Holy Land. Vol. 3 (Jerusalem), 1003–1024.

Ahlström, G. W.

1993   The History of Ancient Palestine from the Palaeolithic Period to Alexander's Conquest (Journal for the Study of the Old Testament Supplement Series 146, Sheffield).

Akkermans, P. M. M. G./G. M. Schwartz

2003   The Archaeology of Syria. From Complex Hunter-Gatherers to Early Urban Societies (c. 16,000–300 BC) (Cambridge).

Albright, W. J.

1932   The Excavation of Tell Beit Mirsim. Vol. 1: The Pottery of the First Three Campaigns (Annual of the American Schools of Oriental Research 12, New Haven).

Allen, S. H.

1994   Trojan Grey Ware at Tel Miqne-Ekron, in: Bulletin of the American Schools of Oriental Research 293, 39–51.

Altman, A.

1988   Trade between the Aegean and the Levant in the Late Bronze Age: Some Neglected Questions, in: M. Heltzer/E. Lipiński, Society and Economy in the Eastern Mediterranean (c. 1500–1000 B.C.). Proceedings of the International Symposium Held at the University of Haifa from the 28th of April to the 2nd of May 1985 (Orientalia Lovaniensia Analecta 23, Leuven), 229–237.

Appadurai, A.

1986   Introduction: Commodities and the Politics of Value, in: A. Appadurai (*ed.*), The Social Life of Things. Commodities in Cultural Perspective (Cambridge), 3–63.

Applbaum, K.

2005   The Anthropology of Markets, in: J. G. Carrier (*ed.*), A Handbook of Economic Anthropology (Cheltenham, Northampton), 275–289.

Arie, E.

2006   The Iron Age I Pottery: Levels K-5 and K-4 and an Intra-Site Spatial Analysis of the Pottery from Stratum VIA, in: I. Finkelstein/D. Ussishkin/B. Halpern (*ed.*), Megiddo IV. The 1998–2002 Seasons (Monograph Series of the Sonia and Marco Nadler Institute of Archaeology 24, Tel Aviv), 191–298.

2013   The Late Bronze III and Iron I Pottery: Levels K-6, M-6, M-5, M-4, and H-9, in: I. Finkelstein/D. Ussishkin/E. H. Cline (*ed.*), Megiddo V. The 2004–2008 Seasons. Vol. 2 (Winona Lake, Indiana), 475–667.

Arie, E./A. Nativ

2013   Part II: Level K-6, in: I. Finkelstein/D. Ussishkin/E. H. Cline (*ed.*), Megiddo V. The 2004–2008 Seasons. Vol. 1 (Winona Lake), 165–177.

Arnaud, D.

1992   Les Ports de la 'Phénicie' à la Fin de l'Âge du Bronze Récent (XIV–XIII siècles) d'après les Textes Cunéiformes de Syrie, in: Studi Micenei ed Egeo Anatolici 30, 179–194.

Artzy, M.

1985a   Merchandise and Merchantmen: On Ships and Shipping in the Late Bronze Age Levant, in: T. Papadopoullos/S. Chatzestylli (*ed.*), Acts of the Second International Cyprological Congress (Nicosia), 135–140.

1985b   Supply and Demand: A Study of Second Millennium Cypriote Pottery in the Levant, in: A. B. Knapp/T. Stech (*ed.*), Prehistoric Production and Exchange: The Aegean and Eastern Mediterranean (Monograph 25, Los Angeles), 93–99.

1990a   Tel Nami 1985/1988, in: Hadashot Arkheologiyot: Excavations and Surveys in Israel 9, 22–24.

1990b   Nami Land and Sea Project, 1985–1988, in: Israel Exploration Journal 40, 73–76.

1991   Nami Land and Sea Project, 1989, in: Israel Exploration Journal 41, 194–197.

1992   Tel Nami – 1989/1991, in: Hadashot Arkheologiyot: Excavations and Surveys in Israel 12, 24–27.

1993   Nami, Tel, in: E. Stern (*ed.*), The New Encyclopedia of Archaeological Excavations in the Holy Land. Vol. 3 (Jerusalem), 1095–1098.

1995   Nami: A Second Millennium International Maritime Trading Center in the Mediterranean, in: S. Gitin (*ed.*), Recent Excavations in Israel: A View to the West (Dubuque), 17–40.

1997   Nomads of the Sea, in: S. Swiny/R. L. Hohlfelder/H. W. Swiny (*ed.*), Res Maritimae. Cyprus and the Eastern Mediterranean from Prehistory to Late Antiquity (Cyprus American Archaeological Research Institute Monograph Series 1, Atlanta), 1–16.

1998   Routes, Trade, Boats and 'Nomads of the Sea', in: S. Gitin/A. Mazar/E. Stern (*ed.*), Mediterranean Peoples in Transition: Thirteenth to Early Tenth Centuries B.C.E (Jerusalem), 439–448.

2003   Bronze Trade in the Late Bronze-Early Iron Period: Tel Masos and Tel Kinrot in Eastern Mediterranean Context, in: C. G. G. Gertog/U. Hübner/S. Münger (*ed.*), Saxa Loquentur. Studien zur Archäologie Palästinas/Israels. Festschrift für Volkmar Fritz zum 65. Geburtstag (Alter Orient und Altes Testament 302, Münster), 15–23.

2006a   'Filling in' the Void: Observations on the Habitation Pattern at Tel Akko at the End of the Late Bronze Age, in: A. M. Maeir/P. de Miroschedji (*ed.*), 'I will Speak the Riddles of Ancient Times'. Archaeological and Historical Studies in Honor of Amihai Mazar on the Occasion of His Sixtieth Birthday. Vol. 1 (Winona Lake), 115–122.

2006b   The Carmel Coast during the Second Part of the Late Bronze Age. A Center for Eastern Mediterranean Transshipping, in: Bulletin of the American Schools of Oriental Research 343, 45–64.

2007   Tell Abu Hawam. News from the Late Bronze Age, in: M. Bietak/ E. Czerny (*ed.*), The Synchronization of Civilisations in the Eastern Mediterranean in the Second Millennium B.C. III. Proceedings of the SCIEM 2000 – 2nd EuroConference, Vienna, 28th of May – 1st of June 2003 (Denkschriften der Gesamtakademie 37, Wien), 357–366.

2013   On the Other 'Sea Peoples', in: A. E. Killebrew/G. Lehmann (*ed.*), The Philistines and Other 'Sea Peoples' in Text and Archaeology (Archaeology and Biblical Studies 15, Atlanta), 329–344.

Artzy, M./S. Zagorski

2012   Cypriot 'Mycenaean' IIIB Imported to the Levant, in: M. Gruber/S. Aḥituv/G. Lehmann *et al.* (*ed.*), All the Wisdom of the East. Studies in Near Eastern Archaeology and History in Honor of Eliezer D. Oren (Orbis Biblicus et Orientalis 255, Fribourg, Göttingen), 1–12.

Ashkenazi, D./S. Bunimovitz/A. Stern

2016   Archaeometallurgical Investigation of Thirteenth–Twelfth Centuries BCE Bronze Objects from Tel Beth-Shemesh, Israel, in: Journal of Archaeological Science: Reports 6, 170–181.

Asscher, Y. *et al.*

   2015a   Radiocarbon Dating Shows an Early Appearance of Philistine Material Culture in Tell Es-Safi/ Gath, Philistia, in: Radiocarbon 57/5, 825–850.

   2015b   Absolute Dating of the Late Bronze to Iron Age Transition and the Appearance of Philistine Culture in Qubur el-Walaydah, Southern Levant, in: Radiocarbon 57/1, 77–97.

Astour, M. C.

   1965   New Evidence on the Last Days of Ugarit, in: American Journal of Archaeology 69/3, 253–258.

   1995   Overland Trade Routes in Ancient Western Asia, in: J. M. Sasson (*ed.*), Civilizations of the Ancient Near East. Vol. 3 (New York), 1401–1420.

Ahlström, G. W.

   1993   Late Cypriot Bronze Age Pottery in Palestine, in: A. Biran/J. Aviram (*ed.*), Biblical Archaeology Today, 1990. Proceedings of the Second International Congress of Biblical Archaeology, Jerusalem, June – July 1990 (Jerusalem), 307–313.

Åström, P.

   1973   Comments on the Corpus of Mycenaean Pottery in Cyprus, in: V. Karageorghis (*ed.*), Acts of the International Archaeological Symposium 'The Mycenaeans in the Eastern Mediterranean', Nicosia 27th March – 2nd April 1972 (Nicosia), 122–127.

   1998   Continuity or Discontinuity: Indigenous and Foreign Elements in Cyprus around 1200 BCE, in: S. Gitin/A. Mazar/E. Stern (*ed.*), Mediterranean Peoples in Transition. Thirteenth to Early Tenth Centuries B.C.E. (Jerusalem), 80–86.

Aubet, M. E.

   2013   Commerce and Colonization in the Ancient Near East (Cambridge).

Avigad, N.

   1976   Jerishe, Tell, in: M. Avi-Yonah (*ed.*), Encyclopedia of Archaeological Excavations in the Holy Land. Vol. 2 (London), 575–578.

Avruch, K.

   2000   Reciprocity, Equality, and Status-Anxiety in the Amarna Letters, in: R. Cohen/R. Westbrook (*ed.*), Amarna Diplomacy. The Beginnings of International Relations (Baltimore, London), 154–164.

Bachhuber, C.

   2006   Aegean Interest on the Uluburun Ship, in: American Journal of Archaeology 110/3, 345–363.

Bajema, M.

   2013   The Lapis Lazuli Road: A View from the Mycenean 'Periphery,' in: L. Bombardieri/A. D'Agostino/G. Guarducci *et al.* (*ed.*), SOMA 2012. Identity and Connectivity. Proceedings of the 16th Symposium on Mediterranean Archaeology, Florence, Italy, 1–3 March 2012. Vol. 1 (Oxford), 407–411.

Ballard, R. D. *et al.*

   2002   Iron Age Shipwrecks in Deep Water off Ashkelon, Israel, in: American Journal of Archaeology 106/2, 151–168.

Balensi, J.

   1985   Revising Tel Abu Hawam, in: Bulletin of the American Schools of Oriental Research 257, 65–74.

Barako, T. J.

   2000   The Philistine Settlement as Mercantile Phenomenon?, in: American Journal of Archaeology 104/3, 513–530.

   2007a   Stratigraphy and Building Remains, in: T. J. Barako, Tel Mor. The Moshe Dothan Excavations, 1959–1960 (Israel Antiquities Authority Reports 32, Jerusalem), 11–42.

   2007b   Canaanite and Philistine Pottery, in: T. J. Barako, Tel Mor. The Moshe Dothan Excavations, 1959–1960 (Israel Antiquities Authority Reports 32, Jerusalem), 43–127.

2007c Summary and Historical Conclusions, in: T. J. Barako, Tel Mor: The Moshe Dothan Excavations, 1959–1960 (Jerusalem), 239–248.

2013   Philistines and Egyptians in the Southern Coastal Canaan during the Early Iron Age, in: A. E. Killebrew/G. Lehmann (*ed.*), The Philistines and Other 'Sea Peoples' in Text and Archaeology (Archaeology and Biblical Studies 15, Atlanta), 37–51.

Barber, R. L. N.

2010   Late Bronze Age Cyclades, in: E. H. Cline (*ed.*), The Oxford Handbook of the Bronze Age Aegean (Oxford), 160–170.

Bartelheim, M. *et al.*

2008   The Late Bronze Age Hoard of Kaleburnu/Galinoporni on Cyprus. Památky Archeologické, 99, 5-33.

2015   'ResourceCultures': A Concept for Investigating the Use of Resources in Different Societies, in: A. Danielisová/M. Fernández-Götz (*ed.*), Persistent Economic Ways of Living. Production, Distribution, and Consumption in Late Prehistory and Early History (Budapest), 39–50.

Bartelheim, M./R. Hardenberg/J. Staecker

2014   Conceptual Introduction SFB 1070, <https://uni-tuebingen.de/index.php?eID=tx_securedownloads&p=39724&u=0&g=0&t=1567695368&hash=712e00891c4b3143b6e7f93b89d51f0cf94e9011&-file=/fileadmin/Uni_Tuebingen/SFB/SFB_1070/dokumente/allgemein/Conceptual_Introduction_CRC_1070_ResourceCultures.pdf> (last access: 09.04.2019).

Bar-Yosef, D. *et al.*

2004   Steatite Beads at Peqi'in: Long Distance Trade and Pyro-Technology during the Chalcolithic of the Levant, in: Journal of Archaeological Science 31/4, 493–502.

Bass, G. F.

1961   The Cape Gelidonya Wreck. Preliminary Report, in: American Journal of Archaeology 65/3, 267–276.

1998   Sailing between the Aegean and the Orient in the Second Millennium BC, in: E. H. Cline/D. Harris-Cline (*ed.*), The Aegean and the Orient in the Second Millennium. Proceedings of the 50th Anniversary Symposium, Cincinnati, 18–20 April 1997 (Aegaeum 18, Liège), 183–189.

2010   Cape Gelidonya Shipwreck, in: E. H. Cline (*ed.*), The Oxford Handbook of the Bronze Age Aegean (Oxford), 797–803.

2013   Cape Gelidonya Redux, in: J. Aruz/S. B. Graff/Y. Rakic (*ed.*), Cultures in Contact. From Mesopotamia to the Mediterranean in the Second Millennium B.C. (New York), 62–71.

Bauer, A. A.

1998   Cities of the Sea: Maritime Trade and the Origin of Philistine Settlement in the Early Iron Age Southern Levant, in: Oxford Journal of Archaeology 17/2, 149–168.

Bauer, A. A./A. S. Agbe-Davies

2011   Trade and Interaction in Archaeology, in: A. S. Agbe-Davies/A. A. Bauer (*ed.*), Social Archaeologies of Trade and Exchange: Exploring Relationships among People, Places, and Things (Walnut Creek), 29–48.

Baumgarten, J. J.

1992   Urbanization in the Late Bronze Age, in: A. Kempinski/R. Reich (*ed.*), The Architecture of Ancient Israel. From the Prehistoric to the Persian Periods (Jerusalem), 143–150.

Bavay, L.

2015   Canaanite Jars and Jar Sealings from Deir el-Medina: Scattered Evidence of Egypt's Economic Relations with the Levant during the New Kingdom, in: B. Eder/R. Pruzsinszky (*ed.*), Policies of Exchange. Proceedings of the International Symposium at the University of Freiburg, Institute for Archaeological Studies, 30 May – 2 June 2012 (Oriental and European Archaeology 2, Wien), 129–140.

Beal, R. H.

2011   Hittite Anatolia: A Political History, in: S. R. Steadman/G. McMahon (*ed.*), The Oxford Handbook of Ancient Anatolia (Oxford) 579–603.

Beckman, G./T. Bryce/E. H. Cline

2011   The Ahhiyawa Texts (Writings from the Ancient World 28, Atlanta).

Bell, C.

2006   The Evolution of Long Distance Trading Relationships across the LBA/Iron Age Transition in the Northern Levantine Coast: Crisis, Continuity, and Change. A Study Based on Imported Ceramics, Bronze and Its Constituent Metals (British Archaeological Reports International Series 1574, Oxford).

2009   Continuity and Change: The Divergent Destinies of Late Bronze Age Ports in Syria and Lebanon across the LBA/Iron Age Transition, in: C. Bachhuber /R. G. Roberts (*ed.*), Forces of Transformation. End of the Bronze Age in the Mediterranean. Proceedings of an International Symposium Held at St. John's College, University of Oxford, 25–26th March 2006 (Oxford), 30–38.

2012   The Merchants of Ugarit. Oligarchs of the Late Bronze Age Trade in Metals?, in: V. Kassianidou/G. Papasavvas (*ed.*), Eastern Mediterranean Metallurgy and Metalwork in the Second Millennium BC. Proceedings of a Conference in Honour of James D. Muhly, Nicosia 10–11 October 2009 (Oxford), 180–187.

Bell, D.

1991   Modes of Exchange. Gift and Commodity, in: Journal of Socio-Economics 20/2, 155–167.

Ben-Ami, D.

2005a   The Architecture and Stratigraphy of the Late Bronze Age, in: A. Ben-Tor/D. Ben-Ami/A. Livneh (*ed.*), Yoqne'am III. The Middle and Late Bronze Ages. Final Report of the Archaeological Excavations (1977–1988) (Qedem Reports 7, Jerusalem), 141–164.

2005b   The Pottery of the Late Bronze Age, in: A. Ben-Tor/D. Ben-Ami/A. Livneh (*ed.*), Yoqne'am III. The Middle and Late Bronze Ages. Final Report of the Archaeological Excavations (1977–1988) (Qedem Reports 7, Jerusalem), 165–240.

Ben-Dor Evian, S.

2015   'They were thr on land, others at sea'. The Etymology of the Egyptian Term for 'Sea-Peoples', in: Semitica 57, 57–75.

Ben-Shlomo, D.

2011   Early Iron Age Domestic Material Culture in Philistia and an Eastern Mediterranean Koiné, in: A. Yasur-Landau/J. R. Ebeling/L.B. Mazow (*ed.*), Household Archaeology in Ancient Israel and Beyond (Culture and History of the Ancient Near East 50, Brill, 183–206.

2012   Tell Ǧemme during the Bronze Age and Canaanite Household Archaeology, in: Zeitschrift des Deutschen Palästina-Vereins 128, 133–157.

2014a   Field I: The Late Bronze Age, in: D. Ben-Shlomo/G. W. van Beek (*ed.*), The Smithsonian Institution Excavation at Tell Jemmeh, Israel, 1970–1990 (Washington), 209–336.

2014b   Synthesis and Conclusions: The Significance of Tell Jemmeh, in: D. Ben-Shlomo/G. W. van Beek (*ed.*), The Smithsonian Institution Excavation at Tell Jemmeh, Israel, 1970–1990 (Washington), 1054–1066.

Ben-Tor, A.

1993a   Jokneam, in: E. Stern (*ed.*), The New Encyclopedia of Archaeological Excavations in the Holy Land. Vol. 3 (Jerusalem), 805–811.

1993b   Qashish, Tel, in: E. Stern (*ed.*), The New Encyclopedia of Archaeological Excavations in the Holy Land. Vol. 4 (Jerusalem), 1200–1203.

1998   The Fall of Canaanite Hazor – The 'Who' and 'When' Questions, in: S. Gitin/A. Mazar/E. Stern (*ed.*), Mediterranean Peoples in Transition. Thirteenth to Early Tenth Centuries B.C.E. (Jerusalem), 456–467.

2002   Hazor – A City State between the Major Powers: A Rejoinder, in: Scandinavian Journal of the Old Testament: An International Journal of Nordic Theology 16/2, 303–308.

2006   The Sad Fate of Statues and the Mutilated Statues of Hazor, in: S. Gitin/J. E. Wright/J. P. Dessel (*ed.*), Confronting the Past Archaeological and Historical Essays on Ancient Israel in Honor of William G. Dever (Winona Lake), 3–16.

2013   Who Destroyed Canaanite Hazor?, in: Biblical Archaeology Review 39/4, 26–36, 58–60.

Ben-Tor, A./D. Ben-Ami

2005   The Late Bronze Age Strata at Yoqne'am: Terminology, Chronology and Historical Background, in: A. Ben-Tor/D. Ben-Ami/A. Livneh (*ed.*), Yoqne'am III. The Middle and Late Bronze Ages. Final Report of the Archaeological Excavations (1977–1988) (Qedem Reports 7, Jerusalem), 241–243.

Ben-Tor, A./R. Bonfil

1988   Tel Qashish, 1984/1985 Seasons, in: Hadashot Arkheologiyot: Excavations and Surveys in Israel 6, 106–108.

2003a   The Stratigraphy and Pottery Assemblages of the Middle and Late Bronze Ages in Area A, in: A. Ben-Tor/R. Bonfil/S. Zuckerman (*ed.*), Tel Qashish. A Village in the Jezreel Valley. Final Report of Archaeological Excavations (1978–1987) (Qedem Reports 5, Jerusalem), 185–276.

2003b   The Transitional Late Bronze/Iron Age to the Persian Period in Area A, in: A. Ben-Tor/R. Bonfil/S. Zuckerman (*ed.*), Tel Qashish. A Village in the Jezreel Valley. Final Report of Archaeological Excavations (1978–1987) (Qedem Reports 5, Jerusalem), 331–363.

2003c   The Middle Bronze Age to the Ottoman Period in Area B, in: A. Ben-Tor/R. Bonfil/S. Zuckerman (*ed.*), Tel Qashish. A Village in the Jezreel Valley. Final Report of Archaeological Excavations (1978–1987) (Qedem Reports 5, Jerusalem), 365–383.

Ben-Tor, A./M. T. Rubiato

1999   Excavating Hazor. Part 2: Did the Israelites Destroy the Canaanite City?, in: Biblical Archaeology Review 25/3, 22–39.

Ben-Tor, A./S. Zuckerman

2008   Hazor at the End of the Late Bronze Age: Back to Basics, in: Bulletin of the American Schools of Oriental Research 350, 1–6.

Ben-Yosef, E. *et al.*

2012   A New Chronological Framework for Iron Age Copper Production at Timna (Israel), in: Bulletin of the American Schools of Oriental Research 367, 31–71.

Benzi, M.

2013   The Southeast Aegean in the Age of the Sea Peoples, in: A. E. Killebrew/G. Lehmann (*ed.*), The Philistines and Other 'Sea Peoples' in Text and Archaeology (Archaeology and Biblical Studies 15, Atlanta), 509–542.

Bergoffen, C. J.

1988   Some Cypriot Pottery from Ashkelon, in: Levant 20, 161–168.

1989   A Comparative Study of the Regional Distribution of Cypriot Pottery in Canaan and Egypt in the Late Bronze Age (PhD Thesis, New York University, New York [unpublished]).

1991   Overland Trade in Northern Sinai: The Evidence of the Late Cypriot Pottery, in: Bulletin of the American Schools of Oriental Research 284, 59–76.

2002   Early Late Cypriot Ceramic Exports to Canaan: White Slip I, in: D. P. Hansen/E. Ehrenberg (*ed.*), Leaving no Stones Unturn*ed.* Essays on the Ancient Near East and Egypt in Honor of Donald P. Hansen (Winona Lake), 23–41.

2010   Imports, Imitations and Status. Red Lustrous Wheelmade Spindle Bottles and Their Derivatives from Ashkelon, in: P. Matthiae *et al.* (*ed.*), Proceedings of the 6th International Congress of the Archaeology of the Ancient Near East, 5 May – 10 May 2009, 'Sapienza', Università di Roma. Vol. 1 (Wiesbaden), 653–661.

2013   Red Lustrous Wheelmade and Coarse-Ware Spindle Bottles from Ashkelon, in: R. B. Koehl (*ed.*), AMILLA: The Quest for Excellence. Studies Presented to Guenter Kopcke in Celebration of His 75th Birthday (Philadelphia), 281–292.

Bertolín Cebrián, R.

1996   Loan-words in Mycenaean Greek, in: Sborník Prací Filozofické Fakulty Brněnské Univerzity Studia Minora Facultatis Philosophicae Universitatis Brunensis 45, 13–20.

Betancourt, P. P.

2000   The Aegean and the Origin of the Sea Peoples, in: E. D. Oren (*ed.*), The Sea Peoples and Their World: A Reassessment (University Museum Monograph 108, University Museum Symposium Series 11, Philadelphia), 297–303.

Bevan, A.

2010   Making and Marking Relationships. Bronze Age Brandings and Mediterranean Commodities, in: A. Bevan/D. Wengrow (*ed.*), Cultures of Commodity Branding (Walnut Creek), 35–86.

Bienkowski, P.

1989   Prosperity and Decline in LBA Canaan: A Reply to Liebowitz and Knapp, in: Bulletin of the American Schools of Oriental Research 275, 59–63.

Bietak, M.

1993   The Sea Peoples and the End of the Egyptian Administration in Canaan, in: J. A. Biran/J. Aviram (*ed.*), Biblical Archaeology Today, 1990. Proceedings of the Second International Congress on Biblical Archaeology, Jerusalem, June – July 1990 (Jerusalem), 292–306.

Bikai, P. M.

1992   The Phoenicians, in: W. A. Ward/M. S. Joukowsky (*ed.*), The Crisis Years: The 12th Century B.C. From Beyond the Danube to the Tigris (Dubuque), 132–141.

Bleiberg, E.

1996   The Official Gift in Ancient Egypt (Norman).

Bliss, F. J.

1894   A Mound of Many Cities (London).

Bourke, S.

2012   The Six Canaanite Temples of Tabaqāt Fahil. Excavating Pella's 'Fortress' Temple (1994–2009), in: J. Kamlah (*ed.*), Temple Building and Temple Cult. Architecture and Cultic Paraphernalia of Temples in the Levant (2.–1. Mill. B.C.E.) (Abhandlungen des Deutschen Palästina-Vereins 41, Wiesbaden), 159–201.

Bramlett, K.

2009   Eastern Front: The Transjordan Highlands in Late Bronze Age Hegemonic Conquest (PhD Thesis, University of Toronto, Toronto [unpublished]).

Brandl, B.

2010   The Egyptian Origin of the Architecture at Deir el-Balaḥ, in: T. Dothan/B. Brandl (*ed.*), Deir el-Balaḥ: Excavations in 1977–1982 in the Cemetery and Settlement. Vol. 1: Stratigraphy and Architecture (Qedem: Monographs of the Institute of Archaeology 49, Jerusalem), 251–265.

Braudel, F.

1972   The Mediterranean and the Mediterranean World in the Age of Philip II (New York).

Braunstein, S. L.

2011   The Meaning of Egyptian-Style Objects in the Late Bronze Cemeteries of Tell el-Farʿah (South), in: Bulletin of the American Schools of Oriental Research 364, 1–36.

Bryan, B. M.

1996   Art, Empire, and the End of the Late Bronze Age, in: J. S. Cooper/G. M. Schwartz (*ed.*), The Study of the Ancient Near East in the 21st Century (Winona Lake), 33–79.

Bryce, T.

1989   The Nature of Mycenaean Involvement in Western Anatolia, in: Historia 38/1, 1–21.

1998   The Kingdom of the Hittites (Oxford).

2002   Life and Society in the Hittite World (Oxford).

2003a   Relations between Hatti and Ahhiyawa in the Last Decades of the Bronze Age, in: G. Beckman/R. Beal/G. McMahon (*ed.*), Hittite Studies in Honor of Harry A. Hoffner Jr. on the Occasion of His 65ᵗʰ Birthday (Winona Lake), 59–72.

2003b   Letters of the Great Kings of the Ancient Near East. The Royal Correspondence of the Late Bronze Age (London, New York).

2011   The Late Bronze Age in the West and the Aegean, in: S. R. Steadman/G. McMahon (*ed.*), The Oxford Handbook of Ancient Anatolia (Oxford), 363–375.

2012   The World of the Neo-Hittite Kingdoms. A Political and Military History (Oxford).

Bunimovitz, S.

1993   The Study of Complex Societies: The Material Culture of the Late Bronze Age Canaan as a Case Study, in: A. Biran/J. Aviram (*ed.*), Biblical Archaeology Today, 1990. Proceedings of the Second International Congress on Biblical Archaeology, Jerusalem, June – July 1990 (Jerusalem), 443–451.

1994   Socio-Political Transformations in the Central Hill Country in the Late Bronze-Iron I Transition, in: I. Finkelstein/N. Na'aman (*ed.*), From Nomadism to Monarchy. Archaeological and Historical Aspects of Early Israel (Jerusalem), 179–202.

1995   On the Edge of Empires – Late Bronze Age (1500–1200 BCE), in: T. E. Levy (*ed.*), The Archaeology of Society in the Holy Land (London), 320–331.

1998   Sea Peoples in Cyprus and Israel: A Comparative Study of Immigration Processes, in: S. Gitin/A. Mazar/E. Stern (*ed.*), Mediterranean Peoples in Transition. Thirteenth to Early Tenth Centuries B.C.E (Jerusalem), 103–113.

2004   The Late Cypriot Pottery, in: D. Ussishkin (*ed.*), The Renewed Archaeological Excavations at Lachish (1973–1994). Vol. 3 (Monograph Series of the Sonia and Marco Nadler Institute of Archaeology 22, Tel Aviv), 1262–1272.

Bunimovitz, S./Z. Lederman

2008   A Border Case: Beth-Shemesh and the Rise of Ancient Israel, in: L. L. Grabbe (*ed.*), Israel in Transition. From the Late Bronze II to the Iron IIa (c. 1250–850 BCE). Vol. 1: The Archaeology (New York, London), 21–31.

2009   The Archaeology of Border Communities. Renewed Excavations at Tel Beth-Shemesh. Part 1: The Iron Age, in: Near Eastern Archaeology 72/3, 114–142.

Burke, A. A.

2011   Early Jaffa: From the Bronze Age to the Persian Period, in: M. Peilstöcker/A. A. Burke (*ed.*), The History and Archaeology of Jaffa I (Monumenta Archaeologica 26, Los Angeles, California), 63–78.

Burke, A. A. *et al.*

2010   Egyptians in Jaffa. A Portrait of Egyptian Presence in Jaffa during the Late Bronze Age, in: Near Eastern Archaeology 73/1, 2–30.

2017   Excavations of the New Kingdom Fortress in Jaffa, 2011–2014: Traces of Resistance to Egyptian Rule in Canaan, American Journal of Archaeology 121/1, 85–133.

Burke. A. A./M. Pleistöcker

2013   The Egyptian Fortress at Jaffa, in: Popular Archaeology March 2013, Electronic Document <http://popular-archaeology.com/issue/march-2013/article/the-egyptian-fortress-in-jaffa> (last access: 29.07.2015).

Burns, B. E.

2010a   Mycenaean Greece, Mediterranean Commerce, and the Formation of Identity (Cambridge).

2010b   Trade, in: E. H. Cline (*ed.*), The Oxford Handbook of the Bronze Age Aegean (Oxford), 291–304.

Bushnell, L.

2013   The Socio-Economic Implications of the Distribution of Juglets in the Eastern Mediterranean during the Middle and Late Bronze Age (PhD Thesis, University College London, London [unpublished]).

Cadogan, G.

1993   Cyprus, Mycenaean Pottery, Trade and Colonisation, in: C. Zerner/P. Zerner/J. Winder (*ed.*), Wace and Blegen. Pottery as Evidence for Trade in the Aegean Bronze Age, 1939–1989 (Amsterdam), 91–99.

1998   The Thirteenth-Century Changes in Cyprus in Their East Mediterranean Context, in: S. Gitin/A. Mazar/E. Stern (*ed.*), Mediterranean Peoples in Transition: Thirteenth to Early Tenth Centuries B.C.E. (Jerusalem), 6–16.

Carmi, I./D. Ussishkin

2004   14C Dates, in: D. Ussishkin (*ed.*), The Renewed Archaeological Excavations at Lachish (1973–1994). Vol. 3 (Tel Aviv), 2508–2513.

Carpenter, R.

1966   Discontinuity in Greek Civilization (Cambridge).

Castle, E. W.

1992   Shipping and Trade in Ramesside Egypt, in: Journal of the Economic and Social History of the Orient 35/3, 239–277.

Catacchio, N. N.

2011   Amber in Antiquity, in: A. Vianello (*ed.*), Exotica in the Prehistoric Mediterranean (Oxford), 56–58.

Caubet, A.

1992   Reoccupation of the Syrian Coast after the Destruction of the 'Crisis Years', in: W. A. Ward/M. S. Joukowsky (*ed.*), The Crisis Years: The 12ᵗʰ Century B.C. From beyond the Danube to the Tigris (Dubuque), 123–131.

2000   Ras Shamra-Ugarit before the Sea Peoples, in: E. D. Oren (*ed.*), The Sea Peoples and Their World: A Reassessment (University Museum Monograph 108, University Museum Symposium Series 11, Philadelphia), 35–51.

Cherry, J. F.

2010   Sorting out Crete's Prepalatial Off-island Interactions, in: W. A. Parkinson/M. L. Galaty (*ed.*), Archaic State Interaction. The Eastern Mediterranean in the Bronze Age (Santa Fe), 107–140.

Chovanec, Z./S. Bunimovitz/Z. Lederman

2015   Is there Opium Here? – Analysis of Cypriot Base Ring Juglets from Tel Beth-Shemesh, Israel, in: Mediterranean Archaeology and Archaeometry 15/2, 175–189.

Cifola, B.

1988   Ramses III and the Sea Peoples: A Structural Analysis of the Medinet Habu Inscriptions, in: Orientalia 57/3, 275–306.

Clark, D. R.

2011   The Late Bronze and Early Iron Ages at Tall al-'Umayri, in: C. R. Clark *et al.* (*ed.*), The Madaba Plains Project. Forty Years of Archaeological Research into Jordan's Past (Sheffield), 43–57.

Cline, E. H.

1994   Sailing the Wine-Dark Sea. International Trade and Late Bronze Age Aegean (British Archaeological Reports International Series 591, Oxford).

1995a   'My Brother, my Son': Rulership and Trade between the LBA Aegean, Egypt and the Near East, in: R. Rehak (*ed.*), The Role of the Ruler in the Prehistoric Aegean (Aegaeum 11, Liège), 143–150.

1995b   Egyptian and Near Eastern Imports at Late Bronze Age Mycenae, in: W. V. Davies/L. Schofield (*ed.*), Egypt, the Aegean and the Levant. Interconnections in the Second Millennium BC (London), 91–115.

2003a   Trade and Exchange in the Levant, in: S. Richard, Near Eastern Archaeology. A Reader (Winona Lake), 360–366.

2003b   Canaan's Relations with the Aegean, in: D. R. Clark/V. H. Matthews (*ed.*), One Hundred Years of American Archaeology in the Middle East. Proceedings of the American Schools of Oriental Research Centennial Celebration, Washington, DC, April 2000 (Boston), 167–179.

2007   Rethinking Mycenaean International Trade with Egypt and the Near East, in: M. L. Galaty/W. A. Parkinson (*ed.*), Rethinking Mycenaean Palaces: New Interpretations of an Old Idea, 2nd Edition (Los Angeles), 190–200.

2010   Bronze Age Interactions between the Aegean and the Eastern Mediterranean Revisited: Mainstream, Periphery, or Margin?, in: W. A. Parkinson/M. L. Galaty (*ed.*), Archaic State Interaction. The Eastern Mediterranean in the Bronze Age (Santa Fe), 161–180.

2011   Whole Lotta Shakin' Going On: The Possible Destruction by Earthquake of Stratum VIA at Megiddo, in: I. Finkelstein/N. Na'aman (*ed.*), The Fire Signals of Lachish. Studies in the Archaeology and History of Israel in the Late Bronze Age, Iron Age, and Persian Period in Honor of David Ussishkin (Winona Lake), 55–70.

2013   Aegean – Near East Relations in the Second Millennium B.C., in: J. Aruz/S. B. Graff/Y. Rakic (*ed.*), Cultures in Contact. From Mesopotamia to the Mediterranean in the Second Millennium B.C. (New York), 26–33.

2014   1177 B.C. The Year Civilization Collapsed (Princeton).

Cline, E. H. (*ed.*)

2010   The Oxford Handbook of the Bronze Age Aegean (Oxford).

Cline, D. H./E. H. Cline

2015   Text Messages, Tablets, and Social Networks: The 'Small World' of the Amarna Letters, in: J. Mynářová/P. Onderka/P. Pavúk (*ed.*), There and Back Again – the Crossroads II. Proceedings of an International Conference Held in Prague, September 15–18, 2014 (Prague), 17–44.

Cline E. H./M. J. Cline

1991   Of Shoes and Ships and Sealing Wax, in: Expedition 33/3, 46–54.

Cline, E. H./D. O'Connor

2003   The Mystery of the 'Sea Peoples', in: D. O'Connor/S. Quirke (*ed.*), Mysterious Lands: Encounters with Ancient Egypt (London), 107–138.

Cline, E. H./S. M. Stannish

2011   Sailing the Great Green Sea? Amenhotep III's 'Aegean List' from Kom el-Hetan, Once More, in: Journal of Ancient Egyptian Interconnections 3/2, 6–16.

Cline, E. H./A. Yasur-Landau

2007   Musings from a Distant Shore: The Nature and Destination of the Uluburun Ship and Its Cargo, in: Tel Aviv 34/2, 125–141.

Cochavi-Rainey, Z./C. Lilyquist

1999   Royal Gifts in the Late Bronze Age, Fourteenth to Thirteenth Centuries B.C.E. Selected Texts Recording Gifts to Royal Personages, (Beer-Sheva 13, Beer-Sheva).

Cohen, C./J. Maran/M. Vetters

2010   An Ivory Rod with a Cuneiform Inscription, most probably Ugaritic, from a Final Palatial Workshop in the Lower Citadel of Tiryns, in: Archäologischer Anzeiger 2010/2, 1–22.

Cook, S. A.

1929   Notes on Recent Excavations, in: Palestine Exploration Quarterly 61/2, 111–118.

Collins, B. J.

2008   The Hittites and Their World (Archaeology and Biblical Studies 7, Leiden).

Cowgill, G. L.

1988   Onward and Upward with Collapse, in: N. Yoffee/G. L. Cowgill (*ed.*), The Collapse of Ancient States and Civilizations (Tucson), 244–276.

Crowley, J. L.

1989   The Aegean and the East. An Investigation into the Transference of Artistic Motifs between the Aegean, Egypt, and the Near East in the Bronze Age (Studies in Mediterranean Archaeology, Pocketbook 51, Jonsered).

Dagan, Y.

2004   Results of the Survey: Settlement Patterns in the Lachish Region, in: D. Ussishkin (*ed.*), The Renewed Archaeological Excavations at Lachish (1973–1994). Vol. 5 (Tel Aviv), 2672–2690.

Dever, W. G.

1992   The Late Bronze-Early Iron I Horizon in Syria-Palestine: Egyptians, Canaanites, 'Sea Peoples,' and Proto-Israelites, in: W. A. Ward/M. S. Joukowsky (*ed.*), The Crisis Years: The 12th Century B.C. From Beyond the Danube to the Tigris (Dubuque), 99–110.

1993   Gezer, in: E. Stern (*ed.*), The New Encyclopedia of Archaeological Excavations in the Holy Land. Vol. 2 (Jerusalem), 496–506.

1998   Israelite Origins and the 'Nomadic Ideal': Can Archaeology Separate Fact From Fiction?, in: S. Gitin/A. Mazar/E. Stern (*ed.*), Mediterranean Peoples in Transition. Thirteenth to Early Tenth Centuries B.C.E. (Jerusalem), 220–237.

Dever, W. G. *et al.*

1986   Gezer IV: The 1969–71 Seasons in the Field VI, the 'Acropolis' (Annual of the Nelson Glueck School of Biblical Archaeology/Hebrew Union College 4, Jerusalem).

1974   Gezer II: Report of the 1967–70 Seasons in Fields I and II (Annual of the Nelsen Glueck School of Biblical Archaeology/Hebrew Union College 2, Jerusalem).

Dever, W. G./H. D. Lance/G. E. Wright

1970   Gezer I: Preliminary Report of the 1964–66 Seasons (Annual of the Nelson Glueck School of Biblical Archaeology/Hebrew Union College 1, Jerusalem).

Dever, W. G./J. D. Seger

2014   A Brief Summary of the Stratigraphy and Cultural History of Gezer, in: G. H. Gilmour (*ed.*), Gezer VI. The Objects from Phases I and II (1964–1674) (Annual of the Nelson Glueck School of Biblical Archaeology/ Hebrew Union College 10, Winona Lake), 8–17.

Diamond, J.

2005   Collapse. How Societies Choose to Fail or Succeed (New York).

Dickinson, O.

1994   The Aegean Bronze Age (Cambridge).

2010   The Collapse at the End of the Bronze Age, in: E. H. Cline (*ed.*), The Oxford Handbook of the Bronze Age Aegean (Oxford), 483–490.

Dietrich, M./O. Loretz

2002   Der Untergang von Ugarit am 21. Januar 1192 v. Chr.? Der astronomisch- hepatoskopische Bericht KTU 1.78 (= RS 12.061), in: Ugarit-Forschungen 34, 53–74.

Dothan, M.

1986   Sardina at Akko?, in: M. S. Balmuth (*ed.*), Studies in Sardinian Archaeology. Vol 2 (Ann Arbor), 105–115.

1993   Mor, Tel, in: E. Stern (*ed.*), The New Encyclopedia of Archaeological Excavations in the Holy Land. Vol. 3 (Jerusalem), 1073–1078.

Dothan, T.

1982   The Philistines and Their Material Culture (New Haven).

1997   Tel Miqne-Ekron: An Iron Age I Philistine Settlement in Canaan, in: N. A. Silberman/D. Small (*ed.*), The Archaeology of Israel. Constructing the Past, Interpreting the Present (Journal for the Old Testament Supplement Series 237, Sheffield), 96–106.

1998   Initial Philistine Settlement: From Migration to Coexistence, in: S. Gitin/A. Mazar/E. Stern (*ed.*), Mediterranean Peoples in Transition. Thirteenth to Early Tenth Centuries B.C.E. (Jerusalem), 148–161.

Dothan, T./D. Ben-Shlomo

2013   Mycenaean IIIC: 1 Pottery in Philistia: Four Decades of Research, in: A. E. Killebrew/G. Lehmann (*ed.*), The Philistines and Other 'Sea Peoples' in Text and Archaeology (Archaeology and Biblical Studies 15, Atlanta), 29–36.

Dothan, T./M. Dothan

1992   People of the Sea. The Search for the Philistines (New York).

Doumas, C. G.

1998   Aegeans in the Levant: Myth and Realty, in: S. Gitin/A. Mazar/E. Stern (*ed.*), Mediterranean Peoples in Transition. Thirteenth to Early Tenth Centuries B.C.E. (Jerusalem), 129–137.

Drake, B. L.

2012   The Influence of Climatic Change on the Late Bronze Age Collapse and the Greek Dark Ages, in: Journal of Archaeological Science 39/6, 1862–1870.

Drews, R.

1993   The End of the Bronze Age. Changes in Warfare and the Catastrophe ca. 1200 B.C. (Princeton).

2000   Medinet Habu: Oxcarts, Ships, and Migration Theories, in: Journal of Near Eastern Studies 59/3, 161–190.

Driessen, J.

1995   'Crisis Architecture'? Some Observations on Architectural Adaptations as Immediate Responses to Changing Socio-Cultural Conditions, in: Topoi 5/1, 63–88.

Eisenstadt, S. M.

1988   Beyond Collapse, in: N. Yoffee/G. L. Cowgill (*ed.*), The Collapse of Ancient States and Civilizations (Tucson), 236–243.

Elgavish, J.

1975   Shiqmona, 1975, in: Israel Exploration Journal 25, 257–258.

1977   Shiqmona, 1976, in: Israel Exploration Journal 27, 166–167.

1978   Shiqmona, 1977, in: Israel Exploration Journal 28, 122–123.

1993   Shiqmona, in: E. Stern (*ed.*), The New Encyclopedia of Archaeological Excavations in the Holy Land. Vol. 4 (Jerusalem), 1373–1378.

Emanuel, J. P.

2015   Sailing from Periphery to Core in the Late Bronze Age Eastern Mediterranean, in: P. Mynářová/P. Onderka/P. Pavúk (*ed.*), There and Back Again – the Crossroads II. Proceedings of an International Conference Held in Prague, September 15–18, 2014 (Prague), 163–180.

Epigraphic Survey

1930   Medinet Habu. Volume I. Earlier Historical Records of Ramses III (Oriental Institute Publications 8, Chicago).

Evans, R. J.

2001   In Defence of History (London).

Evian, S. B. D.

2011   Egypt and the Levant in the Iron Age I–IIA: The Ceramic Evidence, in: Tel Aviv 38/1, 94–119.

Falconer, S. E.

1994   The Development and Decline of Bronze Age Civilization in the Southern Levant: A Reassessment of Urbanism and Ruralism, in: C. Mathers/S. Stoddart (*ed.*), Development and Decline of Bronze Age Civilization in the Mediterranean Bronze Age (Sheffield Archaeological Monographs 8, Sheffield), 305–333.

Fappas, I.

2011   Exchange of Ideas in the Eastern Mediterranean during the 14th and 13th Centuries BC: The Case of Perfumed Oil Use and Ideology, in: K. Duistermaat/I. Regulski (*ed.*), Intercultural Contacts in the Ancient Mediterranean. Proceedings of the International Conference at the Netherlands-Flemish Institute in Cairo, 25th to 29th October 2008 (Leuven, Paris, Walpole), 495–510.

Fargo, V. M.

1993   Hesi, Tell el-, in: E. Stern (*ed.*), The New Encyclopedia of Archaeological Excavations in the Holy Land. Vol. 2 (Jerusalem), 630–634.

Faulseit, R. K.

2016   Collapse, Resilience, and Transformation in Complex Societies: Modeling Trends and Understanding Diversity, in: R. K. Faulseit (*ed.*), Beyond Collapse. Archaeological Perspectives on Resilience, Revitalization, and Transformation in Complex Societies (Carbondale), 3–26.

Faulseit, R. K. (*ed.*)

2016   Beyond Collapse. Archaeological Perspectives on Resilience, Revitalization, and Transformation in Complex Societies (Carbondale).

Faust, A.

2006   Israel's Ethnogenesis. Settlement, Interaction, Expansion and Resistance (London).

2011   The Excavations at Tel 'Eton (2006–2009): A Preliminary Report, in: Palestine Exploration Quarterly 143/3, 198–224.

2014   The History of Tel 'Eton Following the Results of the First Seven Seasons of Excavations (2006–2012), in: P. Bieliński/M. Gawlikowski/R. Koliński *et al.* (*ed.*), Proceedings of the 8th International Conference on the Archaeology of the Ancient Near East, 30 April – 4 May 2012, University of Warsaw. Vol. 2: Excavations and Progress Reports, Posters (Wiesbaden), 585–606.

Faust, A./H. Katz

2015   A Canaanite Town, a Judahite Center, and a Persian Period Fort: Excavating over Two Thousand Years of History at Tel 'Eton, in: Near Eastern Archaeology 78/2, 88–102.

Feldman, M. H.

2006   Diplomacy by Design. Luxury Arts and an 'International Style' in the Ancient Near East, 1400–1200 BCE (Chicago).

FEMA

2016   Fire in the United States 2004–2013, 17th Edition, March 2016.

Finkelstein, I.

1988   Arabian Trade and Socio-Political Conditions in the Negev in the Twelfth-Eleventh Centuries B.C.E., in: Journal of Near Eastern Studies 47/4, 241–252.

1994   The Emergence of Israel: A Phase in Cyclic History of Canaan in the Third and Second Millennia BCE, in: I. Finkelstein/N. Na'aman (*ed.*), From Nomadism to Monarchy. Archaeological and Historical Aspects of Early Israel (Jerusalem), 150–178.

1995   The Great Transformation: The 'Conquest' of the Highland Frontiers and the Rise of the Territorial States, in: T. E. Levy (*ed.*), The Archaeology of Society in the Holy Land (London), 349–367.

1998   Philistine Chronology: High, Middle or Low?, in: S. Gitin/A. Mazar/E. Stern (*ed.*), Mediterranean Peoples in Transition. Thirteenth to Early Tenth Centuries B.C.E. (Jerusalem), 140–147.

2000   The Philistine Settlements: When, Where and How Many?, in: E. D. Oren (*ed.*), The Sea Peoples and Their World: A Reassessment (University Museum Monograph 108, University Museum Symposium Series 11, Philadelphia), 159–180.

2009   13. Destructions: Megiddo as a Case Study, in: Schloen, J. D. (*ed.*), Essays in Honor of Lawrence E. Stager (Winona Lake), 113–126.

2011   Tall al-Umayri in the Iron Age I: Facts and Fiction, with an Appendix on the History of the Collared Rim Pithoi, in: I. Finkelstein/N. Na'aman (*ed.*), The Fire Signals of Lachish. Studies in the Archaeology and History of Israel in the Late Bronze Age, Iron Age, and Persian Period in Honor of David Ussishkin (Winona Lake), 113–128.

Finkelstein, I./D. Ussishkin

2000   Archaeological and Historical Conclusions, in: I. Finkelstein/D. Ussishkin/B. Halpern (*ed.*), Megiddo III. The 1992–1996 Seasons (Monograph Series of the Sonia and Marco Nadler Institute of Archaeology of Tel Aviv University 18, Tel Aviv), 576–605.

Finkelstein, I./D. Ussishkin/R. Deutsch

2006   Western Area M, in: I. Finkelstein/D. Ussishkin/B. Halpern (*ed.*), Megiddo IV. The 1998–2000 Seasons (Monograph Series of the Sonia und Marco Nadler Institute of Archaeology of Tel Aviv University 24, Tel Aviv), 66–80.

Finkelstein, I./D. Ussishkin/B. Halpern

2006   Archaeological and Historical Conclusions, in: I. Finkelstein/D. Ussishkin/B. Halpern (*ed.*), Megiddo IV. The 1998–2000 Seasons (Monograph Series of the Sonia and Marco Nadler Institute of Archaeology 24, Tel Aviv), 843–857.

2008   Megiddo, in: E. Stern (*ed.*), The New Encyclopedia of Archaeological Excavations in the Holy Land. Vol. 5 (Jerusalem), 1944–1950.

Fischer, P. M.

2006   Tell Abu al-Kharaz in the Jordan Valley. Vol. 2: The Middle and Late Bronze Ages (Denkschriften der Gesamtakademie 39, Wien).

2014   The Southern Levant (Transjordan) during the Late Bronze Age, in: M. L. Steiner/A. E. Killebrew (*ed.*), The Oxford Handbook of the Archaeology of the Levant c. 8000–332 BCE (Oxford), 561–576.

Fischer, P. M./T. Bürger

2013   The New Swedish Cyprus Expedition 2012 Excavations at Hala Sultan Tekke, in: Opuscula. Annual of the Swedish Institutes at Athens and Rome 6, 45–79.

Fischer, P. M./M. Sadeq

2008   'Ajjul, Tell el-, in: E. Stern (*ed.*), The New Encyclopedia of Archaeological Excavations in the Holy Land. Vol. 5 (Jerusalem), 1565–1566.

Fisher, K. D.

2007   The 'Aegeanization' of Cyprus at the End of the Bronze Age: An Architectural Perspective, in: T. R. Harrison (*ed.*), Cyprus, the Sea Peoples and the Eastern Mediterranean Regional Perspectives of Continuity and Change (Scripta Mediterranea 27/28, Winona Lake), 81–103.

Fowler, C.

2004   The Archaeology of Personhood. An Anthropological Approach (London, New York).

Frank, A. G.

1993   Bronze Age World System Cycles, in: Current Anthropology 34/4, 383–429.

Frankel, R.

1994   Upper Galilee in the Late Bronze-Iron I Transition, in: I. Finkelstein/N. Na'aman (*ed.*), From Nomadism to Monarchy. Archaeological and Historical Aspects of Early Israel (Jerusalem), 18–34.

Franken, H. J.

1969   Excavations at Tell Deir 'Allā I. A Stratigraphical and Analytical Study of the Early Iron Age Pottery (Leiden).

1992   Excavations at Tell Deir 'Allā. The Late Bronze Age Sanctuary (Leiden).

Franklin, N.

2013a   Part I: The Excavation, in: I. Finkelstein/D. Ussishkin/E. H. Cline (*ed.*), Megiddo V. The 2004–2008 Seasons. Vol. 1 (Winona Lake), 178–214.

2013b   Part III: Another Interpretation of the Remains – The Nordburb and Chamber F, in: I. Finkelstein/D. Ussishkin/E. H. Cline (*ed.*), Megiddo V. The 2004–2008 Seasons. Vol. 1 (Winona Lake), 228–246.

2013c   Archaeological and Historical Conclusions, in: I. Finkelstein/D. Ussishkin/E. H. Cline (*ed.*), Megiddo V. The 2004–2008 Seasons. Vol. 3 (Winona Lake), 1329–1340.

French, E.

1998   The Ups and Downs of Mycenae: 1250–1150 BCE, in: S. Gitin/A. Mazar/E. Stern (*ed.*), Mediterranean Peoples in Transition. Thirteenth to Early Tenth Centuries B.C.E (Jerusalem), 2–5.

2013a   Cilicia, in: A. E. Killebrew/G. Lehmann (*ed.*), The Philistines and Other 'Sea Peoples' in Text and Archaeology (Archaeology and Biblical Studies 15, Atlanta), 479–483.

2013b   The Origin and Date of Aegean-Type Pottery in the Levant, in: A. E. Killebrew/G. Lehmann (*ed.*), The Philistines and Other 'Sea Peoples' in Text and Archaeology (Archaeology and Biblical Studies 15, Atlanta), 345–347.

French, E./S. Sherratt

2004   Section D: Topological and Chronological Considerations, in: D. Ussishkin (*ed.*), The Renewed Archaeological Excavations at Lachish (1973–1994). Vol. 3 (Tel Aviv), 1446–1449.

Frumin, S. *et al.*

2015   Studying Ancient Anthropogenic Impacts on Current Floral Biodiversity in the Southern Levant as Reflected by the Philistine Migration, in: Scientific Reports 5, 1–10.

Gadot, Y.

2008   Continuity and Change in the Late Bronze to Iron Age Transition in Israel's Coastal Plain: A Long Term Perspective, in: A. Fantalkin/A. Yasur-Landau (*ed.*), Bene Israel. Studies in the Archaeology of Israel and the Levant during the Bronze and Iron Ages in Honour of Israel Finkelstein (Culture and History of the Ancient Near East 31, Brill) 55–73.

Gadot, Y. *et al.*

2006   Area K (Levels K-5 and K-4, the 1998-2002 Seasons), in: I. Finkelstein/D. Ussishkin/B. Halpern (*ed.*), Megiddo IV. The 1998–2000 Seasons (Monograph Series of the Sonia and Marco Nadler Institute of Archaeology 24, Tel Aviv), 87–103.

Gal, Z.

1988   The Late Bronze Age in Galilee: A Reassessment, in: Bulletin of the American Schools of Oriental Research 272, 79–84.

Galili, E./N. Gale/B. Rosen

2011   Bronze Age Metal Cargoes off the Israeli Coast, in: Skyllis 11/2, 64–73.

2013   A Late Bronze Age Shipwreck with a Metal Cargo from Hishuley Carmel, Israel, in: International Journal of Nautical Archaeology 42/1, 2–23.

Gallet, Y. *et al.*

2006   Possible Impact of the Earth's Magnetic Field on the History of Ancient Civilizations, in: Earth and Planetary Science Letters 246, 17–26.

Garraty, C. P.

2010   Investigating Market Exchange in Ancient Societies: A Theoretical Review, in: C. P. Garraty/B. L. Stark (*ed.*), Archaeological Approaches to Market Exchange in Ancient Societies (Boulder), 3–32.

Gates, M.-H.

2011   Southern and Southeastern Anatolia in the Late Bronze Age, in: S. Steadman/G. McMahon (*ed.*), The Oxford Handbook of Ancient Anatolia (Oxford), 393–412.

2013   Early Iron Age Newcomers at Kinet Höyük, Eastern Cilicia, in: A. E. Killebrew/G. Lehmann (*ed.*), The Philistines and Other 'Sea Peoples' in Text and Archaeology (Archaeology and Biblical Studies 15, Atlanta), 485–507.

Genz, H.

2011   Foreign Contacts of the Hittites, in: H. Genz/D. P. Mielke (*ed.*), Insights into Hittite History and Archaeology (Colloquia Antiqua 2, Leuven, Paris, Walpole), 301–331.

2013   'No Land Could Stand before Their Arms, from Hatti... on...' New Light on the End of the Hittite Empire and the Early Iron Age in Central Anatolia, in: A. E. Killebrew/G. Lehmann (*ed.*), The Philistines and Other 'Sea Peoples' in Text and Archaeology (Archaeology and Biblical Studies 15, Atlanta), 469–477.

Georgiou, A.

2015   Cyprus during the 'Crisis Years' Revisited, in: A. Babbi/F. Bubenheimer-Erhart/B. Marín-Aguilera *et al.* (*ed.*), The Mediterranean Mirror. Cultural Contacts in the Mediterranean Sea between 1200 and 750 B.C. (Mainz), 129–145.

Georgiou, H.

1979   Relations between Cyprus and the Near East in the Middle and Late Bronze Age, in: Levant 11, 84–100.

1993   A Sea Approach to Trade in the Aegean Bronze Age, in: C. Zerner/P. Zerner/J. Winder (*ed.*), Wace and Blegen. Pottery as Evidence for Trade in the Aegean Bronze Age, 1939–1989 (Amsterdam), 353–364.

1997   Seafaring, Trade Routes, and the Emergence of the Bronze Age: Urban Centers in the Eastern Mediterranean, in: S. Swiny/R. L. Hohlfelder/H. W. Swiny (*ed.*), Res Maritimae. Cyprus and the Eastern Mediterranean from Prehistory to Late Antiquity (Cyprus American Archaeological Research Institute Monograph Series 1, Atlanta), 117–124.

Gilan, A.

2013a   Pirates in the Mediterranean – A View from the Bronze Age, in: N. Jaspert/S. Kolditz (*ed.*), Seeraub im Mittelmeerraum. Piraterie, Korsarentum und maritime Gewalt von der Antike bis zur Neuzeit (Mittelmeerstudien 3, Paderborn), 49–66.

2013b   Hittites in Canaan? The Archaeological Evidence, in: Biblische Notizen 156, 39–52.

Gilboa, A.

2014   The Southern Levant (Cisjordan) during the Iron Age I Period, in: M. L. Steiner/A. E. Killebrew (*ed.*), The Oxford Handbook of the Archaeology of the Levant c. 8000–332 BCE (Oxford), 624–648.

2015   Dor and Egypt in the Early Iron Age: An Archaeological Perspective of (Part of) the Wenamun Report, in: Ägypten und Levante/Egypt and the Levant 25, 247–274.

Gilboa, A./Y. Goran

2015   Early Iron Age Phoenician Networks: An Optical Mineralogy Study of Phoenician Bichrome and Related Wares in Cyprus, in: Ancient West & East 14, 73–110.

Gilmour, G. H.

1992   Mycenaean IIIA and IIIB Pottery in the Levant and Cyprus, in: Report of the Department of Antiquities, Cyprus, 113–128.

2014   Gezer VI. The Objects from Phases I and II (1964–1674) (Annual of the Nelson Glueck School of Biblical Archaeology/Hebrew Union College 10, Winona Lake).

Gittlen B. M.

1977   Studies in the Late Cypriote Pottery Found in Palestine (PhD Thesis, University of Pennsylvania, Ann Arbor [unpublished]).

1981   The Cultural and Chronological Implications of Cypro-Palestine Trade during the Late Bronze Age, in: Bulletin of the American Schools of Oriental Research 241, 49–59.

Golani, A.

2013   Jewelry from the Iron Age II Levant (Orbis Biblicus et Orientalis, Series Archaeologica 34, Fribourg).

2014   Revealed by Their Jewelry: Ethnic Identity of Israelites during the Iron Age in the Southern Levant, in: Polish Archaeology in the Mediterranean 23/2, 269–296.

Golani, A./E. Galili

2015   A Late Bronze Age Canaanite Merchant's Hoard of Gold Artifacts and Hematite Weights from the Yavneh-Yam Anchorage, Israel, in: Journal of Ancient Egyptian Interconnections 7, 16–29.

Gonen, R.

1984   Urban Canaan in the Late Bronze Period, in: Bulletin of the American Schools of Oriental Research 253, 61–73.

1992a   Burial Patterns and Cultural Diversity in Late Bronze Age Canaan (American Schools of Oriental Research Dissertation Series 7, Winona Lake).

1992b   The Late Bronze Age, in: A. Ben-Tor (*ed.*), The Archaeology of Ancient Israel (New Haven, London), 211–257.

Goren, Y.

2013   International Exchange during the Late Second Millennium B.C.: Microarchaeological Study of Finds from the Uluburun Ship, in: J. Aruz/S. B. Graff/Y. Rakic (*ed.*), Cultures in Contact. From Mesopotamia to the Mediterranean in the Second Millennium B.C. (New York), 54–61.

Goren, Y. *et al.*

2003   The Location of Alashiya: New Evidence from Petrographic Investigation of Alashiyan Tablets from El-Amarna and Ugarit, in: American Journal of Archaeology 107/2, 233–255.

2004   Letters of the Great Powers. Alashiya, in: Y. Goren/I. Finkelstein/N. Na'aman (*ed.*), Inscribed in Clay. Provenance Study of the Amarna Letters and Other Ancient Near Eastern Texts (Monograph Series of the Sonia and Marco Nadler Institute of Archaeology 23, Tel Aviv), 48–75.

Gould, B.

2010   Egyptian Pottery, in: T. Dothan/B. Brandl (*ed.*), Deir el-Balaḥ: Excavations in 1977–1982 in the Cemetery and Settlement. Vol. 2: The Finds (Qedem: Monographs of the Institute of Archaeology 50, Jerusalem), 7–56.

Gottlieb, Y.

2010   The Advent of the Age of Iron in the Land of Israel: A Review and Reassessment, in: Tel Aviv 37/1, 89–110.

Greaves, A. M.

2011   The Greeks in Western Anatolia, in: S. R. Steadman/G. McMahon (*ed.*), The Oxford Handbook of Ancient Anatolia (Oxford), 500–514.

Green, J.

2007   Anklets and the Social Construction of Gender and Age in the Late Bronze and Early Iron Age Southern Levant, in: S. Hamilton/R. D. Whitehouse/K. I. Wright (*ed.*), Archaeology and Women. Ancient and Modern Issues (Walnut Creek), 283–311.

Gregory, C. A.

1982   Gifts and Commodities (London).

1997   Savage Money. The Anthropology and Politics of Commodity Exchange (Studies in Anthropology and History 21, London).

Hafford, W. B.

2001   Merchants in the Late Bronze Age Eastern Mediterranean: Tools, Texts and Trade (PhD Thesis, University of Pennsylvania, Philadelphia [unpublished]).

Haggis, D. C.

1995   The End of the Bronze Age: Changes in Warfare and the Catastrophe ca. 1200 B.C. by Robert Drews, in: The American Journal of Philology 116/2, 321–324.

Halayqa, I. K. H.

2010   The Demise of Ugarit in the Light of Its Connections with Hatti, in: Ugarit-Forschungen 42, 297–330.

Haldane, C.

1993   Direct Evidence for Organic Cargoes in the Late Bronze Age, in: World Archaeology 24/3, 348–360.

Hall, T. D./C. Chase-Dunn

1993   The World-Systems Perspective and Archaeology: Forward into the Past, in: Journal of Archaeological Research 1/2, 121–143.

Hallager, E,

2010   Crete, in: E. H. Cline (ed.), The Oxford Handbook of the Bronze Age Aegean (Oxford), 149–159.

Hallo, W. W.

1992   From Bronze Age to Iron Age in Western Asia: Defining the Problem, in: W. A. Ward/M. S. Joukowsky (ed.), The Crisis Years: The 12th Century B.C. From beyond the Danube to the Tigris (Dubuque), 1–9.

Hankey, V.

1967   Mycenaean Pottery in the Middle East: Notes on Finds since 1951, in: Annual of the British School at Athens 62, 107–47.

1974   A Late Bronze Age Temple at Amman: I. The Aegean Pottery, in: Levant 6, 131–159.

1981a   The Aegean Interest in El Amarna, in: Journal of Mediterranean Anthropology and Archaeology 1, 38–49.

1981b   Imported Vessels of the Late Bronze Age at High Places, in: A. Biran (ed.), Temples and High Places in Biblical Times (Jerusalem), 108–117.

1993   Pottery as Evidence for Trade: The Levant from the Mouth of the River Orontes to the Egyptian Border, in: C. Zerner/P. Zerner/J. Winder (ed.), Wace and Blegen. Pottery as Evidence for Trade in the Aegean Bronze Age, 1939–1989 (Amsterdam), 91–99.

Hasel, M. G.

1998   Domination and Resistance. Egyptian Military Activity in the Southern Levant, ca. 1300–1185 B.C. (Probleme der Ägyptologie 11, Leiden, Boston, Köln).

Hawkins, J. D.

1994   The End of the Bronze Age in Anatolia: New Light from Recent Discoveries, in: A. Çilingiroğlu/D. H. French (ed.), Anatolian Iron Ages 3. The Proceedings of the Third Anatolian Iron Ages Colloquium Held at Van, 6–12 August 1990 (Oxford), 91–94.

Heady, P.

2005   Barter, in: J. G. Carrier (ed.), A Handbook of Economic Anthropology (Cheltenham, Northampton), 262–274.

Heinz, M./S. Kulemann-Ossen

2014   The Northern Levant (Lebanon) during the Late Bronze Age, in: M. L. Steiner/A. E. Killebrew (ed.), The Oxford Handbook of the Archaeology of the Levant c. 8000–332 BCE (Oxford), 524–540.

Helck, W.

1979   Die Beziehungen Ägyptens und Vorderasiens zur Ägäis bis ins 7. Jahrhundert v. Chr. (Erträge der Forschung 120, Darmstadt).

Heltzer, M.

1978   Goods, Prices and the Organization of Trade in Ugarit (Wiesbaden).

1988 The Late Bronze Age Service System and Its Decline, in: M. Heltzer/E. Lipiński (*ed.*), Society and Economy in the Eastern Mediterranean (c. 1500–1000 B.C.). Proceedings of the International Symposium Held at the University of Haifa from the 28th of April to the 2nd of May 1985 (Orientalia Lovaniensia Analecta 23, Leuven), 7–18.

1999 The Economy of Ugarit, in: W. G. E. Watson/N. Wyatt (*ed.*), Handbook of Ugaritic Studies (Handbook of Oriental Studies 39, Leiden, Boston, Köln), 423–454.

Hénaff, M.

2013 Ceremonial Gift-Giving: The Lessons of Anthropology from Mauss and beyond, in: M. L. Satlow (*ed.*), The Gift in Antiquity (Malden, Oxford), 12–24.

Hennessy, J. B.

1966 Excavation of a Late Bronze Age Temple at Amman, in: Palestine Exploration Quarterly 98/2, 155–162.

1985 Thirteenth Century B.C. Temple of Human Sacrifice at Amman, in: E. Gubel/E. Lipiński (*ed.*), Phoenicia and Its Neighbours. Proceedings of the Colloquium Held on the 9th and 10th of December 1983 at the 'Vrije Universiteit Brussel', in Cooperation with the 'Centrum voor Myceense en Archaïsch-Griekse Cultuur' (Studia Phoenica 3, Leuven), 85–104.

Herr, L. G.

2000a Tell el-`Umayri and the Madaba Plains Region during the Late Bronze-Iron Age I Transition, in: S. Gitin/A. Mazar/E. Stern (*eds.*), Mediterranean People in Transition: Thirteenth to Early Tenth Centuries B.C.E. (Jerusalem), 251–264.

2000b The Settlement and Fortification of Tell al-'Umayri in Jordan during the LB/Iron I Transition, in: L. E. Stager/J. A. Greene/M. D. Coogan (*ed.*), The Archaeology of Jordan and beyond. Essays in Honor of James A. Sauer (Studies in the Archaeology and History of the Levant 1, Winona Lake), 167–179.

2008 'Umeiri, Tell el-, in: E. Stern (*ed.*), The New Encyclopedia of Archaeological Excavations in the Holy Land. Vol. 5 (Jerusalem), 1848–1851.

2014 The Southern Levant (Transjordan) during the Iron Age I Period, in: M. L. Steiner/A. E. Killebrew (*ed.*), The Oxford Handbook of the Archaeology of the Levant c. 8000–332 BCE (Oxford), 649–659.

Herr, L. G./D. R. Clark/K. Bramlett

2009 From the Stone Age to the Middle Ages in Jordan: Digging up Tall al-'Umayri, in: Near Eastern Archaeology 72/2, 68–97.

Herr, L. G./M. Najjar

2008 The Iron Age, in: R. B. Adams (*ed.*), Jordan. An Archaeological Reader (London, Oakville), 311–334.

Herrmann, C.

1994 Ägyptische Amulette aus Palästina/Israel I. Mit einem Ausblick auf ihre Rezeption durch das Alte Testament (Orbis Biblicus et Orientalis 138, Göttingen).

2002 Ägyptische Amulette aus Palästina/Israel II (Orbis Biblicus et Orientalis 184, Göttingen).

2006 Ägyptische Amulette aus Palästina/Israel III (Orbis Biblicus et Orientalis, Series Archaeologica 24, Göttingen).

2013 The Amulets, in: I. Finkelstein/D. Ussishkin/E. H. Cline (*ed.*), Megiddo V. The 2004–2008 Seasons. Vol. 2 (Winona Lake).

Hesse, J. K.

2008 Contacts and Trade at Late Bronze Age Hazor: Aspects of Intercultural Relationships and Identity in the Eastern Mediterranean (PhD Thesis, Umeå University, Umeå [unpublished]).

Herzog, Z.

1982 Tel Gerisa – 1981/1982, in: Hadashot Arkheologiyot: Excavations and Surveys in Israel 1, 28–31.

1983 Tel Gerisa, 1982, in: Israel Exploration Journal 33, 121–123.

1988   Tel Gerisa – 1986, in: Hadashot Arkheologiyot: Excavations and Surveys in Israel 7, 60–62.

1989   Middle and Late Bronze Age Settlements (Strata XVII–XV), in: Z. Herzog/G. Rapp/O. Negbi (*ed.*), Excavations at Tel Michal, Israel (Publications of the Institute of Archaeology 8, Minnesota, Tel Aviv), 29–43.

1990   Tel Gerisa – 1988, in: Hadashot Arkheologiyot: Excavations and Surveys in Israel 9, 51–52.

1991   Tel Gerisa – 1989/90, in: Hadashot Arkheologiyot: Excavations and Surveys in Israel 10, 121–122.

1993a   Tel Gerisa, in: E. Stern (*ed.*), The New Encyclopedia of Archaeological Excavations in the Holy Land. Vol. 2 (Jerusalem), 480–484.

1993b   Michal, Tel, in: E. Stern (*ed.*), The New Encyclopedia of Archaeological Excavations in the Holy Land. Vol. 2 (Jerusalem), 1036–1041.

1997   Archaeology of the City: Urban Planning in Ancient Israel and Its Social Implications (Monograph Series of the Sonia and Marco Nadler Institute of Archaeology 13, Jerusalem).

2001   Archaeology and History at Tel Michal, in: E. Grossmann, Maritime Tel Michal and Apollionia. Results of the Underwater Survey, 1989–1996 (British Archaeological Reports International Series 915, Oxford), 21–30.

2008   Jaffa, in: E. Stern (*ed.*), The New Encyclopedia of Archaeological Excavations in the Holy Land. Vol. 5 (Jerusalem), 1791–1792.

Herzog, Z./T. Tsuk

1996   Tel Gerisa – 1991/92, in: Hadashot Arkheologiyot: Excavations and Surveys in Israel 15, 60–62.

Heymans, E./G. J. van Wijngaarden

2011   Low-Value Manufactured Exotics in the Eastern Mediterranean in the Late Bronze and Early Iron Ages, in: A. Vianello (*ed.*), Exotica in the Prehistoric Mediterranean (Oxford), 124–136.

Higginbotham, C. R.

2000   Egyptianization and Elite Emulation in Ramesside Palestine. Governance and Accommodation on the Imperial Periphery (Culture and History of the Ancient Near East 2, Leiden, Boston, Köln).

Hitchcock, L. A./A. M. Maeir

2014   Yo-ho, Yo-ho, a Seren's Life for Me!, in: World Archaeology 46/4, 624–640.

Hoffmeier, J. K./S. O. Moshier

2013   'A Highway out of Egypt': The Main Road from Egypt to Canaan, in: F. Förster/H. Riemer, Desert Road Archaeology in Ancient Egypt and beyond, (Africa Praehistorica 27, Köln), 485–510.

Hoffner Jr., H. A.

1992   The Last Days of Khattusha in: W. A. Ward/ M. S. Joukowsky (*ed.*), The Crisis Years: The 12th Century B.C. From beyond the Danube to the Tigris (Dubuque), 46–52.

2009   Letters from the Hittite Kingdom (Writings from the Ancient World 15, Atlanta).

Holladay Jr., J. S.

1995   The Kingdoms of Israel and Judah: Political and Economic Centralization in the Iron IIA–B (ca. 1000–750 BCE), in: T. E. Levy (*ed.*), The Archaeology of Society in the Holy Land (London), 368–398.

Horden, P./N. Purcell

2000   The Corrupting Sea. A Study of Mediterranean History (Oxford).

Huckle, G. M.

2005   The Local Dimension in the Late Bronze Age Southern Levant: A Case Study Using Imported Pottery, in: J. Clarke (*ed.*), Archaeological Perspectives on the Transmission and Transformation of Cultures in the Eastern Mediterranean (Levant Supplementary Series 2, Oxford), 59–65.

Hulin, L.

2009   Embracing the New. The Perception of Cypriot Pottery in Egypt, in: D. Michaelides/V. Kass-
        ianidou/R. S. Merrillees (*ed.*), Egypt and Cyprus in Antiquity (Oxford), 40–47.

Humphrey, C./S. Hugh-Jones

1992   Introduction: Barter, Exchange and Value, in: C. Humphrey/S. Hugh-Jones (*ed.*), Barter, Ex-
        change and Value. An Anthropological Approach (Cambridge), 1–20.

Iacovou, M.

2013   Aegean-Style Material Culture in Late Cypriot III: Minimal Evidence, Maximal Interpretation, in:
        A. E. Killebrew/G. Lehmann (*ed.*), The Philistines and Other 'Sea Peoples' in Text and Archaeolo-
        gy (Archaeology and Biblical Studies 15, Atlanta), 585–618.

2014   Cyprus During the Iron Age I Period (Late Cypriot IIC– IIIA): Settlement Pattern Crisis (LC
        IIC–IIIA) to the Restructuring (LC IIIB) of its Settlement Pattern, in: M. L. Steiner/A. E. Kille-
        brew (*ed.*), The Oxford Handbook of the Archaeology of the Levant c. 8000–332 BCE (Oxford),
        660–674.

Iakovidis, S. E.

1993   The Impact of Trade Disruption on the Mycenaean Economy in the 13th–12th Centuries B.C.E., in:
        A. Biran/J. Aviram (*ed.*), Biblical Archaeology Today, 1990. Proceedings of the Second Interna-
        tional Congress on Biblical Archaeology, Jerusalem, June – July 1990 (Jerusalem), 314–320.

Ilan, D./N. Franklin/R. S. Hallote

2000   Area F, in: I. Finkelstein/D. Ussishkin/B. Halpern (*ed.*), Megiddo III. The 1992–1996 Seasons
        (Monograph Series of the Sonia and Marco Nadler Institute of Archaeology 18, Tel Aviv), 75–104.

Ilan, D./R. S. Hallote /E. C. Cline

2000   The Middle and Late Bronze Age Pottery from Area F, in: I. Finkelstein/D. Ussishkin/B. Halpern
        (*ed.*), Megiddo III. The 1992–1996 Seasons (Monograph Series of the Sonia and Marco Nadler In-
        stitute of Archaeology 18, Tel Aviv), 186–222.

Isaac, B. L.

2005   Karl Polanyi, in: J. G. Carrier (*ed.*) A Handbook of Economic Anthropology (Cheltenham,
        Northampton), 1–25.

Issar A. S./M. Zohar

2007   Climate Change. Environment and History of the Near East, 2nd Edition (New York).

Jones, S.

1997   The Archaeology of Ethnicity. Constructing Identities in the Past and Present (London, New York).

Jung, R.

2010   End of the Bronze Age, in: E. H. Cline (*ed.*), The Oxford Handbook of the Bronze Age Aegean (Ox-
        ford), 171–184.

Jung, R./M. Mehofer

2009   A Sword of Naue II Type from Ugarit and the Historical Significance of Italian-Type Weaponry
        in the Eastern Mediterranean, in: Aegean Archaeology 8, 111–135.

Kafafi, Z. A./G. van der Kooij

2013   Tell Dēr 'Allā during the Transition from Late Bronze Age to Iron Age, in: Zeitschrift des
        Deutschen Palästina-Vereins 129/2, 121–131.

Kahn, D.

2011   The Campaign of Ramesses III against Philistia, in: Journal of Ancient Egyptian Interconnections
        3, 1–11.

Kamlah, J.

2016   Austausch als Ressource. Archäologische Zeugnisse für die Entwicklung des Fernhandels
        in Palästina während der späten Bronze- und frühen Eisenzeit, in: H. Jenni/M. Saur (*ed.*):

Nächstenliebe und Gottesfurcht. Beiträge aus alttestamentlicher, semitistischer und altorientalistischer Wissenschaft für Hans-Peter Mathys zum 65. Geburtstag (Alter Orient und Altes Testament 439; Münster), 203–232.

Kaniewski, D. E. *et al.*

2010   Late Second–Early First Millennium BC Abrupt Climate Changes in Coastal Syria and Their Possible Significance for the History of the Eastern Mediterranean, in: Quaternary Research 74/2, 207–215.

2013   Environmental Roots of the Late Bronze Age Crisis, in: PLoS ONE 8/8, online article <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0071004> (accessed on 05.12.2016).

Kaniewski, D./J. Guiot/E. van Campo

2015   Drought and Societal Collapse 3200 Years ago in the Eastern Mediterranean: A Review, in: Wiley Interdisciplinary Reviews: Climate Change 6/4, 369–382.

Kaplan, J.

1967   Jaffa's History Revealed by the Spade, in: Archaeological Institute of America (*ed.*), Archaeological Discoveries in the Holy Land (New York), 113–118.

1972   The Archaeology and History of Tel Aviv-Jaffa, in: The Biblical Archaeologist 35/3, 65–95.

Kaplan, J./H. Kaplan

1976   Jaffa, in: M. Avi-Yonah (*ed.*), The Encyclopedia of Archaeological Excavations in the Holy Land. Vol. 2 (Jerusalem), 532–541.

Kaplan, J./H. Ritter-Kaplan

1993   Jaffa, in: E. Stern (*ed.*), The New Encyclopedia of Archaeological Excavations in the Holy Land. Vol. 2 (Jerusalem), 655–659.

Karageorghis, V.

1992   The Crisis Years: Cyprus, in: W. A. Ward/M. S. Joukowsky (*ed.*), The Crisis Years: The 12th Century B.C. From beyond the Danube to the Tigris (Dubuque), 79–86.

1998   Hearths and Bathtubs in Cyprus: A 'Sea Peoples'' Innovation?, in: S. Gitin/A. Mazar/E. Stern, (*ed.*), Mediterranean Peoples in Transition. Thirteenth to Early Tenth Centuries B.C.E. (Jerusalem), 276–282.

2000   Cultural Innovations in Cyprus Relating to the Sea Peoples, in: E. D. Oren (*ed.*), The Sea Peoples and Their World: A Reassessment (University Museum Monograph 108, University Museum Symposium Series 11, Philadelphia), 255–279.

Kassianidou, V.

2009   'May He Send Me Silver in Great Quantities' EA 35, in: D. Michaelides/V. Kassianidou/R. S. Merrillees (*ed.*), Egypt and Cyprus in Antiquity (Oxford), 48–59.

2013   The Production and Trade of Cypriot Copper in the Late Bronze Age. An Analysis of the Evidence, in: Pasiphae: Rivista di Filologia e Antichità Egee 7, 133–146.

Kaufmann, H.

1988   The Collapse of Ancient States and Civilizations as an Organizational Problem, in: N. Yoffee/G. L. Cowgill (*ed.*), The Collapse of Ancient States and Civilizations (Tucson), 219–235.

Kealhofer, L./P. Grave

2011   The Iron Age on the Central Anatolian Plateau, in: S. R. Steadman/G. McMahon (*ed.*), The Oxford Handbook of Ancient Anatolia (Oxford), 415–442.

Keel, O.

1995   Corpus der Stempelsiegel-Amulette aus Palästina/Israel. Von den Anfängen bis zur Perserzeit: Einleitung (Orbis Biblicus et Orientalis, Series Archaeologica 10, Göttingen).

Kelder, J. M.

2006   Mycenaeans in Western Anatolia, in: Talanta 36, 49–81.

2009 Royal Gift Exchange between Mycenae and Egypt: Olives as 'Greeting Gifts' in the Late Bronze Age Eastern Mediterranean, in: American Journal of Archaeology 113/3, 339–352.

2010 The Egyptian Interest in Mycenaean Greece, in: Jaarbericht Ex Oriente Lux 42, 125–140.

2012 Ahhiyawa and the World of the Great Kings. A Re-Evaluation of Mycenaean Political Structures, in: Talanta 44, 41–52.

Kelly, K. G.

2011 Arenas of Action: Trade as Power, Trade as Identity, in: A. S. Agbe-Davies/A. A. Bauer (*ed.*), Social Archaeologies of Trade and Exchange. Exploring Relationships among People, Places, and Things (Walnut Creek), 99–117.

Kelm, G. L./A. Mazar

1995 Timnah. A Biblical City in the Sorek Valley (Winona Lake).

Kelso, J. L.

1968 The Excavation of Bethel (1934–1960) (Annual of the American Schools of Oriental Research 39, Cambridge).

1993 Bethel, in: E. Stern (*ed.*), The New Encyclopedia of Archaeological Excavations in the Holy Land. Vol. 1 (Jerusalem), 192–194.

Kempinski, A.

1993 'Ajjul, Tell el-, in: E. Stern (*ed.*), The New Encyclopedia of Archaeological Excavations in the Holy Land. Vol. 1 (Jerusalem), 52–53.

Keswani, P. S.

1993 Models of Local Exchange in Late Bronze Age Cyprus, in: Bulletin of the American Schools of Oriental Research 292, 73–83.

Khatchadourian, L.

2011 The Iron Age in Eastern Anatolia, in: S. R. Steadman/G. McMahon (*ed.*), The Oxford Handbook of Ancient Anatolia (Oxford), 464–499.

Killebrew, A. E.

1998 Mycenaean and Aegean-Style Material Culture in Canaan during the 14th–12th Centuries BC: Trade, Colonization, Diffusion, or Migration?, in: E. H. Cline/D. Harris-Cline (*ed.*), The Aegean and the Orient in the Second Millennium. Proceedings of the 50th Anniversary Symposium, Cincinatti, 18–20 April 1997 (Aegaeum 18, Liège), 159–170.

2005 Biblical Peoples and Ethnicity. An Archaeological Study of Egyptians, Canaanites, Philistines, and Early Israel, 1300–1100 B.C.E. (Archaeology and Biblical Studies 9, Atlanta).

2008 Aegean-Style Pottery and Associated Assemblages in the Southern Levant: Chronological Implications Regarding the Transition from the Late Bronze II to the Iron I and the Appearance of the Philistines, in: L. L. Grabbe (*ed.*), Israel in Transition. From the Late Bronze II to the Iron IIa (c. 1250–850 BCE). Vol. 1: The Archaeology (New York, London), 54–71.

2013 Early Philistine Pottery Technology at Tel Miqne-Ekron: Implications for the Late Bronze-Early Iron Age Transition in the Eastern Mediterranean, in: A. E. Killebrew/G. Lehmann (*ed.*), The Philistines and Other 'Sea Peoples' in Text and Archaeology (Archaeology and Biblical Studies 15, Atlanta), 77–129.

2014 Introduction to the Levant during the Transitional Late Bronze Age/Iron Age I and Iron Age I Periods, in: M. L. Steiner/A. E. Killebrew (*ed.*), The Oxford Handbook of the Archaeology of the Levant c. 8000–332 BCE (Oxford), 595–606.

Killebrew, A. E./G. Lehmann

2013 Introduction: The World of the Philistines and Other Sea Peoples, in: A. E. Killebrew/G. Lehmann (*ed.*), The Philistines and Other 'Sea Peoples' in Text and Archaeology (Archaeology and Biblical Studies 15, Atlanta), 1–17.

Killebrew, A. E./A. Mazar

2009   Area N North: Stratigraphy and Architecture, in: N. Panitz-Cohen/A. Mazar (*ed.*), Excavations at Tel Beth-Shean 1989–1996. Vol. 3.: The 13th–11th Century BCE Strata in Areas N and S (Jerusalem), 33–71.

Killebrew, A. E./M. L. Steiner

2014   Introduction, in: M. L. Steiner/A. E. Killebrew (*ed.*), The Oxford Handbook of the Archaeology of the Levant c. 8000–332 BCE (Oxford), 1–7.

Kitchen, K. A.

2000   Regnal and Genealogical Data of Ancient Egypt (Absolute Chronology I). The Historical Chronology of Ancient Egypt, a Current Assessment, in: M. Bietak (*ed.*), The Synchronisation of Civilisations in the Eastern Mediterranean in the Second Millennium B.C. Proceedings of an International Symposium at Schloß Haindorf, 15th–17th of November 1996 and at the Austrian Academy, Vienna, 11th–12th of May 1998 (Denkschriften der Gesamtakademie 19, Wien), 39–52.

2009   Alas(h)i(y)a (Irs) and Asiya (Isy) in Ancient Egyptian Sources, in: D. Michaelides/V. Kassianidou/R. S. Merrillees (*ed.*), Egypt and Cyprus in Antiquity (Oxford), 1–8.

Klengel, H.

1979   Handel und Händler im alten Orient (Leipzig).

1992   Syria: 3000 to 300 B.C. A Handbook of Political History (Berlin).

2013   Syria 1350–1200 BC, in: W. Orthmann/M. Al-Maqdissi/P. Matthiae (*ed.*), Archéolgie et Histoire de la Syrie (Schriften zur Vorderasiatischen Archäologie 1,Wiesbaden), 339–344.

Kletter, R.

2003   Iron Age Hoards of Precious Metals in Palestine – an 'Underground Economy'? in: Levant 35, 139–152.

Klinge, J./P. Fall

2010   Archaeobotanical Inference of Bronze Age Land Use and Land Cover in the Eastern Mediterranean, in: Journal of Archaeological Science 37/10, 2622–2629.

Knapp, A. B.

1985   Alashiya, Caphtor/Keftiu, and Eastern Mediterranean Trade: Recent Studies in Cypriote Archaeology and History, in: Journal of Field Archaeology 12/2, 231–250.

1987   Pots, PIXE, and Data Processing at Pella in Jordan, in: Bulletin of the American Schools of Oriental Research 266, 1–30.

1988a   Hoards D'Oeuvres: Of Metals and Men on Bronze Age Cyprus, in: Oxford Journal of Archaeology 7/2, 147–176.

1988b   The History and Culture of Ancient Western Asia and Egypt (Chicago).

1989   Response: Independence, Imperialism, and the Egyptian Factor, in: Bulletin of the American Schools of Oriental Research 275, 64–68.

1991   Spice, Drugs, Grain and Grog: Organic Goods in Bronze Age Eastern Mediterranean Trade, in: N. Gale (*ed.*), Bronze Age Trade in the Mediterranean (Göteburg), 21–68.

1993   Thalassocracies in Bronze Age East Mediterranean Trade: Making and Breaking a Myth, in: World Archaeology 24/3, 32–347.

1994   Emergence, Development and Decline on Bonze Age Cyprus, in: C. Mathers/S. Stoddart (*ed.*), Development and Decline of Bronze Age Civilization in the Mediterranean Bronze Age (Sheffield Archaeological Monographs 8, Sheffield), 271–304.

1997   Mediterranean Maritime Landscapes: Transport, Trade, and Society on Late Bronze Age Cyprus, in: S. Swiny/R. L. Hohlfelder/H. W. Swiny (*ed.*), Res Maritimae. Cyprus and the Eastern Mediterranean from Prehistory to Late Antiquity (Cyprus American Archaeological Research Institute Monograph Series 1, Atlanta), 153–162.

1998   The Mediterranean Bronze Age Trade: Distance, Power, and Place, in: E. H. Cline/D. Harris-Cline (*ed.*), The Aegean and the Orient in the Second Millennium. Proceedings of the 50th Anniversary Symposium, Cincinnati, 18–20 April 1997 (Aegaeum 18, Lièges), 193–207.

2013a Matter of Fact: Transcultural Contacts in the Late Bronze Age Eastern Mediterranean, in: J. Maran/P. Stockhammer (*ed.*), Materiality and Social Practice. Transformative Capacities of Intercultural Encounters (Oxford, Oakville), 32– 50.

2013b The Archaeology of Cyprus. From Earliest Prehistory through the Bronze Age (Cambridge).

Knapp, A. B./J. F. Cherry

1994 Provenience Studies and Bronze Age Cyprus: Production, Exchange and Politico-Economic Change (Monographs in World Archaeology 21, Madison).

Knapp, A. B./S. W. Manning

2016 Crisis in Context: The End of the Late Bronze Age in the Eastern Mediterranean, in: American Journal of Archaeology 120/1, 99–149.

Knauf, E. A.

2008 From Archeology to History, Bronze and Iron Ages with Special Regard to the Year 1200 B.C.E, and the Tenth Century, in: L. L. Grabbe (*ed.*), Israel in Transition. From the Late Bronze II to the Iron IIa (c. 1250–850 BCE). Vol. 1: The Archaeology (New York, London), 72–85.

Kochavi, M.

1974 Khirbet Rabûd = Debir, in: Tel Aviv 1, 2–33.

Koehl, R. B.

1986 The Mycenaean and Cypriot Pottery, in: P. E. McGovern (*ed.*), The Late Bronze and Early Iron Ages of Central Transjordan. The Baq‘ah Valley Project, 1977–1981 (University Museum Monograph 65, Philadelphia), 194–201.

Kopanias, K.

2015 The King‘s Household, Royal Gifts and the International Trade in the Amarna Age, in: T. E. Levy (*ed.*), Kingship in Ancient Greece: From Agamemnon to Cleopatra. International Conference in Honor of Pierre Carlier, Athens, 6–8 February 2014. KTEMA, Civilisations de l'Orient, de la Grèce et de Rome Antiques 40 (Strasbourg), 199–206.

Kopetzky, K.

2011 Tell el-Ajjul, in: M. A. Martin (*ed.*), Egyptian-type Pottery in the Late Bronze Age Southern Levant (Denkschriften der Gesamtakademie 69, Wien), 201–209.

Kozal, E.

2007 Regionality in Anatolia between 15th and 13th Centuries BC: Red Lustrous Wheel-Made Ware versus Mycenaean Pottery, in: I. Hein, The Lustrous Wares of Late Bronze Age Cyprus and the Eastern Mediterranean (Denkschriften der Gesamtakademie 13), 141–148.

Kromholz, A. H.

1984 Imported Cypriot Pottery, in: E. Stern (*ed.*) Excavations at Tel Mevorakh II (1973–1976). The Bronze Age (Qedem: Monographs of the Institute of Archaeology 18, Jerusalem), 16–20.

LaBianca, Ø. S./R. W. Younker

1995 The Kingdoms of Ammon, Moab and Edom: The Archaeology of Society in Late Bronze/Iron Age Transjordan (ca. 1400–500 BCE), in: T. E. Levy (*ed.*), The Archaeology of Society in the Holy Land (London), 399–415.

Laemmel, S.

2009 A Note on the Material from the Late Bronze and Early Iron Age: Cemeteries of Tell el-Far‘ah South, in: C. Bachhuber/R. G. Roberts (*ed.*), Forces of Transformation. The End of the Bronze Age in the Mediterranean. Proceedings of an International Symposium Held at St. John's College, University of Oxford, 25–26th March 2006 (Oxford), 170–185.

Lambrou-Phillipson, C.

1991 Seafaring in the Bronze Age Mediterranean: The Parameters Involved in Maritime Travel, in: R. Laffineur/L. Basche (*ed.*), Thalassa. L'Egée Prèhistorique et la Mer (Aegaeum 7, Liège), 11–15.

1993   The Limitations of the Pottery Model in the Identification of Trading Colonies, in: C. Zerner/P. Zerner/J. Winder (*ed.*), Wace and Blegen. Pottery as Evidence for Trade in the Aegean Bronze Age, 1939–1989 (Amsterdam), 365–368.

Langgut, D./I. Finkelstein/T. Litt

2013   Climate and the Late Bronze Collapse: New Evidence from the Southern Levant, in: Tel Aviv 40/2, 149–175.

Lapp, P. W.

1967   The Conquest of Palestine in the Light of Archaeology, in: Concordia Theological Monthly 38, 283–300.

Larsen, M. T.

2015   Ancient Kanesh. A Merchant Colony in Bronze Age Anatolia (Cambridge).

Leemans, W. F.

1977   The Importance of Trade: Some Introductory Remarks, in: Iraq 39/1, 1–10.

Lehmann, G.

2013   Aegean-Style Pottery in Syria and Lebanon during Iron Age I, in: A. E. Killebrew/G. Lehmann (*ed.*), The Philistines and Other 'Sea Peoples' in Text and Archaeology (Archaeology and Biblical Studies 15, Atlanta), 265–328.

Lemos. I. S.

2006   The 'Dark Age' of Greece, in: E. Bispham/T. Harrison/B. A. Sparkes (*ed.*), The Edinburgh Companion to Ancient Greece and Rome (Edinburgh), 87–91.

Lenzen, C. J.

1997   Irbid, in: E. M. Meyers (*ed.*), The Oxford Encyclopedia of Archaeology in the Near East (Oxford), 181.

Lenzen, C. J./R. L. Gordon/A. M. McQuitty

1985   Excavations at Tell Irbid and Beit Ras, 1985, in: Annual of the Department of Antiquities of Jordan 29, 151–159.

Leonard, A.

1987   The Significance of the Mycenaean Pottery Found East of the Jordan River, in: Studies in the History and Archaeology of Jordan 3, 261–266.

1989   Archaeological Sources for the History of Palestine: The Late Bronze Age, in: The Biblical Archaeologist 52/1, 4–39.

1994   An Index to Late Bronze Age Aegean Pottery from Syria-Palestine (Studies in the Mediterranean Archaeology 114, Jonsered).

1995   'Canaanite Jars' and the Late Bronze Age Aegeao-Levantine Wine Trade, in: P. E. McGovern/S. J. Fleming/S. H. Katz (*ed.*), The Origins and Ancient History of Wine (Food and Nutrition in History and Anthropology 11, Philadelphia), 233–254.

Leriou, A.

2011   Overseas Migrations at the End of the Late Bronze Age in the Aegean and the Eastern Mediterranean: Some Reflections, in: G. Vavouranakis (*ed.*), The Seascape in Aegean Prehistory (Monographs of the Danish Institute at Athens 14), 251–270.

Lesko, L. H.

1992   Egypt in the 12th Century B.C., in: W. A. Ward/M. S. Joukowsky (*ed.*), The Crisis Years: The 12th Century B.C. From beyond the Danube to the Tigris (Dubuque), 151–156.

Levy, T. E. *et al.*

2004   Reassessing the Chronology of Biblical Edom: New Excavations and 14C Dates from Khirbet en-Nahas (Jordan), in: Antiquity 78/302, 865–879.

2008   High-Precision Radiocarbon Dating and Historical Biblical Archaeology in Southern Jordan, in: Proceedings of the National Academy of Sciences of the United States of America 105/43, 16 460–16 465.

Liebowitz, H. A.

1987   Late Bronze II Ivory Work in Palestine: Evidence of a Cultural Highpoint, in: Bulletin of the American Schools of Oriental Research 265, 3–24.

1989   Response: LB IIB Ivories and the Material Culture of the Late Bronze Age, in: Bulletin of the American Schools of Oriental Research 275, 63–64.

1993   Yin'am, Tel, in: E. Stern (*ed.*), The New Encyclopedia of Archaeological Excavations in the Holy Land. Vol. 4 (Jerusalem), 1515–1516.

Liebowitz, H. A. (*ed.*)

2003   Tel Yin'am I. The Late Bronze Age. Excavations at Tel Yin'am, 1976–1989 (Studies in Archaeology 42, Austin).

Lilyquist, C.

1996   Stone Vessels at Kamid el-Loz, Lebanon. Egyptian, Egyptianizing, or Non-Egyptian? A Question at Sites from the Sudan to Iraq to the Greek Mainland, in: Kamid el-Loz 16, 133–173.

1999   On the Amenhotep III Inscribed Faience Fragments from Mycenae, in: Journal of the American Oriental Society 119/2, 303–308.

Limmer, A. S.

2007   The Social Functions and Ritual Significance of Jewelry in the Iron Age II Southern Levant (PhD Thesis, University of Arizona, Tucson).

Lin, S.-H. S.

2003   Lading of the Late Bronze Age Ship at Uluburun (unpubl. Masterthesis, Texas A&M University, College Station).

Liphschitz, N.

2007   Timber in Ancient Israel. Dendroarchaeology and Dendrochronology (Monograph Series of the Sonia and Marco Nadler Institute of Archaeology 26, Tel Aviv).

Liphschitz, N./G. Biger

1991   Cedar of Lebanon (Cedrus libani) in Israel during Antiquity, in: Israel Exploration Journal 41, 167–175.

1995   The Timber Trade in Ancient Palestine, in: Tel Aviv 22/1, 121–127.

Lipschitz, O./Y. Gadot/M. Oeming

2012   Tel Azekah 113 Years After: Preliminary Evaluation of the Renewed Excavations at the Site, in: Near Eastern Archaeology 75/4,196–206.

Littauer, M. A./J. H. Crouwel

1996   Robert Drews and the Role of Chariotry in the Bronze Age Greece, in: Oxford Journal of Archaeology 15/3, 297–305.

Liverani, M.

1979   Irrational Elements in the Amarna Trade, in: M. Jaffe, Three Amarna Essays (Malibu), 21–34.

1987   The Collapse of the Near Eastern Regional System at the End of the Bronze Age. The Case of Syria, in: M. Rowlands/M. Larsen/K. Kristiansen (*ed.*), Centre and Periphery in the Ancient World (Cambridge), 66–73.

1990   Prestige and Interest. International Relations in the Near East ca. 1600–1100 B.C. (History of the Ancient Near East Studies 1, Padova).

2000   The Great Powers' Club, in: R. Cohen/R. Westbrook (*ed.*), Amarna Diplomacy. The Beginnings of International Relations (Baltimore, London), 15–27.

2003a Israel's History and the History of Israel (London).

2003b The Influence of Political Institutions on Trade in the Ancient Near East (Late Bronze Age to Early Iron Age), in: C. Zaccagnini (*ed.*), Mercanti e Politica nel Mondo Antico (Saggi di Storia Antica 21, Rome), 119–137.

2008 The Late Bronze Age: Materials and Mechanisms of Trade and Cultural Exchange, in: J. Aruz/K. Benzel/J. M. Evans (*ed.*), Beyond Babylon. Art, Trade, and Diplomacy in the Second Millennium B.C. (New Haven), 161–168.

Lolos, Y. G.

2003 Cypro-Mycenaean Relations ca. 1200 BC: Point Iria in the Gulf of Argos and Old Salamis in the Saronic Gulf, in: N. Stampolidis/V. Karageorghis (*ed.*), *ΠΛΟΕΣ.* Sea Routes. Interconnections in the Mediterranean 16th–6th Centuries B.C. Proceedings of the International Symposium Held at Rethymnon, Crete, September 29th–October 2nd 2002 (Athens), 101–116.

Loud, G.

1948 Megiddo II. Seasons of 1935–39 (The University of Chicago Oriental Institute Publications 62, Chicago).

Luciani, M.

2014 The Northern Levant (Syria) during the Late Bronze Age: Small Kingdoms between Supraregional Empires of the International Age, in: M. L. Steiner/A. E. Killebrew (*ed.*), The Oxford Handbook of the Archaeology of the Levant c. 8000–332 BCE (Oxford), 509–523.

Maeir, A. M.

2013 'Philistia Transforming: Fresh Evidence from Tell es-Sâfi/Gath on the Transformational Trajectory of the Philistine Culture', in: A. E. Killebrew/G. Lehmann (*ed.*), The Philistines and other 'Sea Peoples' in Text and Archaeology (Archaeology and Biblical Studies 15, Atlanta), 191–242.

Bronislav Malinowski, B.

1922 The Argonauts of the Western Pacific. An Account of Native Enterprise and Adventure in the Archipelagoes of Melanesian New Guinea (Studies in Economics and Political Science 65, London 1922).

Manning, S. W.

1998 Changing Pasts and Socio-Political Cognition in Late Bronze Age Cyprus, in: World Archaeology 30/1, 39–58.

2006 Chronology for the Aegean Late Bronze Age 1700–1400 B.C., in: Science 312/5773, 565–569.

2013 A New Radiocarbon Chronology for Prehistoric and Protohistoric Cyprus, ca. 11,000–1050 cal BC, in: A. B. Knapp (*ed.*), The Archaeology of Cyprus. From Earliest Prehistory through the Bronze Age (Cambridge), 485–533.

Manning, S. W./L. Hulin

2005 Maritime Commerce and Geographies of Mobility in the Late Bronze Age of the Eastern Mediterranean, in: E. Blake/A. B. Knapp (*ed.*), The Archaeology of Mediterranean Prehistory (Blackwell Studies in Global Archaeology 6, Malden), 275–307.

Maran, J.

2004 The Spreading of Objects and Ideas in the Late Bronze Age Eastern Mediterranean: Two Case Examples from the Argolid of the 13th and 12th Centuries B.C., in: Bulletin of the American Schools of Oriental Research 336, 11–30.

2009 The Crisis Years? Reflections on Signs of Instability in the Last Decades of the Mycenaean Palaces, in: Scienze dell'Antichità. Storia 15, 241–262.

Marco, S.

2008 Recognition of Earthquake-Related Damage in Archaeological Sites: Examples from the Dead Sea Fault Zone, in: Tectonophysics 453, 148–156.

Marco, S. *et al.*

2006   Megiddo Earthquakes, in: I. Finkelstein/D. Ussishkin/B. H. Halpern (*ed.*), Megiddo IV. The 1998–2000 Seasons (Monograph Series of the Sonia and Marco Nadler Institute of Archaeology 24, Tel Aviv), 568–575.

Marom, N./S. Zuckerman

2011   Applying On-Site Analysis of Faunal Assemblages from Domestic Contexts: A Case-Study from the Lower City of Hazor, in: A. Yasur-Landau/J. R. Ebeling/L. B. Mazow (*ed.*), Household Archaeology in the Bronze and Iron Age Levant (Culture and History of the Ancient Near East 50, Leiden), 37–54.

Martin, M. A.

2005   Egyptian and Egyptianized Pottery in Late Bronze Age Canaan. Typology, Chronology, Ware Fabrics, and Manufacture Techniques. Pots and People?, in: Ägypten und Levante/Egypt and the Levant 14, 265–284.

2008   Egyptians at Ashkelon? An Assemblage of Egyptian and Egyptian-Style Pottery, in: Ägypten und Levante/Egypt and the Levant 18, 245–274.

2011a   Egyptian-Type Pottery in the Late Bronze Age Southern Levant (Denkschriften der Gesamtakademie 69, Wien).

2011b   Egyptian-Type Pottery at Late Bronze Age Megiddo, in: I. Finkelstein/N. Na'aman (*ed.*), The Fire Signals of Lachish. Studies in the Archaeology and History of Israel in the Late Bronze Age, Iron Age, and Persian Period in Honor of David Ussishkin (Winona Lake), 245–264.

Martin, M. A. S./T. J. Barako

2007   Egyptian and Egyptianized Pottery, in: T. J. Barako, Tel Mor. The Moshe Dothan Excavations, 1959–1960 (Israel Antiquities Authority Reports 32, Jerusalem), 129–166.

Martin, M. A./R. Ben-Dov

2007   Egyptian and Egyptian-Style Pottery at Tel Dan, in: Ägypten und Levante 17, 191–203.

Martin, M. A. S./N. Blockman/J. Bidmead

2013   Part I: Levels K-8 and K-7, in: I. Finkelstein/D. Ussishkin/E. H. Cline (*ed.*), Megiddo V. The 2004–2008 Seasons. Vol. 1 (Monograph Series of the Sonia and Marco Nadler Institute of Archaeology 31, Winona Lake), 153–164.

Master, D. M./P. A. Mountjoy/H. Mommsen

2015   Imported Cypriot Pottery in Twelfth-Century B.C. Ashkelon, in: Bulletin of the American Schools of Oriental Research 373, 235–243.

Matney, T.

2011   The Iron Age of Southeastern Anatolia, in: S. R. Steadman/G. McMahon (*ed.*), The Oxford Handbook of Ancient Anatolia (Oxford), 443–463.

Matthers, J. M.

1989   Excavations by the Palestine Exploration Fund at Tell el-Hesi 1890-1892, in: B. T. Dahlberg/K. G. O'Connell (*eds.*), Tell el-Hesi: The Site and the Expedition (Winona Lake), 37–67.

Mauss, M.

1990   The Gift. Forms and Means of Archaic Exchange (London [1925]).

Maxwell-Hyslop K. R.

1971   Western Asiatic Jewellery, c. 3000–612 B.C. (London).

Mazar, A.

1988   Some Aspects of the 'Sea Peoples' Settlement, in: M. Heltzer/E. Lipiński (*ed.*), Society and Economy in the Eastern Mediterranean (c. 1500–1000 B.C.). Proceedings of the International Symposium Held at the University of Haifa from the 28th of April to the 2nd of May 1985 (Orientalia Lovaniensia Analecta 23, Leuven), 251–260.

1990   Archaeology of the Land of the Bible. 10,000–586 B.C.E. (New York).

1993 Beth-Shean, in: E. Stern (*ed.*), The New Encyclopedia of Archaeological Excavations in the Holy Land. Vol. 1 (Jerusalem), 214–223.

1997 Timnah (Tel Batash) I: Stratigraphy and Architecture (Qedem: Monographs of the Institute of Archaeology 37, Jerusalem).

2002 Megiddo in the Thirteenth-Eleventh Centuries BCE: A Review of Some Recent Studies, in: E. D. Oren/S. Ahituv (*ed.*), Aharon Kempinski Memorial Volume. Studies in Archaeology and Related Disciplines (Beer-Sheva 15, Beer-Sheva), 264–282.

2006a Excavations at Tel Beth-Shean 1989–1996. Vol. 1: From the Late Bronze Age IIB to the Medieval Period (Jerusalem).

2006b Beth-Shean from the Late Bronze Age IIB to the Medieval Period: A Summary, in: A. Mazar (*ed.*), Excavations at Tel Beth-Shean 1989–1996. Vol. 1: From the Late Bronze Age IIB to the Medieval Period (Jerusalem), 26–47.

2006c Area Q: Stratigraphy and Architecture, in: A. Mazar (*ed.*), Excavations at Tel Beth-Shean 1989–1996. Vol. 1: From the Late Bronze Age IIB to the Medieval Period (Jerusalem), 61–119.

2007 Myc IIIC in the Land of Israel: Its Distribution, Date and Significance, in: M. Bietak/E. Czerny (*ed.*), The Synchronisation of Civilisations in the Eastern Mediterranean in the Second Millennium B.C. III. Proceedings of the SCIEM 2000 – 2nd EuroConference, Vienna, 28th of May – 1st of June 2003 (Denkschriften der Gesamtakademie 37, Wien), 571–582.

2008a From 1200 to 850 B.C.E.: Remarks on Some Selected Archaeological Issues, in: L. L. Grabbe (*ed.*), Israel in Transition from the Late Bronze II to the Iron IIa (c. 1250–850 BCE). Vol. 1: The Archaeology (New York, London), 86–120.

2008b Beth-Shean, in: E. Stern (*ed.*), The New Encyclopedia of Archaeological Excavations in the Holy Land. Vol. 5 (Jerusalem), 1616–1622.

2009a Introduction and Overview, in: N. Panitz-Cohen/A. Mazar (*ed.*), Excavations at Tel Beth-Shean 1989–1996. Vol. 3: The 13th–11th Century BCE Strata in Areas N and S (Jerusalem), 1–32.

2009b Area N North South: Stratigraphy and Architecture, in: N. Panitz-Cohen/A. Mazar (*ed.*), Excavations at Tel Beth-Shean 1989–1996. Vol. 3: The 13th——11th Century BCE Strata in Areas N and S (Jerusalem), 72–93.

2010 Tel Beth-Shean: History and Archaeology, in: R. G. Kratz/H. Spieckermann (*ed.*), One God – One Cult – One Nation. Archaeological and Biblical Perspectives (Beihefte zur Zeitschrift für die alttestamentliche Wissenschaft 405, Berlin, NewYork), 239–271.

McAnany, P. A./N. Yoffee

2010 Why We Question Collapse and Study Human Resilience, Ecological Vulnerability, and the Aftermath of Empire, in: P. A. McAnany/N. Yoffee (*ed.*), Questioning Collapse. Human Resilience, Ecological Vulnerability, and the Aftermath of Empire (Cambridge), 1–20.

McAnany, P. A./N. Yoffee (*ed.*)

2010 Questioning Collapse. Human Resilience, Ecological Vulnerability, and the Aftermath of Empire (Cambridge).

McCormicks Adams, R.

1974 Anthropological Perspectives on Ancient Trade [and Comments and Replies], in: Current Anthropology 15/3, 239–258.

McClellan, T. L.

1992 12th Century B.C. Syria: Comments on Sader's Paper, in: W. A. Ward/M. S. Joukowsky (*ed.*), The Crisis Years: The 12th Century B.C. From beyond the Danube to the Tigris (Dubuque), 164–173.

McGeough, K.

2015 'What is not in My House You Must Give Me': Agents of Exchange According to the Textual Evidence from Ugarit, in: B. Eder/R. Pruzsinszky (*ed.*), Policies of Exchange. Proceedings of the International Symposium at the University of Freiburg, Institute for Archaeological Studies, 30 May – 2 June 2012 (Oriental and European Archaeology 2, Wien), 85–96.

McGovern, P. E.

1985   The Late Bronze Age Pendants. Innovation in a Cosmopolitan Age (JSOT/ASOR Monographs 1, Sheffield).

1989   The Baqʿah Valley Project 1987. Khirbet Umm ad-Dananir and al-Qesir, in: Annual of the Department of Antiquities of Jordan 33, 123–136.

1990   The Ultimate Attire. Jewelry from a Canaanite Temple at Beth Shan, in: Expedition 32/1, 16–23.

McGovern, P. E./S. J. Fleming/C. P. Swann

1993   The Late Bronze Egyptian Garrison at Beth Shan. Glass and Faience Production and Importation in the Late New Kingdom, in: Bulletin of the American Schools of Oriental Research 290/291, 1–27.

Mee, C.

1978   Aegean Trade and Settlement in Anatolia in the Second Millennium B.C., in: Anatolian Studies 28, 121–156.

1998   Anatolia and the Aegean in the Late Bronze Age, in: E. H. Cline/D. Harris-Cline (*ed.*), The Aegean and the Orient in the Second Millennium. Proceedings of the 50th Anniversary Symposium, Cincinatti, 18–20 April 1997 (Aegaeum 18, Liège), 137–148.

Meiri, M. *et al.*

2013   Ancient DNA and Population Turnover in Southern Levantine Pigs-Signature of the Sea Peoples Migration?, in: Scientific Reports 3/3035, 1–8.

Merrillees, R. S.

1968   The Cypriot Bronze Age Pottery Found in Egypt (Studies in Mediterranean Archaeology 18, Lund).

1974   Trade and Transcendence in the Bronze Age Levant (Studies in Meditteranean Archaeology 39, Göteborg).

1992   The Crisis Years: Cyprus, A Rejoinder, in: W. A. Ward/M. S. Joukowsky (*ed.*), The Crisis Years: The 12th Century B.C. From beyond the Danube to the Tigris (Dubuque), 87–92.

1998   Egypt and the Aegean, in: E. H. Cline/D. Harris-Cline (*ed.*), The Aegean and the Orient in the Second Millennium. Proceedings of the 50th Anniversary Symposium, Cincinatti, 18–20 April 1997 (Aegaeum 18, Liège), 149–158.

2003   Egyptian Foreign Relations (Late Bronze Age and Iron Age), in: N. Stampolidis/V. Karageorghis (*ed.*), *ΠΛΟΕΣ*. Sea Routes. Interconnections in the Mediterranean 16th–6th c. B.C. Proceedings of the International Symposium Held at Rethymnon, Crete, September 29th–October 2nd 2002 (Athens), 35–40.

Metzer, S.

2015   'On the Eve of Destruction: Analyzing the Chronology, Function and Distribution Pattern of a Late Bronze Pottery Assemblage from Tel Azekah' (unpubl. Masterthesis, University of Tel Aviv, Tel Aviv).

Middleton, G. D.

2008   The Collapse of Palatial Society in LBA Greece and the Postpalatial Period (PhD Thesis, Durham University, Durham [unpublished]).

2010   The Collapse of Palatial Society in LBA Greece and the Postpalatial Period (British Archaeological Reports International Series 2110, Oxford).

2012   Nothing Lasts Forever: Environmental Discourses on the Collapse of Past Societies, in: Journal of Archaeological Research 20/3, 257–307.

2015   Telling Stories: The Mycenaean Origins of the Philistines, in: Oxford Journal of Archaeology 34/1, 45–65.

2017   Understanding Collapse Ancient History and Modern Myths (Cambridge).

Millek, J. M.

2017   Sea Peoples, Philistines, and the Destruction of Cities: A Critical Examination of Destruction Layers 'Caused' by the 'Sea Peoples,' in: P. M. Fischer/T Burger (*ed.*), The 'Sea Peoples' Up-To-Date. New Research on the Crisis Years in the Eastern Mediterranean (Vienna).

2018   Destruction and the Fall of Egyptian Hegemony over the Southern Levant, in: Journal of Ancient Egyptian Interconnections 19, 1-21.

Forthcoming a   Just how much was Destroyed? The End of the Late Bronze Age in the Southern Levant, in: Ugarit-Forschungen 49.

Forthcoming b   'Our City is Sacked. May you know it!' The Destruction of Ugarit and its Environs by the 'Sea People,' in: Archaeology & History in Lebanon 48 (Winter).

Forthcoming c   Destruction at the End of the Late Bronze Age in Syria: A Reassessment, in: Studia Eblaitica 5.

Mommsen, H./A.-L. D'Agata/A. Yasur-Landau

2009   Neutron Activation Analysis of Mycenaean IIIC-style Pottery, in: N. Panitz-Cohen/A. Mazar (*ed.*), Excavations at Tel Beth-Shean 1989–1996. Vol. 3: The 13th–11th Century BCE Strata in Areas N and S (Jerusalem), 510–518.

Monroe, C. M.

2008   Money and Trade, in: D. C. Snell (*ed.*), A Companion to the Ancient Near East (New York), 155–168.

2009   Scales of Fate. Trade, Tradition, and Transformation in the Eastern Mediterranean ca. 1350–1175 BCE (Alter Orient und Altes Testament 357, Münster).

2010   Sunk Costs at Late Bronze Age Uluburun, in: Bulletin of the American Schools of Oriental Research 357, 19–33.

2013   Trade, Ancient Near East, in: R. S. Bagnall/K. Brodersen/C. B. Champion *et al.* (*ed.*), The Encyclopedia of Ancient History (Oxford), 6792–9795.

Moran, W. L.

1992   The Amarna Letters (Baltimore).

Morris, E. F.

2015a   Exchange, Extraction, and the Politics of Ideological Money Laundering in Egypt's New Kingdom Empire, in: B. Eder/R. Pruzsinszky (*ed.*), Policies of Exchange. Proceedings of the International Symposium at the University of Freiburg, Institute for Archaeological Studies, 30 May – 2 June 2012 (Oriental and European Archaeology 2, Wien), 167–190.

2015b   Egypt, Ugarit, the God Ba'al, and the Puzzle of a Royal Rebuff, in: Mynářová/P. Onderka/P. Pavúk (*ed.*), There and Back Again – the Crossroads II. Proceedings of an International Conference Held in Prague, September 15–18, 2014 (Prague), 315–351.

Morris, I. P.

2006   The Collapse and Regeneration of Complex Society in Greece, 1500–500 BC, in: G. M. Schwartz/J. J. Nichols (*ed.*), After Collapse. The Regeneration of Complex Societies (Tucson), 72–84.

Motesharrei, S./J. Rivas/E. Kalnay

2014   Human and Nature Dynamics (HANDY): Modeling Inequality and Use of Resources in the Collapse or Sustainability of Societies, in: Ecological Economics 101, 90–102.

Mountjoy, P. A.

1998   The East Aegean-West Anatolian Interface in the Late Bronze Age: Mycenaeans and the Kingdom of Ahhiyawa, in: Anatolian Studies 48, 33–67.

Muhly, J. D.

1992   The Crisis Years in the Mediterranean World: Transition or Cultural Disintegration?, in: W. A. Ward/M. S. Joukowsky (*ed.*), The Crisis Years: The 12th Century B.C. From beyond the Danube to the Tigris (Dubuque), 10–26.

Mullins, R. A.

2012 The Late Bronze and Iron Age Temples at Beth-Shean, in: J. Kamlah (*ed.*), Temple Building and Temple Cult. Architecture and Cultic Paraphernalia of Temples in the Levant (2.–1. Mill. B.C.E.). Proceedings of a Conference on the Occasion of the 50th Anniversary of the Institute of Biblical Archaeology at the University of Tübingen (28–30 May 2010) (Abhandlungen des Deutschen Palästina-Vereins 41, Wiesbaden), 127–158.

Mumford, G.

1998 International Relations between Egypt, Sinai and Syria-Palestine during the Late Bronze Age to early Persian Period (Dynasties 18 – 26: ca .1550 – 525 BC) (Unpublished dissertation, University of Toronto).

2009 Amarna Letters, in: H.-J. Klauck/B. McGinn/C.-L. Seow *et al.* (*ed.*), The Encyclopedia of the Bible and Its Reception I. Aaron – Aniconism (Berlin), 936–941.

2014 Egypt and the Levant, in: M. L. Steiner/A. E. Killebrew (*ed.*), The Oxford Handbook of the Archaeology of the Levant c. 8000–332 BCE (Oxford), 69–89.

2015 The Amman Airport Structure: A Re-Assessment of Its Date-Range, Function and Overall Role in the Levant, in: T. P. Harrison/E. Banning/S. Klassen (*ed.*), Walls of the Prince: Egyptian Interactions with Southwest Asia in Antiquity (Culture and History of the Ancient Near East 77, Leiden), 89–198.

Murray, S. C.

2013 Trade, Imports, and Society in Early Greece. 1300–900 B.C.E. (PhD Thesis, Stanford University, Stanford [unpublished]).

Mynářová, J.

2010 Tradition or Innovation? The Ugaritic-Egyptian Correspondence, in: Ägypten und Levante/Egypt and the Levant 20, 363–372.

2014 Egyptian State Correspondence of the New Kingdom: The Letters of the Levantine Client Kings in the Amarna Correspondence and Contemporary Evidence, in: K. Radner (*ed.*), State Correspondence in the Ancient World. From New Kingdom Egypt to the Roman Empire (New York), 10–31.

2015a Communicating the Empire, or how to Deliver a Message of a King, in: J. Mynářová/P. Onderka/P. Pavúk (*ed.*), There and Back again – the Crossroads II. Proceedings of an International Conference Held in Prague, September 15–18, 2014 (Prague), 149–161.

2015b Egypt among the Great Powers and Its Relations to the Neighboring Vassal Kingdoms in the Southern Levant According to the Written Evidence. Thutmose III and Amarna, in: B. Eder/R. Pruzsinszky (*ed.*), Policies of Exchange. Proceedings of the International Symposium at the University of Freiburg, Institute for Archaeological Studies, 30 May – 2 June 2012 (Oriental and European Archaeology 2, Wien), 157–165.

Na'aman, N.

1981 Economic Aspects of the Egyptian Occupation of Canaan, in: Israel Exploration Society 31, 172–185.

1988 Pharaonic Lands in the Jezreel Valley in the Late Bronze Age, in: M. Heltzer/E. Lipiński (*ed.*), Society and Economy in the Eastern Mediterranean (c. 1500–1000 B.C.). Proceedings of the International Symposium Held at the University of Haifa from the 28th of April to the 2nd of May 1985 (Orientalia Lovaniensia Analecta 23, Leuven), 177–185.

2000 The Egyptian-Canaanite Correspondence, in: R. Cohen/R. Westbrook (*ed.*), Amarna Diplomacy. The Beginnings of International Relations (Baltimore, London), 125–138.

2005 The Network of Canaanite Late Bronze Kingdoms and the City of Ashdod, in: N. Na'aman (*ed.*), Canaan in the Second Millennium B.C.E. (Winona Lake), 145–172.

2011 The Shephelah According to the Amarna Letters, in: I. Finkelstein/N. Na'aman (*ed.*), The Fire Signals of Lachish. Studies in the Archaeology and History of Israel in the Late Bronze Age, Iron Age, and Persian Period in Honor of David Ussishkin (Winona Lake), 281–299.

Nahshoni, P.

2013   A Thirteenth Century BCE Site on the Southern Beach of Ashdod, in: Atiqot, 74, 59–122.

Nakhai, B. A.

2008   Contextualizing Village Life in the Iron Age I, in: L. L. Grabbe (*ed.*), Israel in Transition. From the Late Bronze II to the Iron IIa (c. 1250–850 BCE). Vol. 1: The Archaeology (New York, London), 121–137.

Negbi, O.

1970   The Hoards of Goldwork from Tell el-Ajjul (Studies in Mediterranean Archaeology 25, Göteborg).

1989   Bronze Age Pottery (Strata XVII – XV), in: Z. Herzog/G. Rapp/O. Negbi (*ed.*), Excavations at Tel Michal, Israel (Monograph Series of the Sonia and Marco Nadler Institute of Archaeology 8, Minnesota, Tel Aviv), 43–63.

2005   Urbanism on Late Bronze Age Cyprus: LC II in Retrospect, in: Bulletin of the American Schools of Oriental Research 337, 1–45.

Novák, M.

2013   Upper Mesopotamia in the Mittani Period, in: W. Orthmann/M. Al-Maqdissi/P. Matthiae (*ed.*), Archéolgie et Histoire de la Syrie (Schriften zur Vorderasiatischen Archäologie 1, Wiesbaden), 345–356.

Nur, A./D. Burgess

2008   Apocalypse. Earthquakes, Archaeology, and the Wrath of God (Princeton, Oxford).

Nur, A./E. H. Cline

2000   Poseidon's Horses: Plate Tectonics and Earthquake Storms in the Late Bronze Age Aegean and Eastern Mediterranean, in: Journal of Archaeological Science 27/1, 43–63.

2001   What Triggered the Collapse? Earthquake Storms, in: Odyssey 4/5, 31–36.

O'Connor, D.

2000   The Sea Peoples and the Egyptian Sources, in: E. D. Oren (*ed.*), The Sea Peoples and Their World: A Reassessment (University Museum Monograph 108, University Museum Symposium Series 11, Philadelphia), 85–102.

Oka, R./C. M. Kusimba

2008   The Archaeology of Trading Systems, Part 1: Towards a New Trade Synthesis, in: Journal of Archaeological Research 16/4, 339–395.

Olsvig-Whittaker, L. *et al.*

2015   Ecology of the Past – Late Bronze and Iron Age Landscapes, People and Climate Change in Philistia (the Southern Coastal Plain and Shephelah), Israel, in: Journal of Mediterranean Ecology 13, 57–75.

Oren, E. D.

1972   Tel Sera' (Tell Esh-Shari'a), in: Israel Exploration Journal 22, 167–169.

1982   Ziglag: A Biblical City on the Edge of the Negev, in: The Biblical Archaeologist 45/3, 155–166.

1993   Sera', Tel, in: E. Stern (*ed.*), The New Encyclopedia of Archaeological Excavations in the Holy Land. Vol. 4 (Jerusalem), 1329–1335.

Oren, E. D./E. Netzer

1973   Tel Sera' (Tell Esh-Shari'a), in: Israel Exploration Journal 23, 251–254.

1974   Tel Sera' (Tell Esh-Shari'a), in: Israel Exploration Journal 24, 264–266.

Ortiz, S. M./S. R. Wolff

2012   Guarding the Border to Jerusalem: The Iron Age City of Gezer, in: Near Eastern Archaeology 75/1, 2012, 4–19.

Ottosson, M.

2015   1990–93 – Area B, in: J. Strange (*ed.*), Tall al-Fukhār. Results from Excavations in 1990–1993 and 2002. Vol. 1: Text (Aarhus), 15–28.

Ownby, M./L. M. V. Smith

2011   The Impact of Changing Political Situations on Trade between Egypt and the Near East: A Provenance Study of Canaanite Jars from Memphis, Egypt, in: K. Duistermaat/I. Regulski (*ed.*), Intercultural Contacts in the Ancient Mediterranean. Proceedings of the International Conference at the Netherlands-Flemish Institute in Cairo, 25th to 29th October 2008 (Leuven, Paris, Walpole), 267–284.

Paley, S./Y. Porath

1993   Tel Ḥefer, in: E. Stern (*ed.*), The New Encyclopedia of Archaeological Excavations in the Holy Land. Vol. 2 (Jerusalem), 609–614.

Palmer, R.

2003   Trade in Wine, Perfumed Oil and Foodstuffs: The Linear B Evidence and beyond, in: N. Stampolidis/V. Karageorghis (*ed.*), *ΠΛΟΕΣ*. Sea Routes. Interconnections in the Mediterranean 16th–6th Centuries B.C. Proceedings of the International Symposium Held at Rethymnon, Crete, September 29th– October 2nd 2002 (Athens), 125–140.

Panagiotopoulos, D.

2001   Keftiu in Context: Theban Tomb Paintings as a Historical Source, in: Oxford Journal of Archaeology, 20/3, 263–283.

Panitz-Cohen, N.

2009   The Local Canaanite Pottery, in: N. Panitz-Cohen/A. Mazar (*ed.*), Excavations at Tel Beth-Shean 1989–1996. Vol. 3: The 13th–11th Century BCE Strata in Areas N and S (Jerusalem), 195–433.

2014   The Southern Levant (Cisjordan) during the Late Bronze Age, in: M. L. Steiner/A. E. Killebrew (*ed.*), The Oxford Handbook of the Archaeology of the Levant c. 8000–332 BCE (Oxford), 541–560.

Panitz-Cohen, N./A. Mazar

2009   Area S: Stratigraphy and Architecture, in: N. Panitz-Cohen/A. Mazar (*ed.*), Excavations at Tel Beth-Shean 1989–1996. Vol. 3: The 13th–11th Century BCE Strata in Areas N and S (Jerusalem), 94–193.

Papadimitriou, N.

2013   Regional or ‚International' Networks? A Comparative Examination of Aegean and Cypriot Imported Pottery in the Eastern Mediterranean, in: A. Papadopoulos (*ed.*), Talanta. Proceedings of the Dutch Archaeological and Historical Society 2012. Vol. 44 (Amsterdam), 92–136.

2015   Aegean and Cypriot Ceramic Trade Overseas during the 2nd Millennium BCE, in: J. Mynářová/P. Onderka/P. Pavúk (*ed.*), There and Back again – the Crossroads II. Proceedings of an International Conference Held in Prague, September 15–18, 2014 (Prague), 423–446.

Papadopoulos, A.

2013   A Matter of Quantity? Some Notes on Late Bronze Age Exchange Modes in the Eastern Mediterranean, in: A. Papadopoulos (*ed.*), Talanta. Proceedings of the Dutch Archaeological and Historical Society 2012. Vol. 44 (Amsterdam), 79–91.

Parkinson, W. A.

2010   Beyond the Peer: Social Interaction and Political Evolution in the Bronze Age Aegean, in: D. J. Pullen (*ed.*), Political Economies of the Aegean Bronze Age. Papers from the Langford Conference, Florida State University, Tallahassee, 22–24 February 2007 (Oxford, Oakville), 11–34.

Parry J./M. Bloch

1996   Introduction: Money and Morality of Exchange, in: J. Parry/M. Bloch (*ed.*), Money and the Morality of Exchange (Cambridge), 1–32.

Petrie, W. M. F.

1891   Tell el Hesy (Lachish) (London).

1928   Gerar (Publications of the Egyptian Research Account and the British School of Archaeology in Egypt 43, London).

1930   Beth-Pelet I (Tell Fara) (Publications of the Egyptian Research Account and the British School of Archaeology in Egypt 48, London).

Peyronel, L.

2014   Between Archaic Market and Gift Exchange: The Role of Silver in the Embedded Economies of the Ancient Near East during the Bronze Age, in: F. Carlà/M. Gori (*ed.*), Gift Giving and the 'Embedded' Economy in the Ancient World (Heidelberg), 355–375.

Pfälzner, P.

2012   Levantine Kingdoms of the Late Bronze Age, in: D. T. Potts (*ed.*), A Companion to the Archaeology of the Ancient Near East (Chichester), 770–796.

Philip, G.

1988   Hoards of the Early and Middle Bronze Ages in the Levant, in: World Archaeology 20/2, 190–208.

Phillips, J.

2007   The Amenhotep III 'Plaques' from Mycenae: Comparison, Contrast and a Question of Chronology, in: M. Bietak/E. Czerny (*ed.*), The Synchronisation of Civilisations in the Eastern Mediterranean in the Second Millennium B.C. III. Proceedings of the SCIEM 2000 – 2nd EuroConference, Vienna 28th of May – 1st of June 2003 (Denkschriften der Gesamtakademie 37, Wien), 479–494.

2010   Egypt, in: E. H. Cline (*ed.*), The Oxford Handbook of the Bronze Age Aegean (Oxford), 820–831.

Pickles, S./E. J. Peltenburg

1998   Metallurgy, Society and the Bronze/Iron Transition in the East Mediterranean and the Near East, in: Report of the Department of Antiquities Cyprus, 67–100.

2010   Egypt, in: E. H. Cline (*ed.*), The Oxford Handbook of the Bronze Age Aegean (Oxford), 820–831.

Podany, A. H.

2010   Brotherhood of Kings. How International Relations Shaped the Ancient Near East (Oxford).

Polanyi, K.

1957a   The Economy as Instituted Process, in: K. Polanyi/C. M. Arensberg/H. W. Pearson (*ed.*), Trade and Markets in Early Empires. Economies in History and Theory (New York), 243–270.

1957b   Marketless Trading in Hammurabi's Time, in: K. Polanyi/C. Arensberg/H. W. Pearson (*ed.*), Trade and Market in the Early Empires. Economies in History and Theory (New York), 12–26.

Porath, Y./S. M. Paley

1979   The Regional Project in 'Emeq Ḥefer, 1979, in: Israel Exploration Journal 29, 236–239.

1980   The Regional Project in 'Emeq Ḥefer, 1980, in: Israel Exploration Journal 30, 217–219.

1982   The 'Emeq Ḥefer Regional Project, 1981, in: Israel Exploration Journal 32, 66–67.

Porath, Y./S. M. Paley/R. R. Stieglitz

1983   The 'Emeq Ḥefer Archaeological Research Project, 1983, in: Israel Exploration Journal 33, 264–266.

1984   The 'Emeq Ḥefer Archaeological Research Project, 1984, in: Israel Exploration Journal 34, 276–278.

Prausnitz, M. W.

1963   Achzib, in: Israel Exploration Journal 13, 337–338.

1965   Tel Achzib, in: Israel Exploration Journal 15, 256–258.

1993   Achzib, in: E. Stern (*ed.*), The New Encyclopedia of Archaeological Excavations in the Holy Land. Vol. 1 (Jerusalem), 32–35.

Puglisi Cascino, D.

2013   The View from the Day After: Some Observations on the Late Bronze Age I Final Destruction in Crete, in: J. Dreissen (*ed.*), Destruction. Archaeological, Philological and Historical Perspectives (Louvain), 171–182.

Pulak, C.

2008   The Uluburun Shipwreck and Late Bronze Age Trade, in: J. Aruz/K. Benzel/J. M. Evans (*ed.*), Beyond Babylon. Art, Trade, and the Diplomacy in the 2ⁿᵈ Millennium B.C. (New Haven), 289–310.

2010   Uluburun Shipwreck, in: E. H. Cline (*ed.*), The Oxford Handbook of the Bronze Age Aegean (Oxford), 862–876.

Raban, A.

1988   The Constructive Maritime Role of the Sea Peoples in the Levant, in: M. Heltzer/E. Lipiński (*ed.*), Society and Economy in the Eastern Mediterranean (c. 1500–1000 B.C.). Proceedings of the International Symposium Held at the University of Haifa from the 28ᵗʰ of April to the 2ⁿᵈ of May 1985 (Orientalia Lovaniensia Analecta 23, Leuven), 261–294.

1998   Near Eastern Harbors: Thirteenth-Seventh Centuries BCE, in: S. Gitin/A. Mazar/E. Stern (*ed.*), Mediterranean Peoples in Transition. Thirteen to Early Tenth Centuries B.C.E. (Jerusalem), 428–438.

Rambeau, C. M. C.

2010   Palaeoenvironmental Reconstruction in the Southern Levant: Synthesis, Challenges, Recent Developments and Perspectives, in: Philosophical Transactions of the Royal Society A 368/1931, 5225–5248.

Redford, D. B.

1992   Egypt, Canaan, and Israel in Ancient Times (Princeton).

2000   Egypt and Western Asia in the Late New Kingdom: An Overview, in: E. D. Oren (*ed.*), The Sea Peoples and Their World: A Reassessment. (University Museum Monograph 108, University Museum Symposium Series 11, Philadelphia), 1–20.

Redsicker, D. R./J. J. O'Connor

1996   Practical Fire and Arson Investigation, 2ⁿᵈ Edition (Boca Raton, London, New York).

Reinstein, D.

2014   The Economics of the Gift, in: F. Carlà/M. Gori (*ed.*), Gift Giving and the 'Embedded' Economy in the Ancient World (Heidelberg), 85–102.

Rendsburg, G. A.

1998   On the Potential Significance of Linear A Inscriptions Recently Excavated in Israel, in: Aula Orientalis 16/2, 289–291.

Renfrew, C.

1975   Trade as Action at a Distance: Questions of Integration and Communication, in: J. A. Sabloff/C. C. Lamberg-Karovski (*ed.*), Ancient Civilization and Trade (Albuquerque), 3–59.

1978   Trajectory Discontinuity and Morphogenesis: The Implications of Catastrophe Theory for Archaeology, in: American Antiquity 43/2, 203–222.

1980   The Great Tradition versus the Great Divide: Archaeology as Anthropology?, in: American Journal of Archaeology 84/3, 287–298.

1987   Archaeology and Language. The Puzzle of Indo-european Origins (London).

Renfrew, C./J. F. Cherry

1986   Epilogue and Prospect, in: C. Renfrew/J. F. Cherry (*ed.*), Peer Polity Interaction and Socio-Political Change (Cambridge), 149–158.

Rich, S. *et al.*

2012   Strontium Isotopic and Tree-Ring Signatures of *Cedrus Brevifolia* in Cyprus, in: Journal of Analytical Atomic Spectrometry 27/5, 796–806.

2016   To Put a Cedar Ship in a Bottle: Dendroprovenancing Three Ancient East Mediterranean Watercraft with the $^{87}Sr/^{86}Sr$ Isotope Ratio, in: Journal of Archaeological Science: Reports 9, 514–521.

Riehl, S./R. Bryson/K. Pustovoytov

2008   Changing Growing Conditions for Crops during the Near Eastern Bronze Age (3000–1200 BC): The Stable Carbon Isotope Evidence, in: Journal of Archaeological Science 35/4, 1011–1022.

Roberts, R. G.

2009   Identity, Choice, and the Year 8 Reliefs of Ramesses III at Medinet Habu, in: C. Bachhuber/R. G. Roberts (*ed.*), Forces of Transformation. The End of the Bronze Age in the Mediterranean (Oxford), 60–68.

2014   Changes in Perceptions of the 'Other' and Expressions of Egyptian Self-Identity in the Late Bronze Age, in: A. B. Knapp/P. van Dommelen (*ed.*), The Cambridge Prehistory of the Bronze and Iron Age Mediterranean (New York), 352–366.

Rosen, A.

2007   Civilizing Climate. Social Responses to Climate Change in the Ancient Near East (Lanham, New York, Toronto, Plymouth).

Routledge, B.

2008   Thinking 'Globally' and Analysing 'Locally' South-Central Jordan in Transition, in: L. L. Grabbe (*ed.*), Israel in Transition from the Late Bronze II to the Iron IIa (c. 1250–850 BCE). Vol. 1: The Archaeology (New York, London), 144–176.

2015   A Fishy Business. The Inland Trade in Nile Perch (Lates Niloticus) in the Early Iron Age Levant, in: T. P. Harrison/E. B. Banning/S. Klassen (*ed.*), Walls of the Prince: Egyptian Interactions with Southwest Asia in Antiquity (Culture and History of the Ancient Near East 77, Leiden, Boston), 212–233.

Routledge, B./K. McGeough

2009   Just what Collapsed? A Network Perspective on 'Palatial' and 'Private' Trade at Ugarit, in: C. Bachhuber C./R. G. Roberts (*ed.*), Forces of Transformation. End of the Bronze Age in the Mediterranean. Proceedings of an International Symposium Held at St. John's College, University of Oxford 25–26th March 2006 (Oxford), 22–29.

Rowe, A.

1940   The Four Canaanite Temples of Beth-Shan Part 1: Temples and Cult Objects (Publications of the Palestine Section of the Museum of the University of Pennsylvania 2, Philadelphia).

Rutter, J. B.

2013   Aegean Elements in the Earliest Philistine Ceramic Assemblage: A View from the West, in: A. E. Killebrew/G. Lehmann (*ed.*), The Philistines and Other 'Sea Peoples' in Text and Archaeology (Archaeology and Biblical Studies 15, Atlanta), 543–561.

2014   The Canaanite Transport Amphora within the Late Bronze Age Aegean: A 2013 Perspective on a Frequently Changing Picture, in: D. Nakassis/J. Gulizio/S. A. James (*ed.*), KE-RA-ME-JA. Studies Presented to Cynthia W. Shelmerdine (Prehistory Monographs 46, Philadelphia), 53–69.

Sader, H.

2014   The Northern Levant during the Iron Age I Period, in: M. L. Steiner/A. E. Killebrew (*ed.*), The Oxford Handbook of the Archaeology of the Levant c. 8000–332 BCE (Oxford), 607–623.

Sahlins, M. D.

1972   Stone Age Economics (Chicago, New York).

Samaes, M./J. Coenaerts

2011   Exchange between Southeastern Cyprus and the Surrounding Regions in the Eastern Mediterranean during the Late Bronze Age, in: K. Duistermaat/I. Regulski (*ed.*), Intercultural Contacts in the Ancient Mediterranean. Proceedings of the International Conference at the Netherlands-Flemish Institute of Cairo, 25th to 29th October 2008 (Leuven, Paris, Walpole), 395–410.

Samet, I.

2009   Canaanite Rulership in Late Bronze Age Megiddo (unpubl. Masterthesis, University of Tel Aviv, Tel Aviv).

Sams, G. K.

2011   Anatolia: The First Millennium B.C.E. in Historical Context, in: S. R. Steadman/G. McMahon (*ed.*), The Oxford Handbook of Ancient Anatolia (Oxford), 604–622.

Sandars, N. K.

1987   The Sea Peoples. Warriors of the Ancient Mediterranean, 1250–1150 BC (Ancient Peoples and Places 89, London).

Sass, B.

2002   Wenamun and his Levant – 1075 BC or 925 BC?, in: Ägypten und Levante/Egypt and the Levant 12, 247–255.

Satlow, M. L.

2013   Introduction, in: M. L. Satlow (*ed.*), The Gift in Antiquity (Malden, Oxford), 1–11.

Sauvage, C.

2011   Evidence from Old Texts: Aspects of the Late Bronze Age International Maritime Travels and Trade Regulations in the Eastern Mediterranean?, in: K. Duistermaat/I. Regulski (*ed.*), Intercultural Contacts in the Ancient Mediterranean. Proceedings of the International Conference at the Netherlands-Flemish Institute of Cairo, 25th to 29th October 2008 (Leuven, Paris, Walpole), 427–437.

Schloen, D.

2008   British and Israeli Excavations, in: L. E. Stager/D Schloen/D. M. Master (*eds.*), Ashkelon 1: Introduction and Overview (1985–2006) (Winona Lake), 153–164.

Schwartz, G. M.

2006   From Collapse to Regeneration, in: G. M. Schwartz/J. J. Nichols (*ed.*), After Collapse. The Regeneration of Complex Societies (Tucson), 3–17.

Schwartz, G. M./J. J. Nichols (*ed.*)

2006   After Collapse. The Regeneration of Complex Societies (Tucson).

Seeher, J.

2001   Die Ausgrabungen in Bogazköy-Hattusa 2000, in: Archäologischer Anzeiger 3, 333–362.

2011   The Plateau: The Hittites, in: S. R. Steadman/G. McMahon (*ed.*), The Oxford Handbook of Ancient Anatolia (Oxford), 376–392.

Sharon, I./A. Gilboa

2013   The SKL Town: Dor in the Early Iron Age, in: A. E. Killebrew/G. Lehmann (*ed.*), The Philistines and Other 'Sea Peoples' in Text and Archaeology (Archaeology and Biblical Studies 15, Atlanta), 393–468.

Shelton, K.

2010   Mainland Greece, in: E. H. Cline (*ed.*), The Oxford Handbook of the Bronze Age Aegean (Oxford), 139–148.

Shennan, S. J.

1989   Archaeological Approaches to Cultural Identity (One World Archaeology 10, London).

Sherratt, S.

1998   'Sea Peoples' and the Economic Structure of the Late Second Millennium in the Eastern Mediterranean, in: S. Gitin/A. Mazar/E. Stern, (*ed.*), Mediterranean Peoples in Transition. Thirteenth to Early Tenth Centuries B.C.E. (Jerusalem), 292–313.

1999   E Pur si muove: Pots, Markets, and Values in the Second Millennium Mediterranean, in: J. P. Crielaard/V. Stissi/G. J. van Wijngaarden (*ed.*), The Complex Past of Pottery. Production, Circulation and Consumption of Mycenaean and Greek Pottery (Amsterdam), 163–211.

2000   Circulation of Metals and the End of the Bronze Age in the Eastern Mediterranean, in: C. F. E. Pare (*ed.*), Metals Make the World Go Round: The Supply and Circulation of Metals in Bronze Age Europe. Proceedings of a Conference Held at the University of Birmingham in June 1997 (Oxford), 82–98.

2001   Potemkin Palaces and Route-Based Economies, in: S. Voutsaki/J. Killen (*ed.*), Economy and Politics in the Mycenaean Palace States. Proceedings of a Conference Held on 1–3 July 1999 in the Faculty of Classics, Cambridge (Proceedings of the Cambridge Philological Society, Supplementary Volumes 27, Cambridge), 214–238.

2003   The Mediterranean Economy: 'Globalization' at the End of the Second Millennium B.C.E., in: W. G. Dever/S. Gitin (*ed.*), Symbiosis, Symbolism, and the Power of the Past. Canaan, Ancient Israel, and Their Neighbors from the Late Bronze Age through Roman Palestina. Proceedings of the Centennial Symposium W. F. Albright Institute of Archaeological Research and American Schools of Oriental Research, Jerusalem, May 29 – May 31, 2000 (Winona Lake), 37–62.

2009   The Aegean-Style Pottery Chapter 7A: Imported Mycenaean IIIC Pottery, in: N. Panitz-Cohen/A. Mazar (*ed.*), Excavations at Tel Beth-Shean 1989–1996. Vol. 3: The 13th–11th Centuries BCE (Areas S and N) (Jerusalem), 478–499.

2010   The Aegean and the Wider World: Some Thoughts on a World-Systems Perspective, in: W. A. Parkinson/M. L. Galaty (*ed.*), Archaic State Interaction. The Eastern Mediterranean in the Bronze Age (Santa Fe), 81–106.

2011   Greeks and Phoenicians: Perceptions of Trade and Traders in the Early First Millennium BC, in: A. A. Bauer/A. S. Agbe-Davies (*ed.*), Social Archaeologies of Trade and Exchange: Exploring Relationships among People, Places, and Things (Walnut Creek), 119–142.

2012   The Intercultural Transformative Capacities of Irregularly Appropriated Goods, in: J. Maran/P. Stockhammer (*ed.*), Materiality and Social Practice. Transformative Capacities of Intercultural Encounters (Oxford, Oakville), 152–172.

2014   Introduction to the Levant during the Late Bronze Age, in: M. L. Steiner/A. E. Killebrew (*ed.*), The Oxford Handbook of the Archaeology of the Levant c. 8000–332 BCE (Oxford), 497–508.

Sherratt, A./S. Sherratt

1991   From Luxuries to Commodities: The Nature of Mediterranean Bronze Age Trade Systems, in: N. H. Gale (*ed.*), Bronze Age Trade in the Mediterranean. Papers Presented at the Conference Held at Rewley House, Oxford, in December 1989 (Jonsered), 351–385.

1993   The Growth of the Mediterranean Economy in the Early First Millennium BC, in: World Archaeology 24/3, 361–378.

1998   Small Worlds: Interaction and Identity in the Ancient Mediterranean, in: E. H. Cline/D. Harris-Cline (*ed.*), The Aegean and the Orient in the Second Millennium. Proceedings of the 50th Anniversary Symposium, Cincinatti, 18–20 April 1997 (Aegaeum 18, Liège), 329–343.

Silberman, N. A.

1998   The Sea Peoples, the Victorians, and Us: Modern Social Ideology and Changing Archaeological Interpretations of the Late Bronze Age Collapse, in: S. Gitin/A. Mazar/E. Stern (*ed.*), Mediterranean Peoples in Transition. Thirteenth to Early Tenth Centuries B.C.E. (Jerusalem), 268–275.

Singer, I.

1977   A Hittite Hieroglyphic Seal Impression from Tel Aphek, in: Tel Aviv 4/3–4, 178–190.

1985   The Beginning of Philistine Settlement in Canaan and the Northern Boundary of Philistia, in: Tel Aviv 12/2, 109–122.

1988a The Origin of the Sea Peoples and Their Settlement on the Coast of Canaan, in: M. Heltzer/E. Lipiński (*ed.*), Society and Economy in the Eastern Mediterranean (c. 1500–1000 B.C.). Proceedings of the International Symposium Held at the University of Haifa from the 28th of April to the 2nd of May 1985 (Orientalia Lovaniensia Analecta 23, Leuven), 239–250.

1988b Merneptah's Campaign to Canaan and the Egyptian Occupation of the Southern Coastal Plain of Palestine in the Ramesside Period, in: Bulletin of the American Schools of Oriental Research 269, 1–10.

1994   Egyptians, Canaanites, and Philistines in the Period of the Emergence of Israel, in: I. Finkel-stein/N. Na'aman (*ed.*), From Nomadism to Monarchy. Archaeological and Historical Aspects of Early Israel (Jerusalem), 282–338.

1999   A Political History of Ugarit, in: W. G. E. Watson/N. Wyatt (*ed.*), Handbook of Ugaritic Studies (Handbook of Oriental Studies 39, Leiden, Boston, Köln), 603–733.

2000   New Evidence on the End of the Hittite Empire, in: E. D. Oren (*ed.*), The Sea Peoples and Their World: A Reassessment (University Museum Monograph 108, University Museum Symposium Series 11, Philadelphia), 21–33.

2006   Ships Bound for Lukka: A New Interpretation of the Companion Letters RS 94.2530 and RS 94.2523, in: Altorientalische Forschungen 33/2, 242–262.

2013   The Philistines in the Bible: A Short Rejoinder to a New Perspective, in: A. E. Killebrew/G. Leh-mann (*ed.*), The Philistines and Other 'Sea Peoples' in Text and Archaeology (Archaeology and Biblical Studies 15, Atlanta), 19–27.

Singer-Avitz, L.

2014   The Date of the Qurayyah Painted Ware in the Southern Levant, in: Antiguo Oriente 12, 123–147.

Skeates, R.

2009   Trade and Interaction, in: B. Cunliffe/C. Gosden/R. A. Joyce (*ed.*), The Oxford Handbook of Archaeology (Oxford), 555–578.

Small, D. B.

1998   Surviving the Collapse: The Oikos and the Structural Continuity between Late Bronze Age and Later Greece, in: S. Gitin/A. Mazar/E. Stern (*ed.*), Mediterranean Peoples in Transition. Thirteenth to Early Tenth Centuries B.C.E. (Jerusalem), 283–291.

Smith, S.

2003   Wretched Kush. Ethnic Identities and Boundaries in Egypt's Nubian Empire (London, New York).

Snape, S. R.

2003   Zawiyet Umm el-Rakham and Egyptian Foreign Trade in the 13th Century BC, in: N. Stampoli-dis/V. Karageorghis (*ed.*), *ΠΛΟΕΣ.* Sea Routes. Interconnections in the Mediterranean 16th–6th c. BC. Proceedings of the International Symposium Held at Rethymnon, Crete, September 29th–October 2nd 2002 (Athens), 63–70.

Sommer, K. G.

2016   Der 21. Januar 1192 v. Chr.: Der Untergang Ugarits? (Münchner Studien zur Welt 14, München).

Sparks, R. T.

1996   Egyptian Stone Vessels in Palestine during the Second Millennium B.C. and Their Impact on the Local Stone Vessel Industry, in: G. Bunnens (*ed.*), Cultural Interaction in the Ancient Near East. Papers Read at a Symposium Held at the University of Melbourne, Department of Classics and Archaeology (29–30 September 1994) (Abr-Nahrain Supplement 5, Louvain), 51–66.

2003   Egyptian Stone Vessels and the Politics of Exchange (2617–1070 BC), in: R. Matthews/C. Roemer (*ed.*), Ancient Perspectives on Egypt (London), 39–56.

2007   Stone Vessels in the Levant (Palestine Exploration Fund Annual 8, Leeds).

2013   Fishing for Meaning: The Significance of Net Weights, Fishhooks, and Netting Needles in Mortuary Contexts at Tell el-'Ajjul, in: Journal of Ancient Egyptian Interconnections 5/2, 33–47.

Stager, L. E.

1995   The Impact of the Sea Peoples in Canaan (1185–1050 BCE), in: T. E. Levy (*ed.*), The Archaeology of Society in the Holy Land (London), 332–348.

2011   Ashkelon on the Eve of Destruction in 604 B.C., in: L. E: Stager/D. Schloen/D. M. Master (*eds.*), Ashkelon 3. The Seventh Century B.C. (Winona Lake) 3–12.

Stark, B. L./C. P. Garraty

2010   Detecting Marketplace Exchange in Archaeology: A Methodological Review in: C. P. Garraty/B. L. Stark (*ed.*), Archaeological Approaches to Market Exchange in Ancient Societies (Boulder), 33–58.

Steel, L.

2002   Consuming Passions. A Contextual Study of the Local Consumption of Mycenaean Pottery at Tell el-'Ajjul, in: Journal of Mediterranean Archaeology 15/1, 25–51.

2004a   Cyprus before History. From the Earliest Settlers to the End of the Bronze Age (London).

2004b   A Reappraisal of the Distribution, Context and Function of Mycenaean Pottery in Cyprus, in: Travaux de la Maison de l'Orient Méditerranée 41/1, 69–85.

2010   Cyprus, in: E. H. Cline (*ed.*), The Oxford Handbook of the Bronze Age Aegean (Oxford), 804–819.

2013   Materiality and Consumption in the Bronze Age Mediterranean (Routledge Studies in Archaeology 7, New York, London).

2014   Cyprus during the Late Bronze Age, in: M. L. Steiner/A. E. Killebrew (*ed.*), The Oxford Handbook of the Archaeology of the Levant c. 8000–332 BCE (Oxford), 577–591.

Stein, G.

2002   From Passive Periphery to Active Agents: Emerging Perspectives in the Archaeology of Interregional Interaction, in: American Anthropologist 104/3, 903–916.

Stern, E.

1978   Excavations at Tel Mevorakh I (1973–1976). From the Iron Age to the Roman Period (Qedem: Monographs of the Institute of Archaeology 9, Jerusalem).

1984   Excavations at Tel Mevorakh II (1973–1976). The Bronze Age (Qedem: Monographs of the Institute of Archaeology 18, Jerusalem).

1993   The Renewal of Trade in the Eastern Mediterranean in the Iron Age I, in: A. Biran/J. Aviram (*ed.*), Biblical Archaeology Today, 1990. Proceedings of the Second International Congress on Biblical Archaeology, Jerusalem, June – July 1990 (Jerusalem), 325–334.

2013   The Material Culture of the Northern Sea Peoples in Israel (Studies in the Archaeology and History of the Levant 5, Winona Lake).

Stern, E. (*ed.*)

2008   The New Encyclopedia of Archaeological Excavations in the Holy Land. Vol. 5 (Jerusalem).

Stidsing, R./Y. Salmon

2011   Chapter 14: The Northern Coastal Plain: Tel Dor (Phases 12 and 11 in Area G), in: M. A. A. Martin (*ed.*), Egyptian-Type Pottery in the Late Bronze Age Southern Levant (Vienna), 174–180.

Stidsing, R./Y. Salmon

2011   Chapter 14: The Northern Coastal Plain: Tel Dor (Phases 12 and 11 in Area G), in: M. A. A. Martin (*ed.*), Egyptian-Type Pottery in the Late Bronze Age Southern Levant (Vienna) 174–180.

Stockhammer, P. W.

2011   An Aegean Glance at Megiddo, in: W. Gauß/M. Lindblom/R. A. K. Smith (*ed.*), Our Cups are Full: Pottery and Society in the Aegean Bronze Age. Papers Presented to Jeremy B. Rutter on the Occasion of His 65th birthday (Oxford), 282–296.

2013   Entangled Pottery: Phenomena of Appropriation in the Late Bronze Age Eastern Mediterranean, in: J. Maran/P. Stockhammer (*ed.*), Materiality and Social Practice. Transformative Capacities of Intercultural Encounters (Oxford, Oakville), 89–103.

2015   Levantine and Cypriot Pottery in Mycenaean Greece as Mirrors of Intercultural Contacts, in: A. Babbi/F. Bubenheimer-Erhart/B. Marín-Aguilera *et al.* (*ed.*), The Mediterranean Mirror. Cultural Contacts in the Mediterranean Sea between 1200 and 750 B.C. (Mainz), 177–187.

Strange, J.

2008   The Late Bronze Age, in: R. B. Adams (*ed.*), Jordan. An Archaeological Reader (London, Oakville), 281–310.

2015a 1990–93 Area C and D, in: J. Strange (*ed.*), Tall al-Fukhār. Vol. 1 Text (Aarhus), 29–62.

2015b 2002 – Area F, in: J. Strange (*ed.*), Tall al-Fukhār. Results from Excavations in 1990–1993 and 2002. Vol. 1: Text (Aarhus), 63–72.

2015c The History and Significance of Tall al-Fukhār, in: J. Strange (*ed.*), Tall al-Fukhār. Results from Excavations in 1990 – 1993 and 2002, Vol. 1: Text (Aarhus), 419–422.

Strathern, A./P. J. Stewart

2005 Ceremonial Exchange, in: J. G. Carrier (*ed.*), A Handbook of Economic Anthropology (Cheltenham, Northampton), 230–245.

Stewart, C./K. Lemmens/M. Sala

2015 Satellite Radar in Support to Archaeological Research in Egypt: Tracing Ancient Tracks between Egypt and Southern Levant across North Sinai, in: Consiglio Nazionale Delle Ricerche (*ed.*), Egyptian Curses 2. A Research of Ancient Catastrophes (Rome), 198–221.

Sugerman, M.

2000 Webs of Commerce: The Archaeology of Ordinary Things in Late Bronze Age Israel and Palestine (Harvard).

2009 Trade and Power in Late Bronze Age Canaan, in: J. D. Schloen (*ed.*), Exploring the Longue Durée. Essays in Honor of Lawrence E. Stager (Winona Lakes), 439–448.

Sukenik, E. L.

1934 Tell Jerishe, in: The Quarterly of the Department of Antiquates in Palestine 4, 208–209.

1938 Tell Jerishe, in: The Quarterly of the Department of Antiquates in Palestine 6, 225.

1944 Tell Jerishe, in: The Quarterly of the Department of Antiquates in Palestine 10, 198–199.

Sweeney, D.

2004 Hieratic Inscriptions from Lachish, in: D. Ussishkin (*ed.*), The Renewed Excavations at Lachish (1973–1994). Vol. 3 (Tel Aviv), 1601–1617.

Tainter, J. A.

1988 The Collapse of Complex Societies (Cambridge).

1995 Sustainability of Complex Societies, in: Futures 27/4, 397–407.

2016 Why Collapse is so Difficult to Understand, in: R. K. Faulseit (*ed.*), Beyond Collapse. Archaeological Perspectives on Resilience, Revitalization, and Transformation in Complex Societies (Carbondale), 27–39.

Tebes, J. M.

2003 A New Analysis of the Iron Age I 'Chiefdom' of Tel Masos (Beersheba Valley), in: Aula Orientalis 21, 63–78.

2007 Pottery Makers and Premodern Exchange in the Fringes of Egypt. An Approximation to the Distribution of Iron Age Midianite Pottery, in: Buried History 43, 11–26.

2013 Investigating the Painted Pottery Traditions of the First Millennium BC Northwestern Hejaz and Southern Levant: Chronological Data and Arabian Parallels, in: Proceedings of the Seminar for Arabian Studies 43, 317–336.

2014 The Symbolic and Social World of the Qurayyah Pottery Iconography, in: J.M. Tebes (*ed.*), Unearthing the Wilderness: Studies on the History and Archaeology of the Negev and Edom in the Iron Age (Leuven), 163-202.

Testa, G./C. Lilyquist

2011 Strontium Isotopes as a Promising Tool to Determine Calcite-*Alabaster* Provenance, in: E. G. Kapsomenos *et al.* (*ed.*), Proceedings of the 10th Cretological Congress, Chania, 1–8 October 2006, 323–336.

Thaler, U.

2005   Ahhiyawa and Hatti: Palatial Perspectives, in: A. Pace/S. Antoniadou (*ed.*), Mediterranean Cross-roads. International Archaeological Conference on Movements of People and Movement of Cultures (London), 291–324.

Thompson, C. M.

2003   Sealed Silver in Iron Age Cisjordan and the 'Invention' of Coinage, in: Oxford Journal of Archaeology 22/1, 67–107.

2009   Three 20th Dynasty Silver Hoards from the Egyptian Garrison, in: N. Panitz-Cohen/A. Mazar (*ed.*), Excavations at Tel Beth-Shean 1989–1996. Vol. 3: The 13th–11th Century BCE Strata in Areas N and S (Jerusalem), 597–607.

Tomlinson, J. E.

2004   Section C: Statistical Evaluation of Neutron Activation Data, in: D. Ussishkin (*ed.*), The Renewed Archaeological Excavations at Lachish (1973–1994). Vol. 3 (Tel Aviv), 1437–1445.

Tubb, J. N.

1986   Tell es-Sa'idiyeh 1986: Interim Report of the Second Season of Excavations, in: Annual of the Department of Antiquities of Jordan 30, 115–129.

1988a   Tell es-Sa'idiyeh 1987: Third Season Interim Report, in: Annual of the Department of Antiquities of Jordan 32, 41–58.

1988b   Tell es-Sa'idiyeh: Preliminary Report on the First Three Season of Renewed Excavation, in: Levant 20, 23–88.

1990   Preliminary Report on the Fourth Season of Excavations at Tell es-Sa'idiyeh in the Jordan Valley, in: Levant 22, 21–42.

1993   Sa'diyeh, Tell-es, in: E. Stern (*ed.*), The New Encyclopedia of Archaeological Excavations in the Holy Land. Vol. 3 (Jerusalem), 1295–1300.

2000   Sea Peoples in the Jordan Valley, in: E. D. Oren (*ed.*), The Sea Peoples and Their World: A Reassessment (University Museum Monograph 108, University Museum Symposium Series 11, Philadelphia), 181–196.

Tubb, J. N./P. G. Dorrell

1991   Preliminary Report of the Fifth (1990) Season of Excavations at Tell es-Sa'idiyeh, in: Annual of the Department of Antiquities of Jordan 35, 181–194.

1993   Tell es-Sa'idiyeh: Interim Report on the Sixth Season of Excavations, in: Palestine Exploration Quarterly 125/1, 50–74.

Tubb, J. N./P. G. Dorrell/F. J. Cobbing

1996   Interim Report on the Eighth (1995) Season of Excavations at Tell es-Sa'idiyeh, in: Palestine Exploration Quarterly 128/1, 16–40.

1997   Interim Report on the Ninth Season (1996) of Excavations at Tell es-Sa'idiyeh, Jordan, in: Palestine Exploration Quarterly 129/1, 54–77.

Tufnell, O.

1993   'Ajjul, Tell el-, in: E. Stern (*ed.*), The New Encyclopedia of Archaeological Excavations in the Holy Land. Vol. 1 (Jerusalem), 49–52.

Ussishkin, D.

1982   The Conquest of Lachish by Sennacherib (Publications of the Institute of Archaeology 6, Tel Aviv).

1985   Levels VII and VI Lachish and the End of the Late Bronze Age in Canaan, in: J. Tubb (*ed.*), Palestine in the Bronze and Iron Ages. Papers in Honour of Olga Tufnell (London), 213–230.

1998   The Destruction of Megiddo at the End of the Late Bronze Age and Its Historical Significance, in: S. Gitin/A. Mazar/E. Stern (*ed.*), Mediterranean Peoples in Transition. Thirteenth to Early Tenth Centuries B.C.E. (Jerusalem), 197–219.

1995   The Destruction of Megiddo at the End of the Late Bronze Age and Its Historical Significance, in: Tel Aviv 22/2, 240–267.

2000   Area G: Soundings in the Late Bronze Gate, in: I. Finkelstein/D. Ussishkin/B. H. Halpern (*ed.*), Megiddo III. The 1992–1996 Seasons (Monograph Series of the Sonia and Marco Nadler Institute of Archaeology 18, Tel Aviv), 104–122.

2004a   A Synopsis of the Stratagraphical, Chronological and Historical Issues, in: D. Ussishkin (*ed.*), The Renewed Archaeological Excavations at Lachish (1973–1994). Vol. 1 (Tel Aviv), 50–122.

2004b   Area P: The Level VI Temple, in: D. Ussishkin (*ed.*), The Renewed Archaeological Excavations at Lachish (1973–1994). Vol. 1 (Monograph Series of the Sonia and Marco Nadler Institute of Archaeology 22, Tel Aviv), 215–281.

2008   The Date of the Philistine Settlement in the Coastal Plain: The View from Megiddo and Lachish, in: L. L. Grabbe (*ed.*), Israel in Transition. From the Late Bronze II to the Iron IIa (c. 1250–850). Vol. 1: The Archaeology (New York, London), 203–218.

2014   Biblical Lachish. A Tale of Construction, Destruction, Excavation and Restoration (Jerusalem).

van Beek, G. W.

1993   Jemmeh, Tell, in: E. Stern (*ed.*), The New Encyclopedia of Archaeological Excavations in the Holy Land. Vol. 2 (Jerusalem), 667–674.

van de Mieroop, M.

2004   A History of the Ancient Near East ca. 3000–323 BC (Blackwell History of the Ancient World 1, Malden, Oxford, Chichester).

2010   The Eastern Mediterranean in the Age of Ramesses II (Malden, Oxford, Chichester).

van der Kooij, G.

1993 Deir 'Alla, Tell, in: E. Stern (*ed.*), The New Encyclopedia of Archaeological Excavations in the Holy Land. Vol. 1 (Jerusalem), 338–342.

van der Steen, E. J.

1996   The Central East Jordan Valley in the Late Bronze and Early Iron Ages, in: Bulletin of the American Schools of Oriental Research 302, 51–74.

van der Veen, P.

2013   When Pharaohs Ruled Jerusalem, in: Biblical Archeology Review 39/2, 42–48.

van Neer, W. *et al.*

2004   Fish Remains from Archaeological Sites as Indicators of Former Trade Connections in the Eastern Mediterranean, in: Paléorient 30/1, 101–148.

van Neer, W./I. Zohar/O. Lernau

2005   The Emergence of Fishing Communities in the Eastern Mediterranean Region: A Survey of Evidence from Pre- and Protohistoric Periods, in: Paléorient 31/1, 131–157.

van Wijngaarden, G. J.

2002   Use and Appreciation of Mycenaean Pottery in the Levant, Cyprus and Italy (ca. 1600–1200 BC) (Amsterdam Archaeological Studies 8, Amsterdam).

2013   Trade Goods Reproducing Merchants? The Materiality of Mediterranean Late Bronze Age Exchange, in: J. Maran/P. Stockhammer (*ed.*), Materiality and Social Practice. Transformative Capacities of Intercultural Encounters (Oxford, Oakville), 61–72.

Varberg, J./B. Gratuze/F. Kaul

2015   Between Egypt, Mesopotamia and Scandinavia: Late Bronze Age Glass Beads Found in Denmark, in: Journal of Archaeological Science 54, 168–181.

Vichos, Y./Y. Lolos

1997   The Cypro-Mycenaean Wreck at Point Iria in the Argolic Gulf: First Thoughts on the Origin and the Nature of the Vessel, in: S. Swiny/R. L. Hohlfelder/H. W. Swiny (*ed.*), Res Maritimae. Cyprus and the Eastern Mediterranean from Prehistory to Late Antiquity (Cyprus American Archaeological Research Institute Monograph Series 1, Atlanta), 321–337.

Vidal, J.

2006   Ugarit and the Southern Levantine Sea-Ports, in: Journal of the Economic and Social History of the Orient 49/3, 269–279.

Vita, J.-P.

1999   The Society of Ugarit, in: W. G. E. Watson//N. Wyatt (*ed.*), Handbook of Ugaritic Studies (Handbook of Oriental Studies 39, Leiden, Boston, Köln), 455–498.

von Rüden, C.

2015   Making the Way through the Sea. Experiencing Mediterranean Seascapes in the Second Millennium B.C.E, in: A. Lichtenberger/C. von Rüden (*ed.*), Multiple Mediterranean Realities. Current Approaches to Spaces, Resources, and Connectivities (Mittelmeerstudien 6, Paderborn), 31–66.

von Rüden, C./A. Lichtenberger

2015   Introduction: Multiple Mediterranean Realities. Spaces, Resources and Connectivities, in: A. Lichtenberger, A./C. von Rüden (*ed.*), Multiple Mediterranean Realities. Current Approaches to Spaces, Resources, and Connectivities (Mittelmeerstudien 6, Paderborn), 9–16.

Voskos, I./A. B. Knapp

2008   Cyprus at the End of the Late Bronze Age: Crisis and Colonization or Continuity and Hybridization?, in: American Journal of Archaeology 112/4, 659–684.

Wachsmann, S.

2000   To the Sea of the Philistines, in: E. D. Oren (*ed.*), The Sea Peoples and Their World: A Reassessment (University Museum Monograph 108, University Museum Symposium Series 11, Philadelphia), 103–143.

2008   Seagoing Ships and Seamanship in the Bronze Age Levant (Texas).

Waiman-Barak, P./A. Gilboa/Y. Goren

2014   A Stratified Sequence of Early Iron Age Egyptian Ceramics at Tel Dor, Israel, in: Ägypten und Levante/Egypt and the Levant 24, 317–341.

Webster, L. *et al.*

2018   Preliminary Radiocarbon Results for Late Bronze Age Strata at Tel Azekah and their Implications. Radiocarbon 60/1, 309–331.

Weinstein, J. M.

1973   Foundation Deposits in Ancient Egypt (PhD Thesis, University of Pennsylvania, Philadelphia [unpublished]).

1981   The Egyptian Empire in Palestine: A Reassessment, in: Bulletin of the American Schools of Oriental Research 241, 1–28.

1992   The Collapse of the Egyptian Empire in the Southern Levant, in: W. A. Ward/ M. S. Joukowsky (*ed.*), The Crisis Years: The 12th Century B.C. From beyond the Danube to the Tigris (Dubuque), 142–150.

1998   Egyptian Relations with the Eastern Mediterranean World at the End of the Second Millennium BCE, in: S. Gitin/A. Mazar/E. Stern (*ed.*), Mediterranean Peoples in Transition. Thirteenth to Early Tenth Centuries B.C.E. (Jerusalem), 188–196.

Weiss, B.

1982   The Decline of Late Bronze Age Civilization as a Possible Response to Climatic Change, in: Climatic Change 4/2, 173–198.

Wengrow, D.

1996   Egyptian Taskmasters and Heavy Burdens: Highland Exploitation and the Collared-Rim Pithos of the Bronze/Iron Age Levant, in: Oxford Journal of Archaeology 15/3, 307–326.

Wiener, M. H.

1991   The Nature and Control of Minoan Foreign Trade, in: N. H. Gale (*ed.*), Bronze Age Trade in the Mediterranean. Papers Presented at the Conference Held at Rewley House, Oxford, in December 1989 (Jonsered), 325–350.

Wood, B. G.

1991   The Philistines Enter Canaan. Where They Egyptian Lackeys or Invading Conquerors?, in: Biblical Archeology Review 17/6, 44–52.

Wright, G. E.

1939   Iron: The Date of Its Introduction into Common Use in Palestine, in: American Journal of Archaeology 43/3, 458–463.

Yadin, Y.

1993   Hazor, in: E. Stern (*ed.*), The New Encyclopedia of Archaeological Excavations in the Holy Land. Vol. 2 (Jerusalem), 594–603.

Yadin, Y./S. Geva

1986   Investigations at Beth Shean. The Early Iron Age Strata (Qedem: Monographs of the Institute of Archaeology 23, Jerusalem).

Yahalom-Mack, N./A. Eliyahu-Behar

2015   The Transition from Bronze to Iron in Canaan: Chronology, Technology, and Context, in: Radiocarbon 57/2, 285–305.

Yahalom-Mack, N. *et al.*

2014   New Insights into Levantine Copper Trade: Analysis of Ingots from the Bronze and Iron Ages in Israel, in: Journal of Archaeological: Science 45, 159–177.

Yakar, J.

1993   Anatolian Civilization Following the Disintegration of the Hittite Empire: An Archaeological Appraisal, in: Journal of the Institute of Archaeology of Tel Aviv University 20/1, 3–28.

2006   Dating the Sequence of the Final Destruction/Abandonment of LBA Settlements: Toward a Better Understanding of Events that Led to the Collapse of the Hittite Kingdom, in: D. P. Mielke/U.-D. Schoop/J. Seeher (*ed.*), Strukturierung und Datierung in der hethitischen Archäologie: Voraussetzungen, Probleme, neue Ansätze. Internationaler Workshop Istanbul, 26.–27. November 2004 (Byzantinische Veröffentlichungen des Deutschen Archäologischen Instituts Istanbul 4, Istanbul), 33–51.

Yan, Y.

2012   The Gift and Gift Exchange, in: J. G. Carrier (*ed.*), A Handbook of Economic Anthropology, 2nd Edition (Cheltenham, Northampton), 275–290.

Yannai, E.

2004   The Northwest Anatolian Grey Ware, in: D. Ussishkin (ed.), The Renewed Archaeological Excavations at Lachish (1973–1994) (Monograph Series of the Sonia and Marco Nadler Institute of Archaeology 22, Tel Aviv), 1273–1279.

Yasur-Landau, A.

2010a The Philistines and Aegean Migration at the End of the Late Bronze Age (Cambridge).

2010b Levant, in: E. H. Cline (*ed.*), The Oxford Handbook of the Bronze Age Aegean (Oxford), 832–848.

Yasur-Landau, A./Y. Goren

2004   A Cypro-Minoan Potmark from Aphek, in: Tel Aviv 31/1, 22–31.

Yellen, J./A. E. Killebrew

2010   The Origin of Egyptian-Style Ceramics from Deir el-Balaḥ: Conclusions from Neutron Activation Analysis, in: T. Dothan/B. Brandl (*ed.*), Deir el-Balaḥ: Excavations in 1977–1982 in the Cemetery and Settlement. Vol. 2: The Finds (Qedem: Monographs of the Institute of Archaeology 50, Jerusalem), 57–74.

Yisraeli, Y.

1993   Far'ah, Tell el- (South), in: E. Stern (*ed.*), The New Encyclopedia of Archaeological Excavations in the Holy Land. Vol. 2 (Jerusalem), 441–444.

Yoffee, N.

1988   Orienting Collapse, in: N. Yoffee/G. L. Cowgill (*ed.*), The Collapse of Ancient States and Civiliza-
        tions (Tucson), 1–19.

Yoffee, N./G. L. Cowgill (*ed.*)

1988   The Collapse of Ancient States and Civilizations (Tucson).

Yon, M.

1992a   The End of the Kingdom of Ugarit, in: W. A. Ward/M. S. Joukowsky (*ed.*), The Crisis Years: The
        12th Century B.C. From beyond the Danube to the Tigris (Dubuque), 111–122.

1992b   Ugarit: The Urban Habitat. The Present State of the Archaeological Picture, in: Bulletin of the
        American Schools of Oriental Research 286, 19–34.

2003   The Foreign Relations of Ugarit, in: N. Stampolidis/V. Karageorghis (*ed.*), *ΠΛΟΕΣ*. Sea Routes.
        Interconnections in the Mediterranean 16th–6th Centuries B.C. Proceedings of the International
        Symposium Held at Rethymnon, Crete, September 29th–October 2nd 2002 (Athens), 41–51.

2006   The City of Ugarit at Tell Ras Shamra (Winona Lake).

Yurco, F. J.

1999   End of the Late Bronze Age and Other Crisis Periods: A Volcanic Cause, in: E. Teeter/J. Larson
        (*ed.*), Gold of Praise. Studies on Ancient Egypt in Honor of Edward F. Wente (Studies in Ancient
        Oriental Civilization 58, Chicago), 456–463.

Zaccagnini, C.

1987   Aspects of Ceremonial Gift Exchange in the Near East during the Late Second Millennium BC,
        in: M. Rowlands (*ed.*), Centre and Periphery in the Ancient World (Cambridge), 57–65.

2000   The Interdependence of the Great Powers, in: R. Cohen/R. Westbrook (*ed.*), Amarna Diplomacy.
        The Beginnings of International Relations (Baltimore, London), 141–153.

Zarzecki-Peleg, A.

2005a   The Iron Age I (Strata XVIII–XVII), in: A. Ben-Tor/A. Zarzecki-Peleg/S. Cohen-Anidjar (*ed.*), Yo-
        qneʿam II. The Iron Age and the Persian Period. Final Report of the Archaeological Excavations
        (1977–1988) (Qedem Reports 6, Jerusalem), 10–89.

2005b   Architectural and Urban Analysis, in: A. Ben-Tor/A. Zarzecki-Peleg/S. Cohen-Anidjar (*ed.*), Yo-
        qneʿam II. The Iron Age and the Persian Period. Final Report of the Archaeological Excavations
        (1977–1988) (Qedem Reports 6, Jerusalem), 225–232.

Zertal, A.

1998   The Iron Age I Culture in the Hill-Country of Canaan – A Manassite Perspective, in: S. Gitin/A.
        Mazar/E. Stern (*ed.*), Mediterranean Peoples in Transition. Thirteenth to Early Tenth Centuries
        B.C.E. (Jerusalem), 238–250.

Zukerman, A.

2010   On Aegean Involvement in Trade with the Near East during the Late Bronze Age, in: Ugarit-
        Forschungen 42, 887–901.

Zuckerman, S.

2007   Anatomy of a Destruction: Crisis Architecture, Termination Rituals and the Fall of Canaanite Ha-
        zor. Journal of Mediterranean Archaeology, 20/1, 3–32.

2009   The Last Days of a Canaanite Kingdom: A View from Hazor, in: C. Bachhuber/R. G. Roberts (*ed.*),
        Forces of Transformation. End of the Bronze Age in the Mediterranean. Proceedings of an Inter-
        national Symposium Held at St. John's College, University of Oxford, 25 – 26th March 2006 (Ox-
        ford), 100–107.

2013   Area S: Renewed Excavations in the Lower City of Hazor, in: Near Eastern Archaeology 76/2,
        94–97.

Zuckerman, S. *et al.*

2010   A Provenance Study of Mycenaean Pottery from Northern Israel, in: Journal of Archaeological Science 37/2, 409–416.

Zwickel, W.

2011   Jaffa in Its Regional Context during the Late Bronze Age and Iron Ages, in: M. Peilstöcker/A. A. Burke (*ed.*), The History and Archaeology of Jaffa I (Monumenta Archaeologica 26, Los Angeles), 79–93.

Appendix I: Chart of Destruction

Site	Approximate date of destruction	Scale	Pre-destruction	Post-destruction	Classification
Acco	NA	NA	NA	NA	No Destruction
Amman Airport Structure	NA	NA	NA	NA	No Destruction
Aphek	End of 13th cent. BC	Site-wide	Sudden	Abandonment	Human Activity: Warfare
Ashdod	End of 13th cent. BC	Partial	NA	Partial Abandonment, Intro of Local LH IIIC pottery	Unknown
Ashkelon	NA	NA	NA	NA	No Destruction
Bet-El	End of 13th cent. BC	Partial	Crisis / Abandonment?	Architectural changes, MC changes?	Natural/Human Activity?
Beth-Shean	Mid-12th cent. BC	Multi-building	Sudden / Abandonment?	Egyptian/Egyptianised pottery disappears	Natural: Earthquake
Beth-Shemesh	End of 13th cent. BC	Unknown	Unknown	Continuation of 'Canaanite' MC	Natural/Accidental?
el-'Afule	NA	NA	NA	NA	No Destruction
ez-Zib	13th cent. BC	Unknown	NA	NA	Unknown
Gezer XV	Second half 13th cent. BC	Single Building	Crisis	Ephemeral local 'Canaanite' phase	Natural/Accidental?
Gezer XIV	Second half 13th cent. BC	Partial	Ephemeral	Continuation of 'Canaanite' MC, some Philistine wares	Natural/Accidental?
Ǧezīret en-Nāmī	End of 13th cent. BC	Partial	Unknown	Abandonment	Unknown
Hazor	Mid-13th cent. BC	Multi-building	Crisis / Abandonment	Abandonment	Human Activity: Desecration / Post-Battle?
Ḫirbet el-Burǧ	NA	NA	NA	NA	No Destruction
Ḫirbet Tell eḏ-Durūr	NA	NA	NA	NA	No Destruction
Jaffa					
Khirbet Rabud	NA	NA	NA	NA	No Destruction
Lachish VII Area S	End of 13th cent. BC	Single Building	Sudden?	Building built over by Pillared Building Level VI	Accidental
Lachish VII Fosse Temple	End of 13th cent. BC	Single Building	Emptied of goods	Abandonment	Ritual Termination: Sacred

Site	Approximate date of destruction	Scale	Pre-destruction	Post-destruction	Classification
Lachish VI	End of 12th cent. BC	Site-wide?	Crisis	Abandonment	Human Activity?
Megiddo	First half 12th cent. BC	Single Building / Partial	Crisis / Abandonment	Abandonment / Poorer settlement	Unknown
Shiqmona	NA	NA	NA	NA	No Destruction
Tel Azekah	End of 12th cent. BC	Multi-building	Sudden / Crisis?	Abandonment	Natural/Human Activity?
Tel Mevorakh	NA	NA	NA	NA	No Destruction
Tel Michal	NA	NA	NA	NA	No Destruction
Tel Miqne (Ekron)	End of 13th cent. BC	Single Building	Unknown	Local 'Canaanite' phase	Unknown
Tell Abū Ḥaraz	NA	NA	NA	NA	No Destruction
Tell Abū Ḥawām	NA	NA	NA	NA	No Destruction
Tell Abū Hurēre	End of 13th cent. BC	Single Building	Abandonment	Continuation of 'Canaanite' MC, some Philistine wares	Unknown
Tell Bēt Mirsim	Second half 13th cent. BC	Unknown	Crisis?	Continuation of 'Canaanite' MC though poorer	Natural/Accidental?
Tell Dēr 'Allā	First half 12th cent. BC	Site-wide	Sudden	Partial rebuilding, Continuation of 'Canaanite' MC	Natural: Earthquake
Tell el-Baṭāšī	NA	NA	NA	NA	No Destruction
Tell el-Fārʿa (South)	First half 12th cent. BC	Single Building?	Unknown	Squatter settlement	Unknown
Tell el-Fuḫḫār	First half 12th cent. BC	Single Building	Crisis / Abandonment	Continuation of local MC	Natural/Accidental?
Tell el-Ḥesī	NA	NA	NA	NA	No Destruction
Tell el-Ifšār	End of 13th cent. BC	Unknown	Unknown	Abandonment?	Unknown
Tell el-ʿUmērī Phase 14	End of 13th cent. BC	Single Building	Crisis / Abandonment	Changes in architecture and MC	Natural: Earthquake
Tell el-ʿUmērī Phase 12	Mid-12th cent. BC	Site-wide	Sudden	Hiatus	Human Activity: Warfare

Site	Approximate date of destruction	Scale	Pre-destruction	Post-destruction	Classification
Tell en-Nā'am	Second half 13th cent. BC	Multi-building	Crisis	Squatter settlement	Natural/Accidental?
Tell eṣ-Ṣāfī (Gath)	NA	NA	NA	NA	No Destruction
Tell es-Saʿīdīye	Mid-12th cent. BC	Site-wide	Crisis / Abandonment	Squatter settlement / Abandonment	Natural?
Tell eš-Šerīʿa	Mid-12th cent. BC	Multi-building	Crisis?	Some Philistine wares	Unknown
Tell eṭ-Ṭuyūr	End of 13th cent. BC	Single Building	Sudden?	Continuation of 'Canaanite' MC, some Philistine wares	Natural/Accidental?
Tell ʿĒṭūn	First half 12th cent. BC	NA	NA	Continuation of 'Canaanite' MC	Unknown
Tell Ǧemme	NA	NA	NA	NA	No Destruction
Tell Ǧerīše	NA	NA	NA	NA	No Destruction
Tell Ḥēdar VII	End of 13th cent. BC	Single Building	Sudden?	Building F rebuilt then abandoned	Natural: Earthquake?
Tell Ḥēdar VI	First half 12th cent. BC	Single Building	Sudden?	Abandonment	Natural?
Tell Irbid	13th cent. BC	Single Building?	Sudden?	Continuation of settlement	Unknown
Tell Kēsān	End of 13th cent. BC	Unknown	Unknown	Some Philistine wares	Unknown
Tell Qassīs	13th cent. BC	Partial	Unknown	Fragmentary remains of unclear date	Unknown
Tell Qēmūn	Second half 13th cent. BC	Multi-building?	Sudden? / Crisis?	Abandonment	Unknown
Umm ad-Dananīr	13th cent. BC	Unknown	Unknown	Abandonment	Unknown

Appendix II: Tables

Site	Quantity	Site (cont.)	Quantity
1. Lachish	3828	39. *Nətīv hā-ʿĂśārā*	23
2. *Tell el-ʿAǧul*	1525	40. *Ṭabaqāt Faḥil*	23*
3. Ashkelon	700*	41. *Tell el-Ifšār*	20
4. Hazor	381*	42. *Ḫirbet Ḥānūtā*	18
5. *Tell Ǧemme*	364	43. *Tell Ǧerīše*	16
6. *Tell Ḥēdar*	300	44. *Tell el-Melāt* (Cemetery)	14
7. *Tell Bēt Mirsim*	287	45. *Tell Kēsān*	13
8. *Tell Abū Ḥawām*	276*	46. Gibeon (*el-Ǧīb*)	12
9. *Tell el-Baṭāšī*	212	47. Jaffa	12
10. Gezer	181	48. 48.*Tell Ēṭūn*	11
11. Megiddo	141	49. *Tell Dōṭān*	10
12. Shechem	132	50. *Tell Saḥar*	10
13. *Tell Abū Hurēre*	129	51. *Ḫirbet Tell eḏ-Ḏurūr*	10
14. *Tell eš-Šerīʿa*	111	52. *Tell Qassīs*	10*
15. Beth-Shean	96	53. *Tell Abū Ḫaraz*	9
16. Tel Mevorakh	94	54. Khirbet Rabud	9
17. *Tell ʿArā* (Cemetery)	85	55. *el-ʿAfūle*	9
18. *Tell el-Fārʿa* (South)	80	56. *Ǧezīret en-Nāmī*	9
19. *Tell Qēmūn*	77	57. *Tell el-Fārʿa* (North)	9
20. Acco	70*	58. *El-Baqʿa*	8
21. Beth-Shemesh	68*	59. Dhahrat el-Humraiya	8
22. *Tell el- Qāḍī*	61	60. Tel Miqne (Ekron)	8
23. Ashdod	58*	61. *Ḥorvat Zelef*	6*
24. Jerusalem	56	62. *Yāzūr*	6
25. Amman Airport Structure	53	63. *Tell el-Qasīle*	6
26. *Ḫirbet el-Burǧ*	49*	64. *Tell eṭ-Ṭuyūr*	6
27. *Ǧett*	48	65. Barkai	5
28. Ashdod (Southern Beach)	47	66. *Tệl Nahărīyā*	5*
29. *el-Qubēbe* (Burial cave)	47	67. *Tell el-Ōrēme*	4
30. *Tell el-Ḥesī*	46	68. *Tell el-Īḏām*	4
31. *Palmaḥīm*	39	69. *Tell es-Saʿīdīye*	4
32. Jericho	38	70. *Tell en-Nāʿam*	4
33. Tel Michal	31	71. *Tell eṣ-Ṣārem*	4*
34. *Dēr el-Balaḥ*	30	72. *Tell es-Samak*	3
35. *Tell eṣ-Ṣāfī* (Gath)	30	73. *Tell ed-Duwēr*	3*
36. *Tell Ridān*	26	74. *Šaʿar ʾEfrayim*	3*
37. Bethel	25	75. *Ḫirbet en-Nuḥās*	3
38. Aphek	24	76. el-Biʾna	3

Site (cont.)	Quantity	Site (cont.)	Quantity
77. Nes Ziyyona	3	92. *Kataret es-Samr*	2
78. Balu'	3	93. Ta'anach	1
79. *Tell Qirī*	3	94. *Ez-Zīb*	1
80. *Qubūr el-Walēyide*	3	95. *Tell Zerāʿa*	1
81. Tel Risim*	3*	96. Tell el-'Amr	1
82. Šoham	3	97. Tel Kishion	1
83. *Ṭẹl Ện Ṣippōrī*	3	98. *El-Kabrī*	1
84. Beth-Zur	2	99. Nazareth	1
85. Azekah	2	100. *ʿĒn Sāmiye* (*Ḍahr Mirzbāne*)	1
86. Irbid	2	101. el-Waqf	1
87. *Ṭẹl Yavnệ*	2	102. Tell el-Ful	1
88. Bahan	2	103. *Ṭẹl Būrnā*	1
89. *Tell Abū Hurēre*	2	104. ʿỆn Ḥaggīt	1
90. Tel Regev	2	105. *Ṭẹl Yẹzrəʿēl*	1
91. *Ḫirbet Yarmūk*	2*		

Table 1. Distribution of Cypriot Pottery in the Southern Levant (* marks sites which do not have an exact number of sherds or vessels).

Site	Quantity	Site (cont.)	Quantity
1. *Tell el-ʿAǧūl*	618	15. *Tell el-Fārʿa* (North)	7
2. *Tell el-Baṭāšī*	69	16. *Ḫirbet Tell eḍ-Ḍurūr*	7
3. Hazor	52	17. *Ḥorvat Zelef*	6
4. Ashkelon	52	18. Baq'ah Valley	5
5. Megiddo	41	19. *Ṭabaqāt Faḥil*	4
6. *Ǧett*	37	20. *Tell Abū Ḥaraz*	3
7. Lachish	36	21. *Ṭẹl Ện Ṣippōr*	3
8. Beth-Shean	30	22. *Ṭẹl Nahărīyā*	3
9. Ashdod	25	23. *El-Bālūʿ*	3
10. *Ḫirbet Ḥānūtā*	18	24. *Tell Dōṯān*	1
11. *Tell el-Qāḍī*	16	25. Shechem	1
12. *Tell Ǧemme*	13	26. Acco	1
13. *Tell Qēmūn*	10	27. *Tell Abū Hurēre*	1
14. Jaffa	10		

Table 2. Chronological Distribution of Cypriot Pottery in the Southern Levant: LB I.

Site	Quantity	Site (cont.)	Quantity
1. Lachish	2489	15. *Tell Ǧerīše*	14
2. *Tell el-ʿAǧūl*	494	16. *Tell Ǧemme*	14
3. Gezer	107	17. *Tell el-Fārʿa* (South)	14
4. Jerusalem	55	18. *Tell Abū Hurēre*	13
5. *Tell Ḫēdar*	50	19. *Dēr el-Balaḥ*	12
6. el-Qubeibe (Burial cave)	47	20. Gibeon (el-Jib)	12
7. Acco	44	21. Beth-Shemesh	11
8. Jericho	34	22. *Tell el-Qāḍī*	6
9. *Tell Bēt Mirsim*	32	23. Barkai	5
10. *Tell eš-Šerīʿa*	30	24. Beth-Shean	3
11. *Tell Qēmūn*	29	25. *Ḫirbet Tell eḏ-Ḏurūr*	2
12. *Nətīv hā-ʿĂśārā*	23	26. *Tell Abū Ḥawām*	1
13. Ashdod	22	27. *Tell el-Fārʿa* (North)	1
14. Megiddo	21	28. Tel Yavneh	1

Table 3.   Chronological Distribution of Cypriot Pottery in the Southern Levant: LB IIA.

Site	Quantity	Site (cont.)	Quantity
1. Lachish	551	16. Aphek	12
2. *Tell Bēt Mirsim*	228†	17. Ǧezīret en-Nāmī	9
3. Beth-Shean	58	18. ʿAfula	9
4. *Tell el-Baṭāšī*	54	19. Acco	6
5. Amman Airport Structure	53	20. Ashdod	5
6. Beth-Shemesh	50†	21. *Tell el-Qāḍī*	4
7. Ashdod (Southern Beach)	47	22. Tel Miqne (Ekron)	3
8. *Tell el-ʿAǧūl*	41	23. *Ḫirbet el-Burǧ*	3
9. *Tell Ḫēdar*	40	24. Ǧett	3
10. *Tell Qēmūn*	33	25. *Tell el-Fārʿa* (South)	2
11. Megiddo	30	26. *Tēl Nahărīyā*	2
12. *Tell Ǧemme*	30	27. Ên Ḥaggīt	1
13. Gezer	22	28. *Tell es-Saʿīdīye*	1
14. *Tell eš-Šerīʿa*	16	29. *Tell el-Fārʿa* (North)	1
15. *Dēr el-Balaḥ*	14		

Table 4.   Chronological Distribution of Cypriot Pottery in the Southern Levant: LB IIB († marks residual or possible residual material).

Site	Quantity	Site (cont.)	Quantity
1. Lachish	173†	12. Ashkelon	2
2. *Tell eṣ-Ṣāfī* (Gath)	25	13. *Dēr el-Balaḥ*	2
3. *Tell eš-Šerīʿa*	10	14. *Tell Dōṯān*	2
4. *Ḥirbet el-Burǧ*	8	15. *Tell es-Samak*	2
5. Tel Miqne (Ekron)	5	16. Beth-Shemesh	1
6. *Tell Ǧemme*	5	17. *Ḥirbet Tell eḏ-Ḏurūr*	1
7. Beth-Shean	4	18. *Tell Bēt Mirsim*	1
8. *Ṭabaqāt Faḥil*	3	19. *Tell Abū Hurēre*	1
9. *Tell el-Qāḍī*	3	20. *ez-Zīb*	1
10. *Tell Abū Ḥawām*	3	21. *Tell Ǧerīše*	1
11. Ashdod	2		

Table 5. Chronological Distribution of Cypriot Pottery in the Southern Levant: Iron I († marks residual or possible residual material).

Site	Quantity	Site (cont.)	Quantity
1. *Tell el-ʿAǧūl*	168	9. *Tell eš-Šerīʿa*	20
2. *Tell Abū Hurēre*	114	10. *Ṭabaqāt Faḥil*	14
3. Tel Mevorakh	94	11. Gezer	8
4. *Tell ʿArā* (Cemetery)	85	12. *Tell Dōṯān*	7
5. *Tell el-Fārʿa* (South)	43	13. *Tell Qēmūn*	5
6. *Tell el-Ḥesī*	38	14. *Tell el-Qāḍī*	3
7. *Ḥirbet el-Burǧ*	30	15. Lachish	2
8. Ashkelon	27	16. *Tell Abū Ḥaraz*	1

Table 6. Chronological Distribution of Cypriot Pottery in the Southern Levant: MB IIC – LB II.

Site		Quantity	Site (cont.)		Quantity
1.	*Tell Abū Ḥawām*	259	18.	*Tell eṭ-Ṭuyūr*	6
2.	Ashkelon	94	19.	Beth-Shemesh	6
3.	*Palmaḥīm*	39	20.	*Tell el-ʿĪḏām*	4
4.	*Tell Ridān*	26	21.	*Tell Abū Ḥaraz*	4
5.	Gezer	20	22.	*Ḫirbet el-Burǧ*	4
6.	*Tell el-Ifšār*	20	23.	El Biʾna	3
7.	Acco	19	24.	*Tell ed-Duwēr*	3
8.	*Tell el-Baṭāšī*	18	25.	Šaʿar ʾEfrayim	3
9.	*Tell Bēt Mirsim*	17	26.	*Tell Qirī*	3
10.	Lachish	15	27.	Šoham	3
11.	Tel Michal	14	28.	*Tell Ǧemme*	2
12.	*Tell el-Melāt* (Cemetery)	14	29.	Hazor	2
13.	*Tell Ēṭūn*	11	30.	*Ṭabaqāt Faḥil*	1
14.	Aphek	10	31.	*Tell el-Qāḍī*	1
15.	*Ḍahret el-Ḥumrēye*	8	32.	*Tēl Yavnē̂*	1
16.	Ǧett	6	33.	*Tēl Būrnā*	1
17.	Shechem	6	34.	*Tell Zerāʿa*	1

Table 7. Chronological Distribution of Cypriot Pottery in the Southern Levant: LBA.

Site		Quantity	Site (cont.)		Quantity
1.	Shechem	28	3.	*Tell es-Samak*	1
2.	Jericho	2	4.	Lachish	1

Table 8. Chronological Distribution of Cypriot Pottery in the Southern Levant: LB – Iron I.

Site		Quantity	Site (cont.)		Quantity
1.	*Tell el-ʿAǧūl*	199	5.	*Tell el-Fārʿa* (South)	6
2.	Lachish	137	6.	*Tell el-Qāḍī*	4
3.	*Tell el-Baṭāšī*	20	7.	*Yāzūr*	2
4.	*Tell Ḥēdar*	20	8.	Gezer	2

Table 9. Chronological Distribution of Cypriot Pottery in the Southern Levant: LB IIB – Iron I.

Site	Quantity	Site (cont.)	Quantity
1. Ashkelon	525	21. Beth-Zur	2
2. Lachish	297	22. *Tell Abū Ḥaraz*	1
3. Hazor	224	23. Azekah	2
4. *Tell Ḥēdar*	120	24. Ǧett	2
5. *Tell Ǧemme*	100	25. Tel Regev	2
6. Shechem	88	26. Aphek	2
7. Gezer	22	27. *Tēl Yëzrəʿēl*	1
8. *Tell el-Qāḍī*	17	28. ʿEin Samiya (Dhar Mirzbaneh)	1
9. Khirbet Rabud	9	29. Tell el-Ful	1
10. *Tell el-Ḥesī*	8	30. *Tell Ǧerīše*	1
11. Megiddo	5	31. Jerusalem	1
12. *Tell el-ʿOrēme*	4	32. *El-Kabrī*	1
13. *Yāzūr*	4	33. Tel Kishion	1
14. *Tell eṣ-Ṣāfī* (Gath)	4	34. *Ṭabaqāt Faḥil*	1
15. *Qubūr el-Walēyide*	3	35. *Tell Qassīs*	1
16. Nes Ziyyona	3	36. *Tell eṣ-Ṣārem*	1
17. Jaffa	2	37. Taʾanach	1
18. *Tell es-Saʿīdīye*	2	38. Tell el-ʾAmr	1
19. *Tell Abū Ḥawām*	2	39. Nazareth	1
20. Bahan	2	40. Jericho	1

Table 10. Chronological Distribution of Cypriot Pottery in the Southern Levant: Unknown.

Site	Quantity	Site (cont.)	Quantity
1. *Tell Abū Ḥawām*	706*	15. Gezer	34
2. Amman Airport Structure	486	16. Tell Beit Mirsim	31
3. Lachish	367	17. Ashdod (Southern Beach)	27
4. Hazor	209*	18. Ashkelon	18
5. Beth-Shean	105	19. *Tell eṣ-Ṣāfī* (Gath)	17
6. Megiddo	95	20. Shechem	15
7. *Tell el-Qāḍī*	90	21. *Tell Ḥēdar*	15
8. *Tell el-ʿAǧūl*	73	22. *Tell eš-Šerīʿa*	15
9. Ashdod	63	23. *Tell Qēmūn*	14
10. Aphek	62	24. Tel Mevorakh	14
11. Acco	45*	25. *Tell Dōṯān*	12
12. *Tell Ǧemme*	44	26. *Tell el-Baṭāšī*	11
13. *Dēr el-Balaḥ*	42	27. *Tell Ǧerīše*	10
14. Beth-Shemesh	40	28. *Ḥirbet Tell eḍ-Ḍurūr*	10

Site (cont.)	Quantity		Site (cont.)	Quantity
29. *Tell es-Saʿīdīye*	9		55. *Tell ʿArā* (Cemetery)	2
30. *Tell Qassīs*	8		56. *Tell Kēsān*	2
31. *Tell Dēr ʿAllā*	7		57. Ashdod-Yam	1
32. *El-Baqʿa*	5		58. ʿAtlit	1
33. *Ḥirbet el-Burǧ*	5*		59. Gibeon (*el-Ǧīb*)	1
34. *Ṭabaqāt Faḥil*	5		60. Irbid	1
35. Taʾanach	5		61. ʿĪzbet Ṣarṭa	1
36. *Ḥirbet Ǧedūr*	5		62. Khirbet Burgeta	1
37. *Ǧezīret en-Nāmī*	5		63. Khirbet Rabud	1
38. *Tell el-Fārʿa* (South)	5		64. *Palmaḥīm*	1
39. Bethel	4		65. Šoham	1
40. *Ǧett*	4		66. Tel Bira	1
41. *Tell Abū Hurēre*	4		67. *Tell el-ʿOrēme*	1
42. *Tell en-Nāʿam*	4		68. *Ḥirbet Yarmūk*	1
43. *Tell el-Ḥesī*	4		69. *Tell Abū Qudēs*	1
44. Heshbon	3		70. Tel Michal	1
45. Jericho	3		71. Tel Miqne (Ekron)	1
46. Jerusalem	3		72. *Tell en-Naǧīle*	1
47. *Qubūr el-Walēyide*	3		73. *Tḕl Naḥărīyā*	1
48. *Tell Ēṭūn*	3		74. *Tell Ridān*	1
49. *Tell eṣ-Ṣārem*	3		75. *Tell es-Samak*	1
50. *Tell eṭ-Ṭuyūr*	3		76. Tel Shush (Abu Shusheh)	1
51. *el-ʿAfūle*	2		77. Tell Eran	1
52. *Ḍahret el-Ḥumrēye*	2		78. Tell Sahab	1
53. *Mādebā*	2		79. *Tell Zerāʿa*	1
54. *Tell Qirī*	2		80. *Tell Abū Qudēs*	1

Table 11. Distribution of Mycenaean Pottery in the Southern Levant (*marks sites which do not have an exact number of sherds or vessels).

Site	Quantity		Site (cont.)	Quantity
1. Lachish	3		4. Hazor	2
2. Amman Airport Structure	3		5. *Ǧett*	1
3. *Ṭabaqāt Faḥil*	2		6. *Tell Abū Ḥawām*	1

Table 12. Chronological Distribution of Late Helladic (Mycenaean) Pottery in the Southern Levant: LH II.

Site	Quantity		Site (cont.)	Quantity
1. *Tell el-ʿAǧūl*	9		7. Megiddo	1
2. Lachish	3		8. *Tell Abū Ḥawām*	1
3. Acco	3		9. Beth-Shemesh	1
4. *Tell ʿArā* (Cemetery)	2		10. Amman	1
5. Beth-Shean	1		11. Taʾanach	1
6. Acco	1		12. *Palmaḥīm* (Cemetery)	1

Table 13. Chronological Distribution of Late Helladic (Mycenaean) Pottery in the Southern Levant: LH IIIA.

Site	Quantity		Site (cont.)	Quantity
1. Lachish	6		5. Gezer	1
2. Megiddo	1		6. Gibeon (el-Jib)	1
3. *Tell el-Baṭāšī*	1		7. Amman Airport Temple	1
4. *Tell Bēt Mirsim*	1		8. *Ḫirbet Ǧedūr*	1

Table 14. Chronological Distribution of Late Helladic (Mycenaean) Pottery in the Southern Levant: LH IIIA1.

Site	Quantity		Site (cont.)	Quantity
1. Lachish	71		19. Jatt	1
2. *Tell Abū Ḥawām*	39		20. *Ḍahret el-Ḥumrēye*	1
3. Amman Airport Structure	35		21. *El-Baqʿa*	1
4. *Tell el-Qāḍī*	21		22. *Tell eṣ-Ṣāfī* (Gath)	1
5. *Tell el-ʿAǧūl*	18		23. *Tell en-Nāʿam*	1
6. Megiddo	18		24. Shechem	1
7. Acco	17		25. *Tell Ḫēdar*	1
8. Gezer	15		26. *Tell Dōṯān*	1
9. Tel Mevorakh	14		27. *Tell el-Fārʿa* (North)	1
10. Beth-Shean	11		28. *Tell el-Fārʿa* (South)	1
11. Beth-Shemesh	10		29. *Tell eš-Šerīʿa*	1
12. Hazor	6		30. *Tell es-Saʿīdīye*	1
13. Aphek	5		31. Tel Shush (Abu Shusheh)	1
14. Ashdod	3		32. *Tell el-Ḥesī*	1
15. *Ḫirbet Ǧedūr*	3		33. *Tell Ǧemme*	1
16. *Tell el-Baṭāšī*	2		34. Khirbet Rabud	1
17. *Tell Bēt Mirsim*	2		35. *Tell el-ʿOrēme*	1
18. *Dēr el-Balaḥ*	1			

Table 15. Chronological Distribution of Late Helladic (Mycenaean) Pottery in the Southern Levant: LH IIIA2.

Site	Quantity	Site (cont.)	Quantity
1. *Tell Abū Ḥawām*	175	16. Bethel	4
2. Megiddo	46	17. *Tell el-Ḥesī*	3
3. Ashdod	31	18. Amman Airport Structure	3
4. Hazor	26	19. *Tell Abū Hurēre*	3
5. *Tell Bēt Mirsim*	25	20. Jerusalem	2
6. Beth-Shemesh	19	21. *Tell Qirī*	2
7. Aphek	13	22. *Tell el-ʿAğūl*	2
8. Lachish	12	23. ʿAfula	2
9. *Tell eṣ-Ṣāfī* (Gath)	10	24. *Ḍahret el-Ḥumrēye*	1
10. Shechem	10	25. *Tell el-Fārʿa* (South)	1
11. *Tell Ğerīše*	10	26. *Tell el-Qāḍī*	1
12. Ashkelon	10	27. *Tell Kēsān*	1
13. *Tell Qassīs*	7	28. *Ṭabaqāt Faḥil*	1
14. *Tell eš-Šerīʿa*	5	29. Taʾanach	1
15. Gezer	5	30. *Tell eṭ-Ṭuyūr*	1

Table 16. Chronological Distribution of Late Helladic (Mycenaean) Pottery in the Southern Levant: LH IIIA-B.

Site	Quantity	Site (cont.)	Quantity
1. *Tell Abū Ḥawām*	88	11. Heshbon	3
2. Lachish	16	12. *Tell eš-Šerīʿa*	2
3. Beth-Shean	12	13. Ashdod	2
4. *Tell el-Qāḍī*	11	14. *Tell el-ʿAğūl*	2
5. Amman Airport Structure	9	15. *Tell Abū Qudēs*	1
6. Aphek	7	16. *Tell Qassīs*	1
7. Hazor	4	17. Tell Sahab	1
8. *Tell en-Nāʿam*	4	18. *Tell el-Baṭāšī*	1
9. *Tell eṣ-Ṣāfī* (Gath)	4	19. Shechem	1
10. Beth-Shemesh	3	20. *Dēr el-Balaḥ*	1

Table 17. Chronological Distribution of Late Helladic (Mycenaean) Pottery in the Southern Levant: LH IIIA2-B.

Site	Quantity	Site (cont.)	Quantity
1. Lachish	70	9. Megiddo	2
2. Amman Airport Structure	28	10. *Tell Dēr ʿAllā*	2
3. Aphek	15	11. Ashkelon	2
4. *Tell Abū Ḥawām*	14	12. *Tell eš-Šerīʿa*	1
5. Hazor	5	13. *Tell es-Saʿīdīye*	1
6. *Tell el-Qāḍī*	5	14. *Tell Ǧemme*	1
7. *Tell el-ʿAǧūl*	3	15. Acco	1
8. *Tell en-Nāʿam*	2		

Table 18. Chronological Distribution of Late Helladic (Mycenaean) Pottery in the Southern Levant: LH IIIA2-B1.

Site	Quantity	Site (cont.)	Quantity
1. *Tell Abū Ḥawām*	89	19. Shechem	3
2. Lachish	49	20. Ashkelon	3
3. Megiddo	24	21. *Qubūr el-Walēyide*	3
4. Ashdod (Southern Beach)	23	22. *Tell el-Fārʿa* (South)	3
5. *Tell el-Qāḍī*	17	23. *El-Baqʿa*	3
6. Amman Airport Structure	15	24. Medeba (Madaba)	2
7. Ashdod	11	25. *Tell eṣ-Ṣāfī* (Gath)	2
8. *Dēr el-Balaḥ*	10	26. *Tell eṭ-Ṭuyūr*	2
9. Hazor	10	27. *Tell Qēmūn*	2
10. *Tell el-ʿAǧūl*	10	28. *Tell Bēt Mirsim*	1
11. Acco	10	29. *Tell Dōṯān*	1
12. *Tell es-Saʿīdīye*	8	30. ʿIzbet Sartah	1
13. Gezer	8	31. *Tell Ǧemme*	1
14. Beth-Shean	7	32. Tel Miqne (Ekron)	1
15. *Tell eš-Šerīʿa*	6	33. *Tell Ḫēdar*	1
16. Aphek	6	34. *Tĕl Naḥărīyā*	1
17. *Tell Dēr ʿAllā*	5	35. *Tell Abū Hurēre*	1
18. Beth-Shemesh	4		

Table 19. Chronological Distribution of Late Helladic (Mycenaean) Pottery in the Southern Levant: LH IIIB.

Site	Quantity	Site (cont.)	Quantity
1. Lachish	12	5. Megiddo	1
2. Amman Airport Structure	10	6. *El-Baqʿa*	1
3. *Dēr el-Balaḥ*	6	7. Aphek	1
4. *Tell es-Saʿīdīye*	1	8. *Tell el-ʿAǧūl*	1

Table 20. Chronological Distribution of Late Helladic (Mycenaean) Pottery in the Southern Levant: LH IIIB1.

Site	Quantity	Site (cont.)	Quantity
1. Ǧezīret en-Nāmī	5	4. Hazor	1
2. Lachish	3	5. *Tell el-Qāḍī*	1
3. Aphek	2	6. *Tell Abū Ḥawām*	1

Table 21. Chronological Distribution of Late Helladic (Mycenaean) Pottery in the Southern Levant: LH IIIB2

Site	Quantity	Site (cont.)	Quantity
1. Beth-Shean	29	6. Gezer	2
2. *Tell Ḥēdar*	11	7. Megiddo	1
3. *Tell Abū Ḥawām*	11	8. Beth-Shemesh	1
4. Ashdod	5	9. *Tell Bēt Mirsim*	1
5. Lachish	2		

Table 22. Chronological Distribution of Late Helladic (Mycenaean) Pottery in the Southern Levant: LH IIIB-C.

Site	Quantity	Site (cont.)	Quantity
1. Beth-Shean	20	5. *Tell Abū Ḥawām*	2
2. Acco	12	6. *Tell Kēsān*	1
3. *Tell eṣ-Ṣārem*	3	7. *Tell el-Qāḍī*	1
4. *Tell Ḥēdar*	2		

Table 23. Chronological Distribution of Late Helladic (Mycenaean) Pottery in the Southern Levant: LH IIIC

Site	Quantity	Site (cont.)	Quantity
1. Amman Airport Structure	357	19. *Tell Ēṭūn*	3
2. *Tell Abū Ḥawām*	276	20. Ğett	2
3. Hazor	155	21. *Ṭabaqāt Faḥil*	2
4. Lachish	115	22. Taʿanach	2
5. *Tell Ğemme*	40	23. Ashdod-Yam	1
6. *Tell el-Qāḍī*	33	24. ʿAtlit	1
7. *Tell el-ʿAğūl*	27	25. Irbid	1
8. *Dēr el-Balaḥ*	20	26. Khirbet Burgeta	1
9. Beth-Shean	18	27. Šoham	1
10. Aphek	13	28. Tel Bira	1
11. *Tell Qēmūn*	12	29. *Ḫirbet Yarmūk*	1
12. Ashdod	10	30. Tel Michal	1
13. *Tell Dōṯān*	10	31. *Tell en-Nağīle*	1
14. *Ḫirbet Tell eḏ-Ḏurūr*	10	32. *Tell es-Samak*	1
15. *Tell el-Baṭāšī*	7	33. *Tell Bēt Mirsim*	1
16. *Ḫirbet el-Burğ*	4	34. Tell Eran	1
17. Ashkelon	3	35. *Tell Zerāʿa*	1
18. Jericho	3	36. Yavneh-Yam	1

Table 24. Chronological Distribution of Late Helladic (Mycenaean) Pottery in the Southern Levant: LH.

Site	Quantity	Site (cont.)	uantity
1. *Tell Abū Ḥawām*	37	8. Taʿanach	1
2. Amman Airport Structure	13	9. Jerusalem	1
3. Lachish	5	10. *Ḫirbet Ğedūr*	1
4. Ashdod (Southern Beach)	4	11. *Ḫirbet el-Burğ*	1
5. *Dēr el-Balaḥ*	4	12. Ashdod	1
6. Gezer	3	13. *Tell el-ʿAğūl*	1
7. Beth-Shemesh	2	14. Acco	1

Table 25. Distribution of Minoan Pottery in the Southern Levant.

Site	Quantity	Site (cont.)	Quantity
1. Timnaʿ	70	12. *Naḥal Šəlomō*	3*
2. *Ḫirbet en-Nuḥās*	33	13. Wadi ʿUqfi (Maʿale Shaharut)	3*
3. Kadesh-Barnea	20	14. Mezad Hazeva	2*
4. *Barqā el-Hetiye*	11	15. *Ēn el-Ġaḍyān*	2
5. *Tell el-Fārʿa* (South)	10	16. Gezer	1
6. *Ḫirbet el-Mšāš*	8	17. Har Romem	1
7. Tell el-Kheleifeh	6	18. Har Shani	1*
8. Mezad Gozal	5	19. Khirbet Duwar	1
9. Amman Airport Structure	3*	20. Khirbet esh-Shedeiyid	1
10. Lachish	3	21. Tawilan	1
11. *Wādī ʿAmrānī*	3*	22. *Ḫirbet Ǧedūr*	1

Table 26. Distribution of Qurayya Ware in the Southern Levant (*marks sites which do not have an exact number of sherds or vessels).

Site	Quantity	Site (cont.)	Quantity
1. Lachish	27	4. Ashdod (Southern Beach)	1
2. *Tell Abū Ḥawām*	23	5. *Tell eṭ-Ṭuyūr*	1
3. Tel Miqne (Ekron)	8	6. *Tell eṣ-Ṣāfī* (Gath)	1

Table 27. Distribution of Northwest Anatolian Grey Ware in the Southern Levant.

Site	Quantity	Site (cont.)	Quantity
1. Ashkelon	150	15. Lachish	2
2. *Ḫirbet el-Burǧ*	99	16. *Tell eš-Šerīʿa*	2
3. Beth-Shean	19	17. *Tell Zerāʿa*	1
4. Ashdod (Southern Beach)	15	18. *Qubūr el-Walēyide*	1
5. *Tell el-ʿAǧūl*	10*	19. *Tell Ēṭūn*	1
6. *Dēr el-Balaḥ*	9	20. *Tell ʿArā* (Cemetery)	1
7. Megiddo	7	21. *Tell el-Iḏām*	1
8. *Tell Ḥēdar*	6	22. *Tell es-Saʿīdīye*	1
9. *Tell Abū Ḥawām*	5	23. *Tell Qēmūn*	1
10. *Tell el-Qāḍī*	5	24. *ez-Zīb*	1
11. Aphek	3	25. *Ǧezīret en-Nāmī*	1
12. Jaffa	3	26. Nahal Patish	1
13. *Tell el-Qasīle*	3	27. Tel Esdar	1
14. Acco	2		

Table 28. Distribution of Imported Egyptian Pottery in the Southern Levant (* denotes where the exact number is unknown).

Site		Quantity		Site (cont.)	Quantity
1.	*Tell el-ʿAğūl*	98	16.	*Dēr el-Balaḥ*	3
2.	Amman Airport Structure	53	17.	*Tell el-Fārʿa* (South)	2
3.	Lachish	42	18.	*Ḫirbet Ǧedūr*	2
4.	Megiddo	36	19.	Acco	2
5.	Beth-Shean	32	20.	Jericho	2
6.	*Ṭabaqāt Faḥil*	22	21.	Tel Michal	1
7.	Gezer	21	22.	*Tell Dēr ʿAllā*	1
8.	Hazor	15	23.	Tel Miqne (Ekron)	1
9.	Beth-Shemesh	14	24.	*Tell Qirī*	1
10.	Jerusalem	13	25.	*Tell eš-Šerīʿa*	1
11.	Timnaʾ	5	26.	Shechem	1
12.	Irbid	5	27.	Ashdod	1
13.	*Tell el-Qasīle*	4	28.	Shiloh	1
14.	*Tell Bēt Mirsim*	3	29.	Taʾanach	1
15.	*Tell Abū Ḥawām*	3	30.	*el-Ḥuṣn*	1

Table 29. Distribution of Egyptian Stone Vessels in the Southern Levant.

Site		Quantity		Site (cont.)	Quantity
1.	*Tell el-ʿAğūl*	60	5.	Tel Michal	1
2.	Megiddo	11	6.	Gezer	1
3.	*Ṭabaqāt Faḥil*	9	7.	Beth-Shean	1
4.	Hazor	2	8.	Acco	1

Table 30. Chronological Distribution of Egyptian Stone Vessels in the Southern Levant: LB I.

Site		Quantity		Site (cont.)	Quantity
1.	Amman Airport Structure	53	9.	*Tell Abū Ḥawām*	3
2.	Lachish	22	10.	*Ḫirbet Ǧedūr*	2
3.	Megiddo	19	11.	Jerusalem	2
4.	*Tell el-ʿAğūl*	11	12.	*Tell el-Fārʿa* South	2
5.	Hazor	11	13.	*Tell Dēr ʿAllā*	1
6.	Beth-Shean	11	14.	*Dēr el-Balaḥ*	1
7.	Gezer	3	15.	*Tell eš-Šerīʿa*	1
8.	*Ṭabaqāt Faḥil*	3	16.	Ashdod	1

Table 31. Chronological Distribution of Egyptian Stone Vessels in the Southern Levant: LB II.

Site	Quantity	Site (cont.)	Quantity
1. *Tell el-Qasīle*	4	4. Gezer	2
2. Megiddo	4	5. Tel Miqne (Ekron)	1
3. Beth-Shemesh	4	6. Lachish	1

Table 32. Chronological Distribution of Egyptian Stone Vessels in the Southern Levant: Iron I.

Site	Quantity	Site (cont.)	Quantity
1. *Tell el-Fārʿa* (South)	208	16. *Tell el-ʿAǧūl*	5
2. Beth-Shean	129	17. *Dēr el-Balaḥ*	4
3. Megiddo	91	18. Ashdod	4
4. Lachish	45	19. *Ez-Zīb*	4
5. Gezer	21	20. *Qubūr el-Walēyide*	2
6. Beth-Shemesh	20	21. *Tell el-Baṭāšī*	2
7. Ashkelon	17	22. Acco	2
8. Tel Miqne (Ekron)	17	23. *Ḫirbet el-Burǧ*	1
9. *Tell Abū Ḥawām*	13	24. Jerusalem	1
10. *Tell ʿArā* (Cemetery)	9	25. *Tell Ridān*	1
11. *Tell eš-Šerīʿa*	9	26. *Tell Bēt Mirsim*	1
12. *Tell Abū Salīma*	7	27. *Tell es-Saʿīdīye*	1
13. *Tell Ǧemme*	7	28. *Tell eṣ-Ṣāfī* (Gath)	1
14. *Tell Ǧerīše*	6	29. *Tell el-Fārʿa* (North)	1
15. *Tell el-Ḫuwēlfe*	5		

Table 33. Distribution of Egyptian Amulets in the Southern Levant

Site	Quantity	Site (cont.)	Quantity
1. *Tell el-Fārʿa* (South)	101	6. *Tell Abū Salīma*	5
2. Beth-Shean	97	7. *Tell el-ʿAǧūl*	2
3. Lachish	25	8. *Tell Ǧerīše*	1
4. Megiddo	10	9. *Tell Bēt Mirsim*	1
5. *Tell Abū Ḥawām*	7		

Table 34. Chronological Distribution of Egyptian Amulets in the Southern Levant: LB IIB.

Site	Quantity	Site (cont.)	Quantity
1. *Tell el-Fārʿa* (South)	28	12. *Dēr el-Balaḥ*	4
2. Lachish	13	13. *Tell el-Ḥuwēlfe*	4
3. Gezer	11	14. Ashdod	3
4. Ashkelon	10	15. *Tell Ǧerīše*	3
5. Beth-Shean	10	16. *Ez-Zīb*	2
6. Megiddo	10	17. *Tell el-ʿAǧūl*	2
7. *Tell eš-Šerīʿa*	9	18. *Ḫirbet el-Burǧ*	1
8. Tel Miqne (Ekron)	8	19. Jerusalem	1
9. *Tell ʿArā* (Cemetery)	8	20. *Tell Ridān*	1
10. Beth-Shemesh	5	21. *Tell eṣ-Ṣāfī* (Gath)	1
11. *Tell Ǧemme*	5		

Table 35. Chronological Distribution of Egyptian Amulets in the Southern Levant: LB IIB – Iron I.

Site	Quantity	Site (cont.)	Quantity
1. *Tell el-Fārʿa* (South)	79	12. *Ez-Zīb*	2
2. Megiddo	71	13. *Tell el-Baṭāšī*	2
3. Beth-Shean	22	14. *Qubūr el-Walēyide*	2
4. Beth-Shemesh	15	15. *Tell Ǧerīše*	2
5. Gezer	10	16. *Tell Ǧemme*	2
6. Tel Miqne (Ekron)	9	17. *Tell es-Saʿīdīye*	1
7. Lachish	7	18. *Tell el-Fārʿa North*	1
8. Ashkelon	7	19. Ashdod	1
9. *Tell Abū Ḥawām*	6	20. *Tell el-ʿAǧūl*	1
10. *Tell Abū Salīma*	2	21. *Tell el-Ḥuwēlfe*	1
11. Acco	2	22. *Tell ʿArā* (Cemetery)	1

Table 36. Chronological Distribution of Egyptian Amulets in the Southern Levant: Iron I

Site		Site (cont.)	
1.	*Ḫirbet el-Burǧ*	12.	*Tell el-ʿUmērī*
2.	Lachish	13.	Ashdod
3.	Megiddo	14.	*Tell Dōṯān*
4.	Ashkelon	15.	*Tell Abū Ḥawām*
5.	Acco	16.	Tel Harasim
6.	*Tell Ǧerīše*	17.	Neve Yarak
7.	*Tell el-Qasīle*	18.	Jerusalem
8.	Beth-Shean	19.	*Tell eṣ-Ṣārem*
9.	el-Ahwat	20.	Timna'
10.	*Tell el-ʿŌrēme*	21.	*Ḥarūvīt*
11.	Tell el-Wawiyat	22.	*Ên Ḥaggīt*

Table 37. Distribution of Nile Perch in the Southern Levant: Highest Concentration to Lowest.

Site		Site (cont.)	
1.	*Tell Abū Ḥawām*	4.	Neve Yarak
2.	*Tell Dōṯān*	5.	Tel Harasim
3.	*Ḥarūvīt*		

Table 38. Chronological Distribution of Nile Perch in the Southern Levant: LBA.

Site		Site (cont.)	
1.	Acco	3.	Tell el-Wawiyat
2.	Lachish		

Table 39. Chronological Distribution of Nile Perch in the Southern Levant: LBA – Iron I.

Site		Site (cont.)	
1.	el-Ahwat*	8.	Jerusalem
2.	Ashdod*	9.	*Tell el-ʿŌrēme**
3.	Ashkelon	10.	Megiddo
4.	Beth-Shean	11.	*Tell el-Qasīle**
5.	*Ḫirbet el-Burǧ**	12.	*Tell el-ʿUmērī*
6.	*Ên Ḥaggīt*	13.	*Tell eṣ-Ṣārem**
7.	*Tell Ǧerīše**		

Table 40. Chronological Distribution of Nile Perch in the Southern Levant: Iron I (* denotes Iron IB).

Site	Quantity	Site (cont.)	Quantity
1. Megiddo	382	24. *Tell el-Qasīle*	3
2. *Tell el-ʿAǧūl*	349	25. Rogem Hiri	3
3. Beth-Shean	222	26. Ashdod	3
4. Gezer	187	27. *Tell Bēt Mirsim*	2
5. *Tell el-Fārʿa* (South)	154	28. Aphek	2
6. *Dēr el-Balaḥ*	104	29. Bahan	2
7. *Tell es-Saʿīdīye*	82	30. Sahem	2
8. Beth-Shemesh	72	31. Tel Miqne (Ekron)	2
9. *Ḍahret el-Ḥumrēye*	65	32. Tel Anafa	1
10. Amman Airport Structure	65	33. *Tell Zerāʿa*	1
11. Lachisch	57	34. ʿEn Neshev	1
12. *Mīnet Rūbīn*	48	35. *Tell Ēṭūn*	1
13. *Tell el-Qāḍī*	32	36. Tell el-Wawiyat	1
14. Acco	29	37. *Tell ʿArā* (Cemetery)	1
15. *Tell Ǧemme*	18	38. *Tell Ǧerīše*	1
16. *Ṭabaqāt Faḥil*	18	39. Mt. Ebal	1
17. Hazor	8	40. *Palmaḥīm*	1
18. *Tell en-Nāʿam*	8	41. *Ḫirbet Ǧedūr*	1
19. *Tell Abū Ḥawām*	8	42. Tel Kitan	1
20. *Tell el-Ifšār*	6	43. Shiloh	1
21. *Ǧezīret en-Nāmī*	6	44. *Tēl Šādūd*	1
22. *Yāzūr*	6	45. *Tell Dēr ʿAllā*	1
23. *Yiftah'el*	4		

Table 41. Distribution of Precious Metals in the Southern Levant.

Site	Quantity	Site (cont.)	Quantity
1. *Tell el-ʿAǧūl*	317	21. Rogem Hiri	3
2. Megiddo	242	22. *Yāzūr*	2
3. Beth-Shean	149	23. Ashdod	2
4. *Dēr el-Balaḥ*	98	24. Aphek	2
5. *Tell el-Fārʿa* (South)	95	25. Bahan	2
6. Amman Airport Structure	65	26. *Tell es-Saʿīdīye*	2
7. Gezer	64	27. Tel Miqne (Ekron)	2
8. *Ḍahret el-Ḥumrēye*	63	28. ʿEn Neshev	1
9. Beth-Shemesh	63	29. *Tell en-Nāʿam*	1
10. Lachisch	48	30. Tel Anafa	1
11. *Mīnet Rūbīn*	48	31. Tell el-Wawiyat	1
12. *Tell el-Qāḍī*	27	32. Shiloh	1
13. Acco	22	33. *Tell el-Ifšār*	1
14. *Tell Ǧemme*	16	34. Mt. Ebal	1
15. *Ṭabaqāt Faḥil*	13	35. *Ḫirbet Ǧedūr*	1
16. *Tell Abū Ḥawām*	7	36. *Tell Ǧerīše*	1
17. Yiftaḥ'el	4	37. Sahem	1
18. Hazor	3	38. *Têl Šādūd*	1
19. *Ǧezīret en-Nāmī*	3	39. *Tell Dēr ʿAllā*	1
20. *Tell el-Qasīle*	3		

Table 42. Distribution of Gold Objects in the Southern Levant.

Site	Quantity	Site (cont.)	Quantity
1. Megiddo	136	15. Hazor	5
2. Gezer	123	16. *Yāzūr*	4
3. Beth-Shean	73	17. Ǧezīret en-Nāmī	3
4. *Tell el-Fārʿa* (South)	53	18. *Tell Bēt Mirsim*	2
5. *Tell el-ʿAǧūl*	24	19. *Tell Ǧemme*	2
6. Beth-Shemesh	9	20. *Ḍahret el-Ḥumrēye*	2
7. Lachisch	8	21. *Tell Abū Ḥawām*	1
8. *Tell en-Nāʿam*	7	22. *Tell Ēṭūn*	1
9. Acco	7	23. *Palmaḥīm*	1
10. *Tell es-Saʿīdīye*	6	24. Sahem	1
11. *Ṭabaqāt Faḥil*	5	25. *Tell Zerāʿa*	1
12. *Tell el-Ifšār*	5	26. *Tell ʿArā* (Cemetery)	1
13. *Tell el-Qāḍī*	5	27. Tel Kitan	1
14. *Dēr el-Balaḥ*	5		

Table 43. Distribution of Silver Objects in the Southern Levant.

Site	Gold	Silver	Electrum
1. *Tell el-ʿAǧūl*	32		1
2. Megiddo	19	8	
3. Lachish	5		
4. *Ḍahret el-Ḥumrēye*	1	2	
5. Hazor	1	2	
6. Bahan	1		
7. *Ṭabaqāt Faḥil*	1		
8. Tel Kitan		1	
9. *Dēr el-Balaḥ*		1	
10. Beth-Shean	1		

Table 44. Chronological Distribution of Precious Metal Objects in the Southern Levant: LB I.

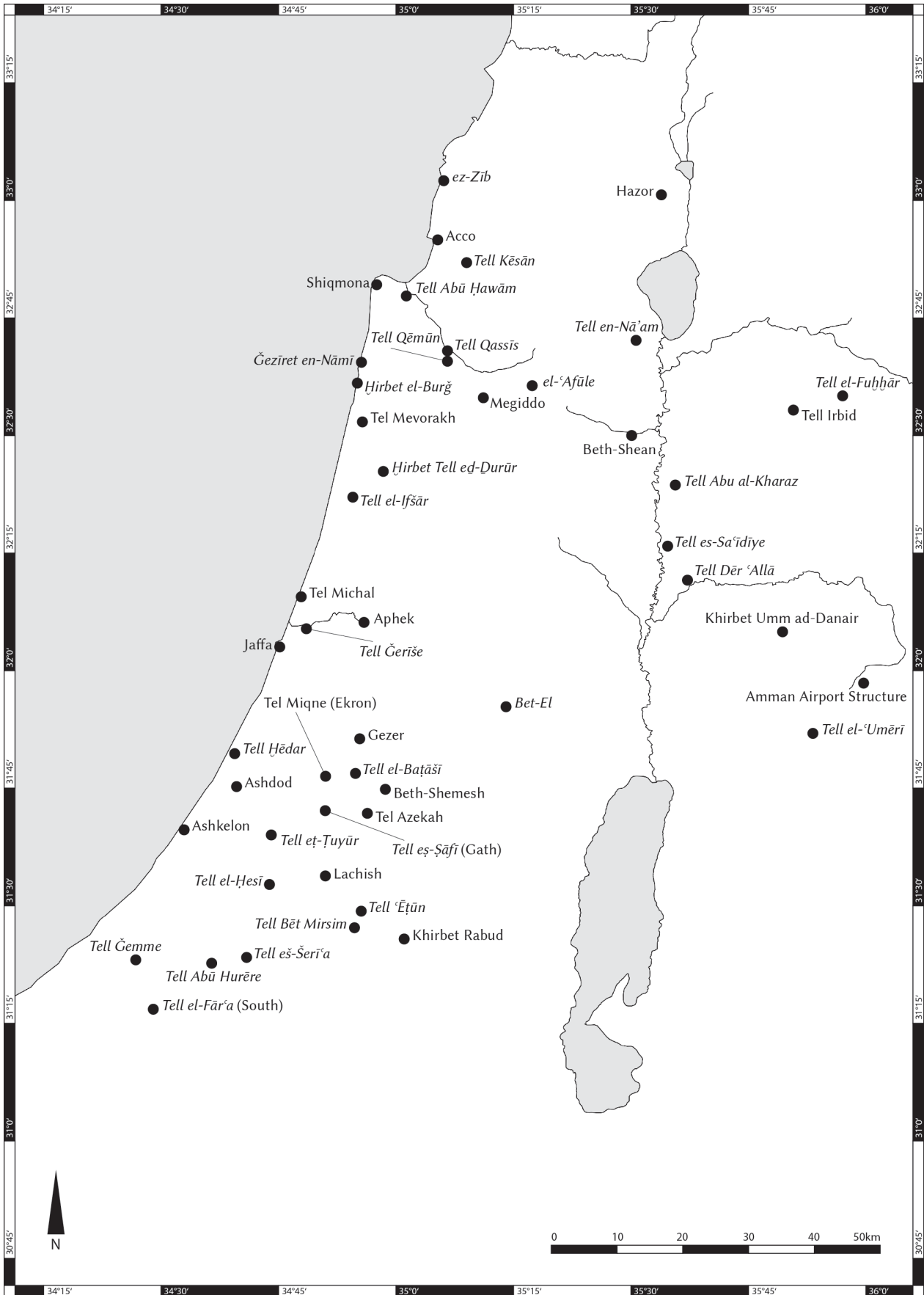| Site		Gold	Silver	Electrum
1.	*Ḍahret el-Ḥumrēye*	30		
2.	Acco	22	7	
3.	Lachish	5	1	
4.	Hazor	1	3	
5.	*Tệl Šādūd*	1		
6.	*Tell en-Nāʿam*	1		
7.	Megiddo	1		
8.	*Dēr el-Balaḥ*			1

Table 45. Chronological Distribution of Precious Metal Objects in the Southern Levant: LB IIA.

Site		Gold	Silver
1.	Beth-Shemesh	63	6
2.	Amman Airport Structure	65	
3.	Beth-Shean	46	2
4.	*Tell en-Nāʿam*		6
5.	*Tell Abū Ḥawām*	6	
6.	Lachish	2	2
7.	Sahem	1	1
8.	Megiddo		1

Table 46. Chronological Distribution of Precious Metal Objects in the Southern Levant: LB IIB.

Site		Gold	Silver	Electrum
1.	Megiddo	56	5	
2.	*Tell el-Fārʿa* (South)	11	4	2
3.	*Yāzūr*	2	4	
4.	Beth-Shean	4		
5.	*Tell el-Qasīle*	3		
6.	Tel Miqne (Ekron)	2		
7.	*Tell Abū Ḥawām*	1	1	
8.	ʿEn Neshev	1		
9.	Tell el-Wawiyat	1		
10.	Lachish	1		
11.	Ashdod			1

Table 47. Chronological Distribution of Precious Metal Objects in the Southern Levant: Iron I.

Site		Gold	Silver
1.	Megiddo	90	4
2.	Beth-Shean	36	39
3.	*Tell el-Fārʿa* (South)	23	
4.	*Tell Ǧemme*	18	2
5.	Lachish	12	1
6.	Ashdod	2	
7.	Aphek	2	
8.	*Tell Dēr ʿAllā*	1	

Table 48. Chronological Distribution of Precious Metal Objects in the Southern Levant: Iron IA.

Site		Gold	Silver
1.	Megiddo		103
2.	Beth-Shean	14	23

Table 49. Chronological Distribution of Precious Metal Objects in the Southern Levant: Iron IB.

Site	
1.	Lachish
2.	*Ḫirbet el-Mšāš*
3.	*Tell el-Qasīle*
4.	Aphek
5.	Beth-Shean
6.	Hazor
7.	Jaffa
8.	*Tell eš-Šerīʿa*
9.	Taʾanach

Table 50. Distribution of Cedar Wood in the Southern Levant.

Site	
1.	Megiddo
2.	Aphek
3.	*Ǧezīret en-Nāmī*
4.	*Tell el-Fārʿa* (South)

Table 51. Distribution of Hittite Objects in the Southern Levant.

Appendix III: Maps

ez-Zīb

Hazor

Acco

Tell Kēsān

Shiqmona

Tell Abū Ḥawām

Tell Qēmūn

Tell Qassīs

Tell en-Nāʾam

Ǧezīret en-Nāmī

Ḥirbet el-Burǧ

el-ʿAfūle

Tell el-Fuḫḫār

Megiddo

Tell Irbid

Tel Mevorakh

Beth-Shean

Ḥirbet Tell eḍ-Ḍurūr

Tell Abu al-Kharaz

Tell el-Ifšār

Tell es-Saʿīdīye

Tell Dēr ʿAllā

Tel Michal

Khirbet Umm ad-Danair

Aphek

Jaffa

Tell Ǧerīše

Bet-El

Amman Airport Structure

Tel Miqne (Ekron)

Tell el-ʿUmērī

Gezer

Tell Ḥēdar

Tell el-Baṭāšī

Ashdod

Beth-Shemesh

Tel Azekah

Ashkelon

Tell eṭ-Ṭuyūr

Tell eṣ-Ṣāfī (Gath)

Tell el-Ḥesī

Lachish

Tell ʿĒṭūn

Tell Bēt Mirsim

Khirbet Rabud

Tell Ǧemme

Tell eš-Šerīʿa

Tell Abū Hurēre

Tell el-Fārʿa (South)

0   10   20   30   40   50km

N

Map 1.   Sites ‚destroyed' at the end of the LBA.
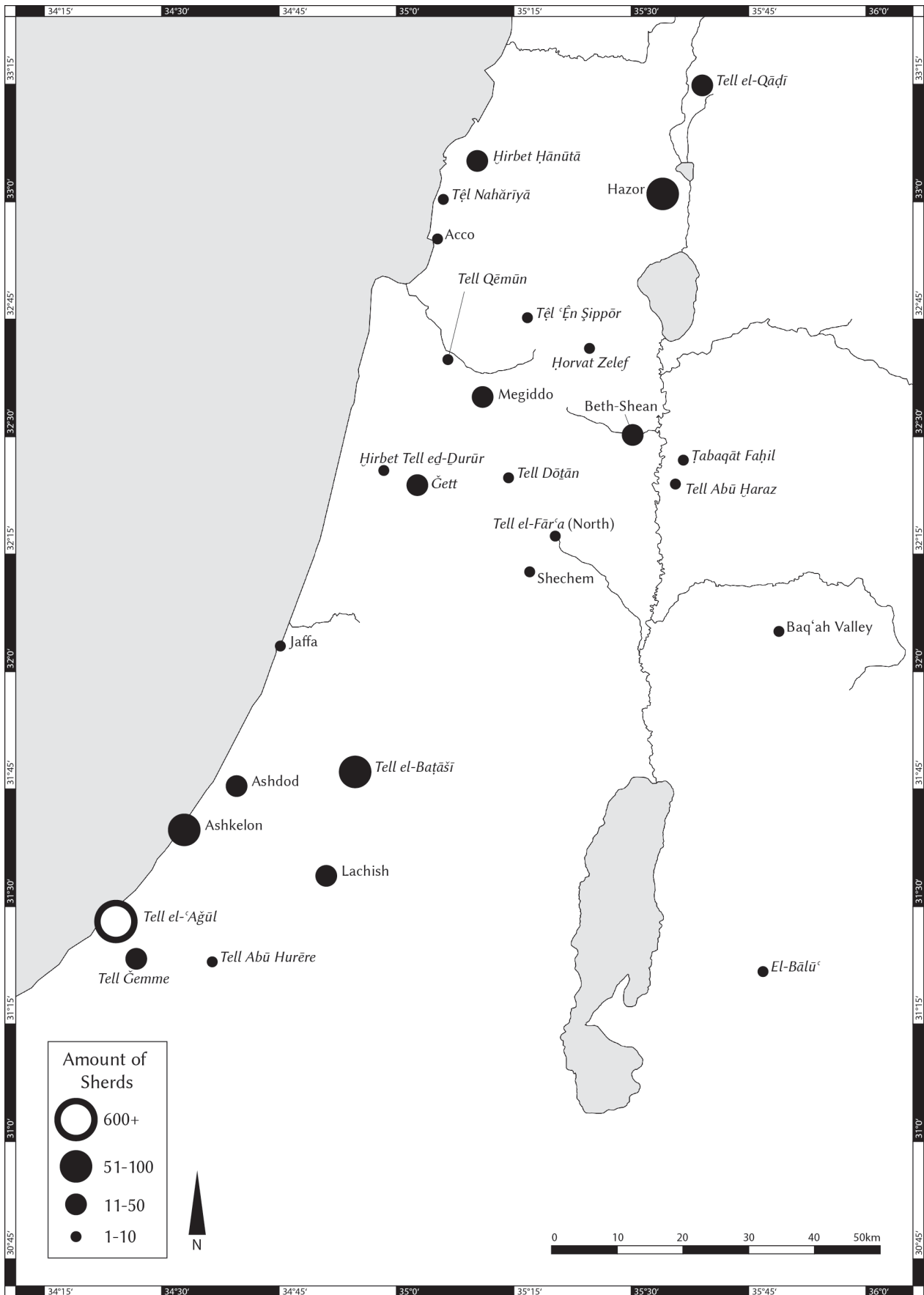
Map 2.   Regional distribution of Cypriot pottery in LB I.
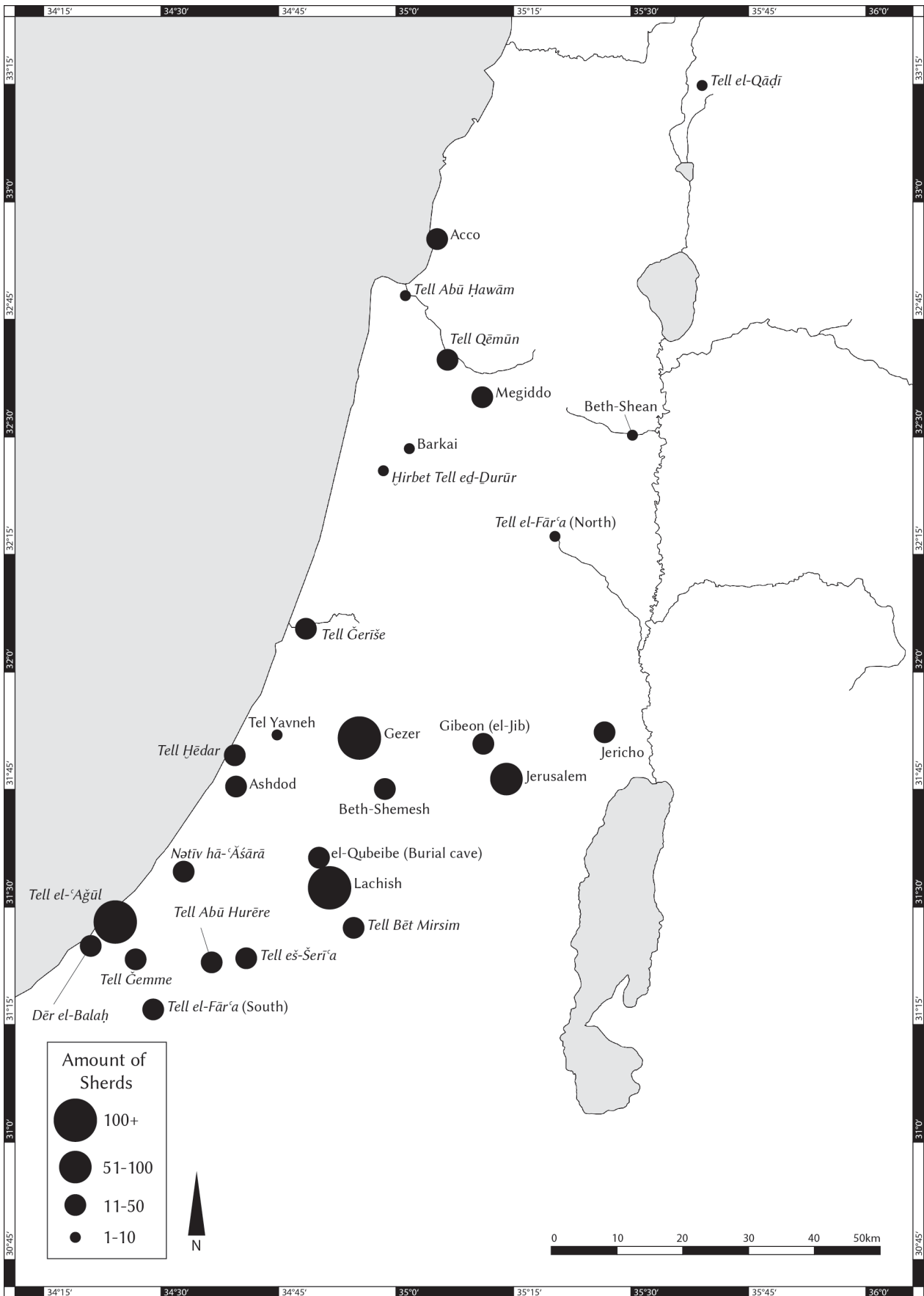
Map 3.   Regional distribution of Cypriot pottery in LB IIA.
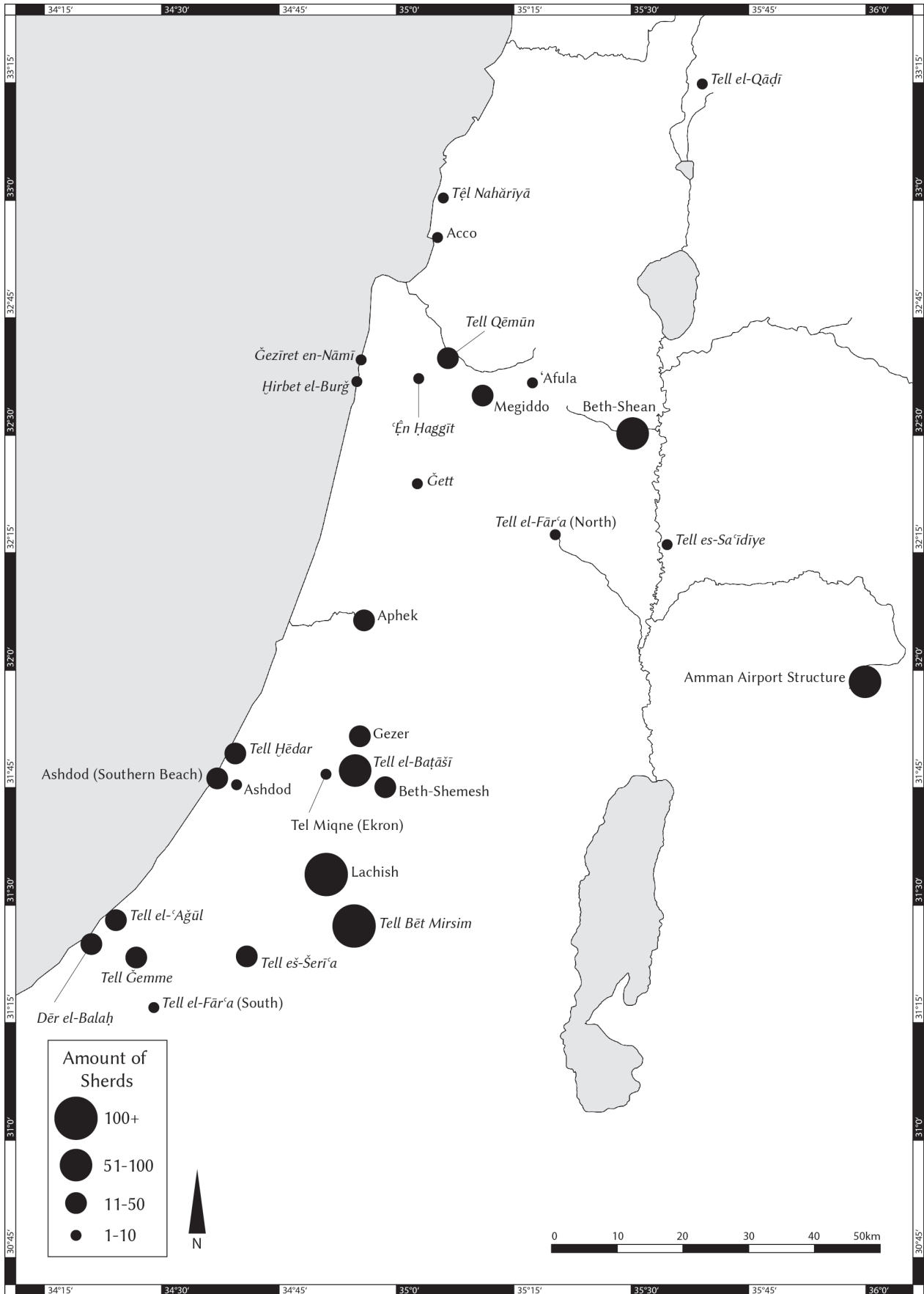
Map 4.   Regional distribution of Cypriot pottery in LB IIB.
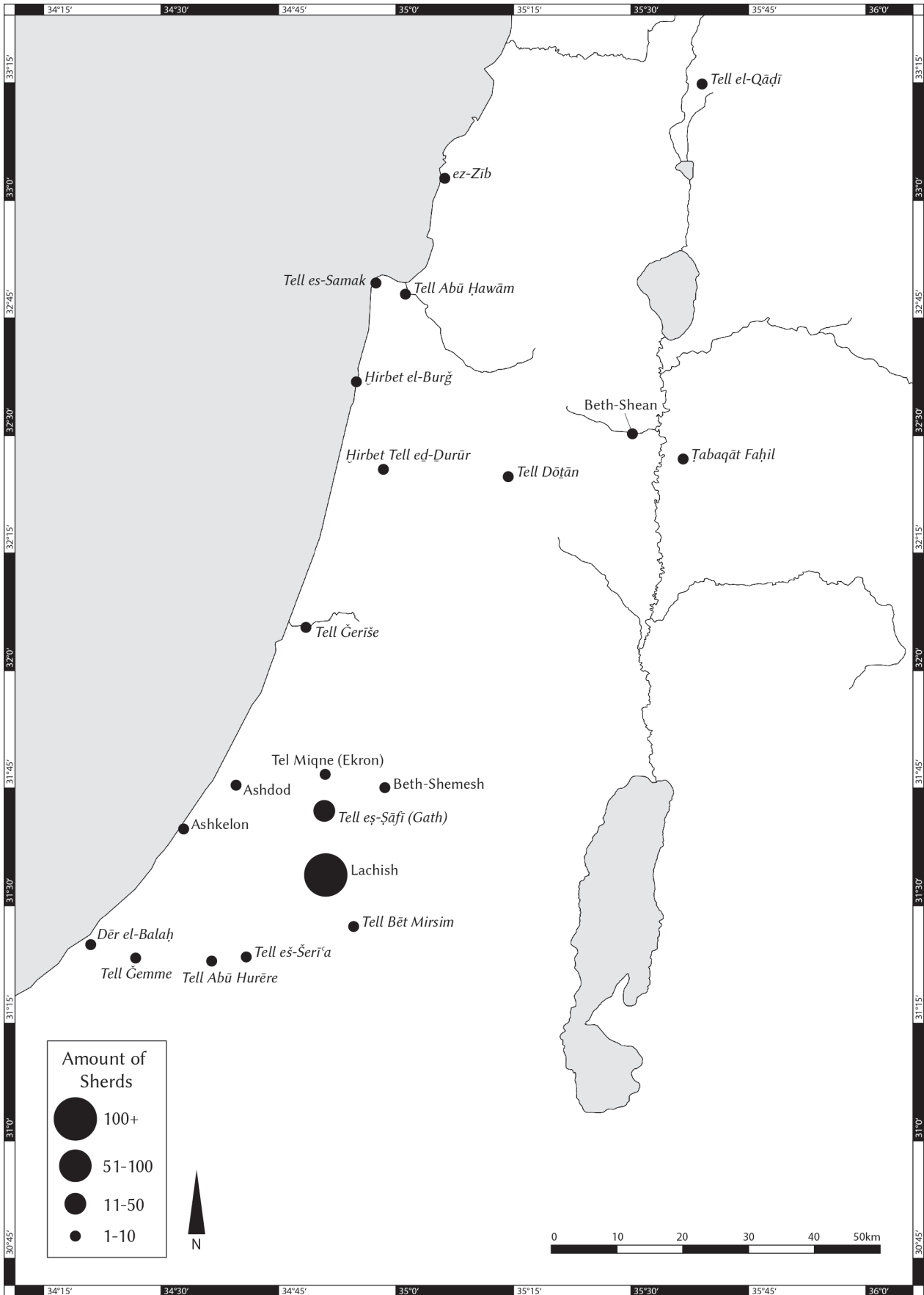
Map 5.   Regional distribution of Cypriot pottery in Iron I.
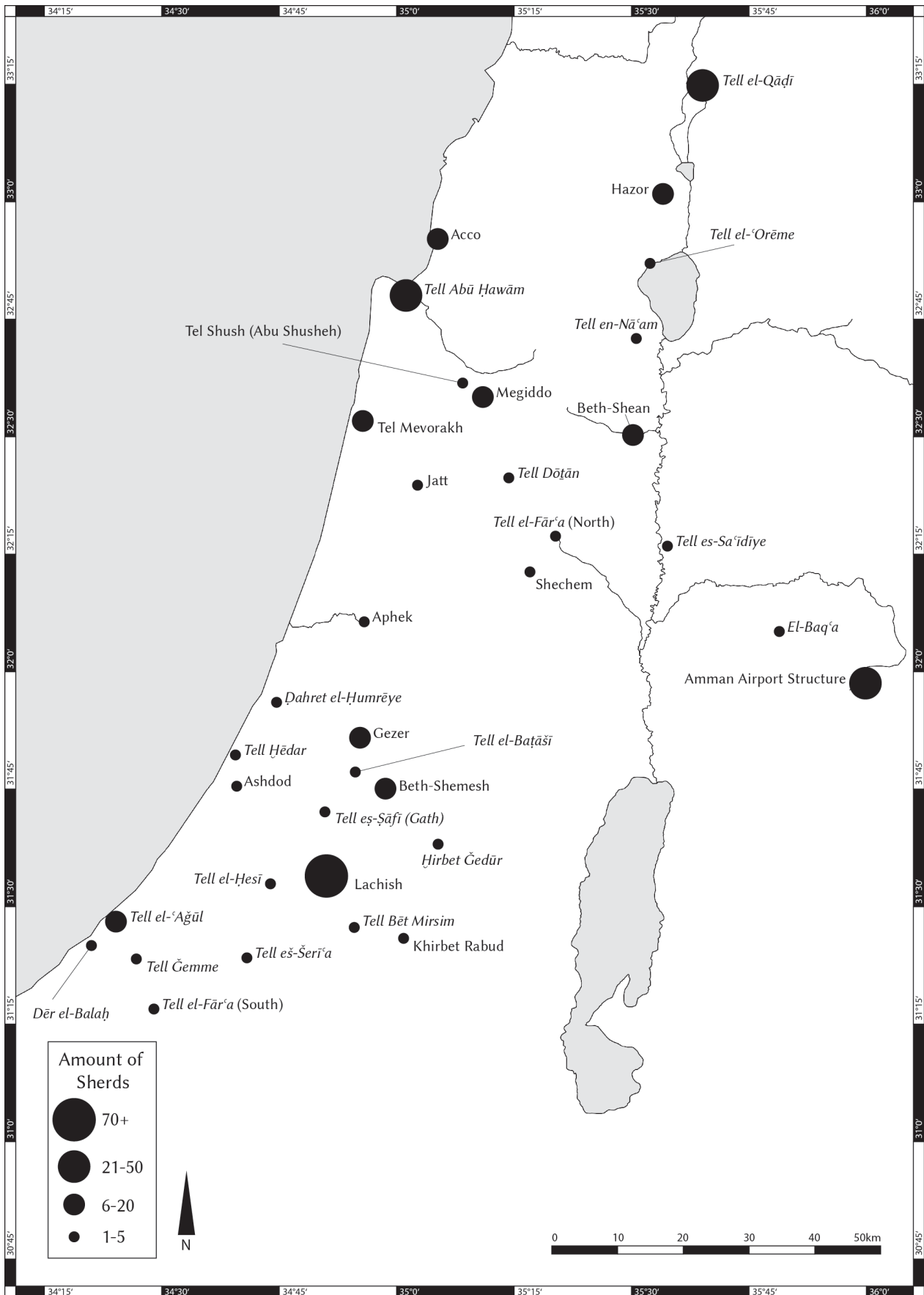
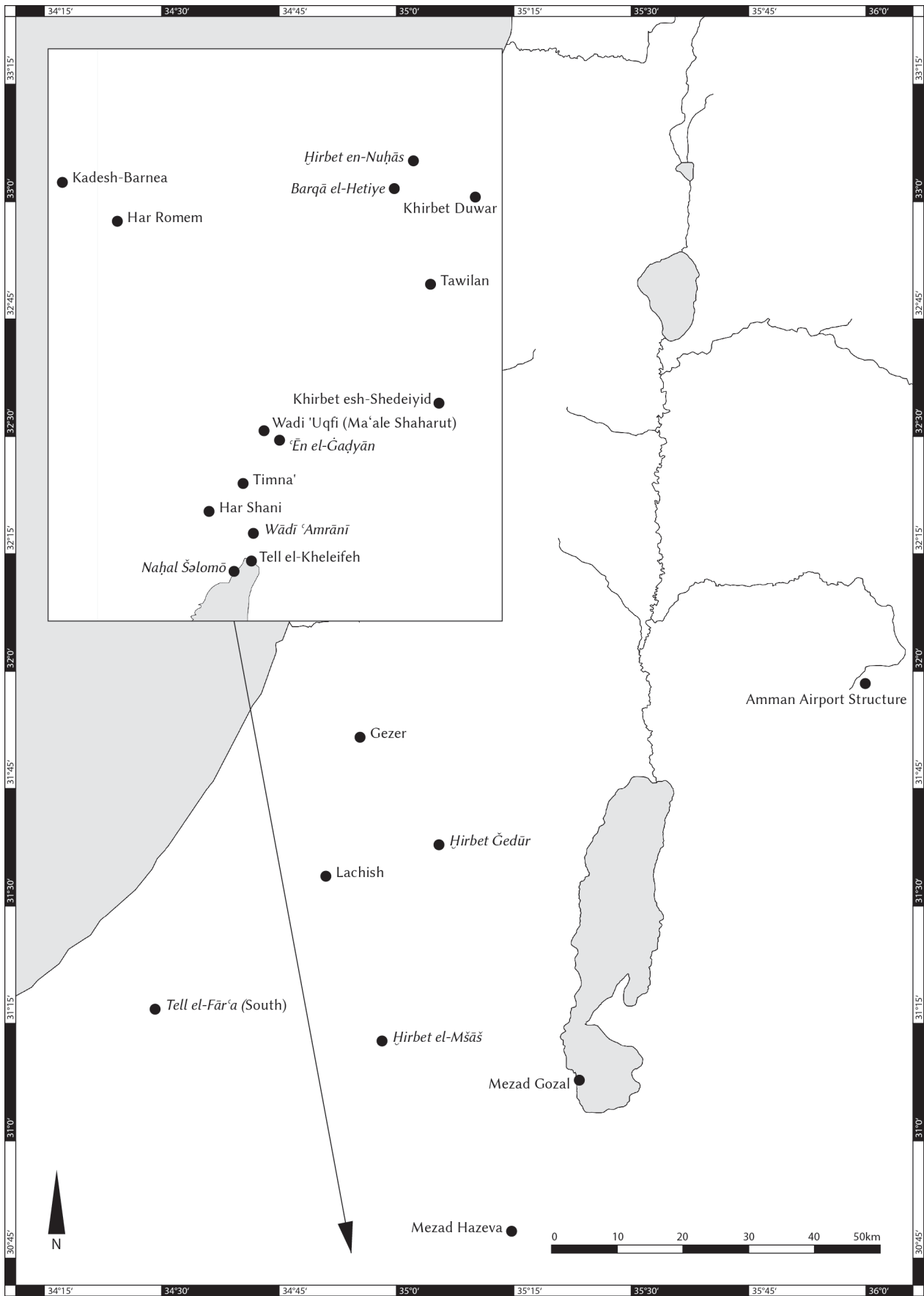**Map 6.**   Regional distribution of LH IIIA2 pottery.
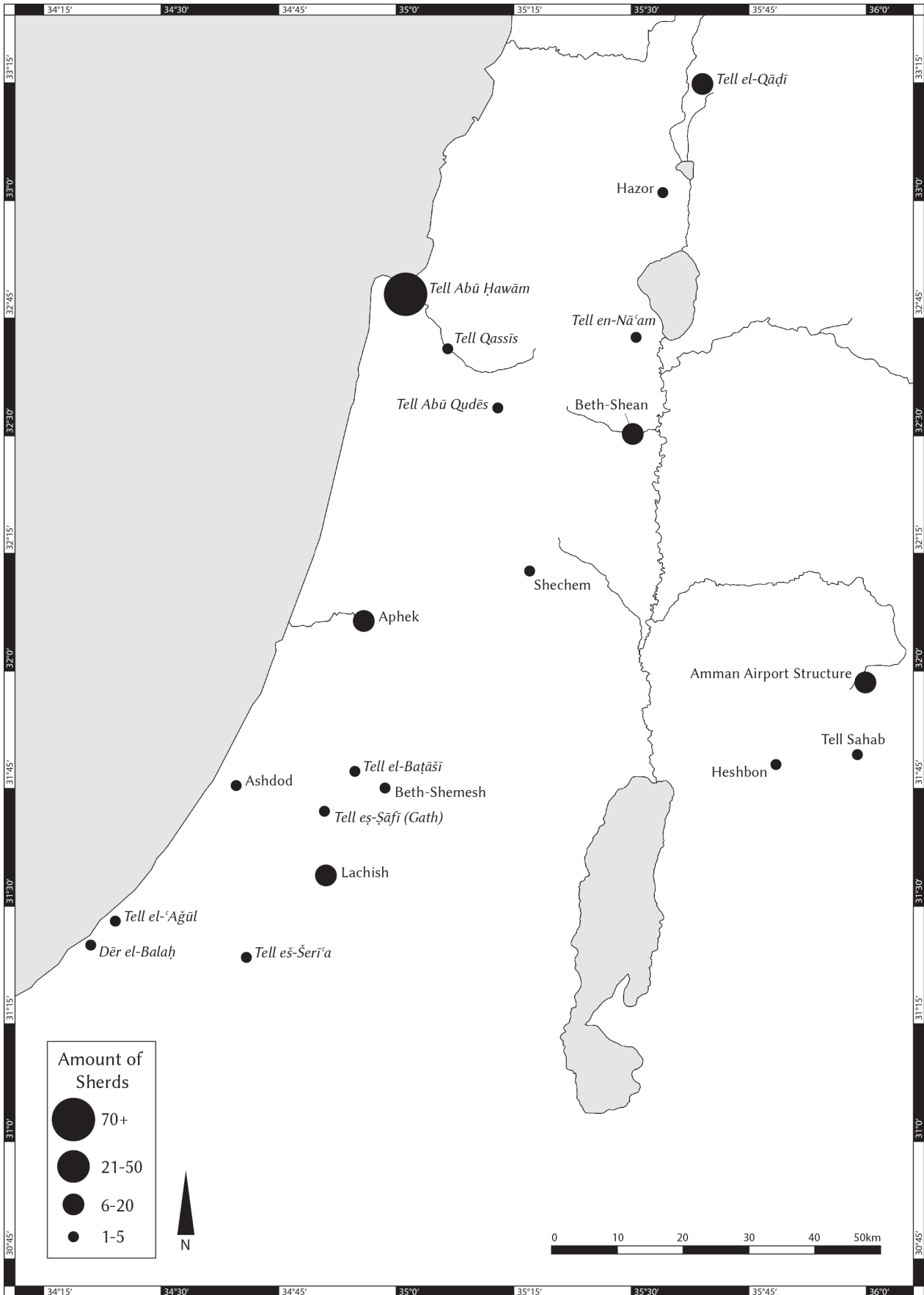
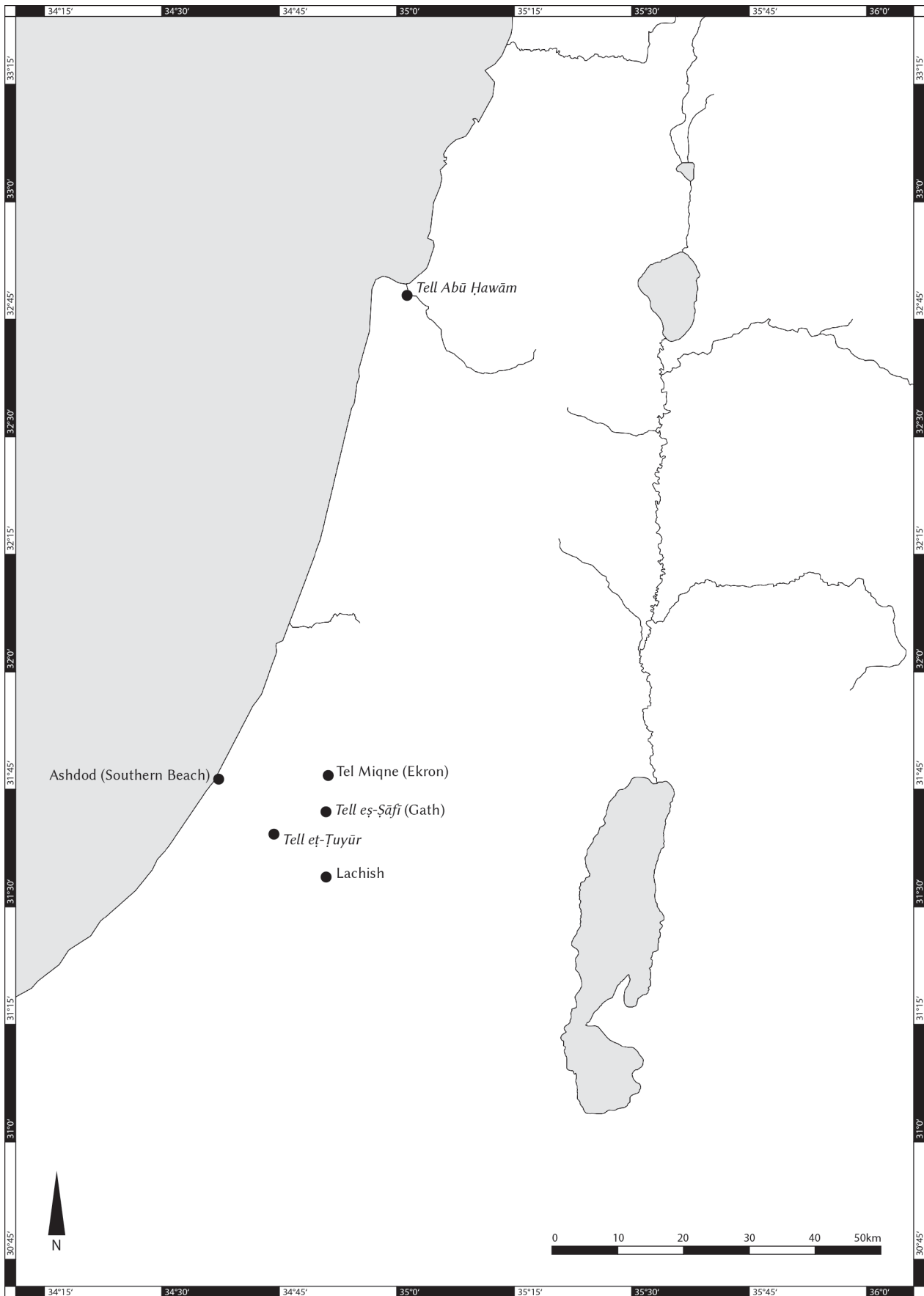**Map 7.**   Regional distribution of LH IIIA2–IIIB pottery.
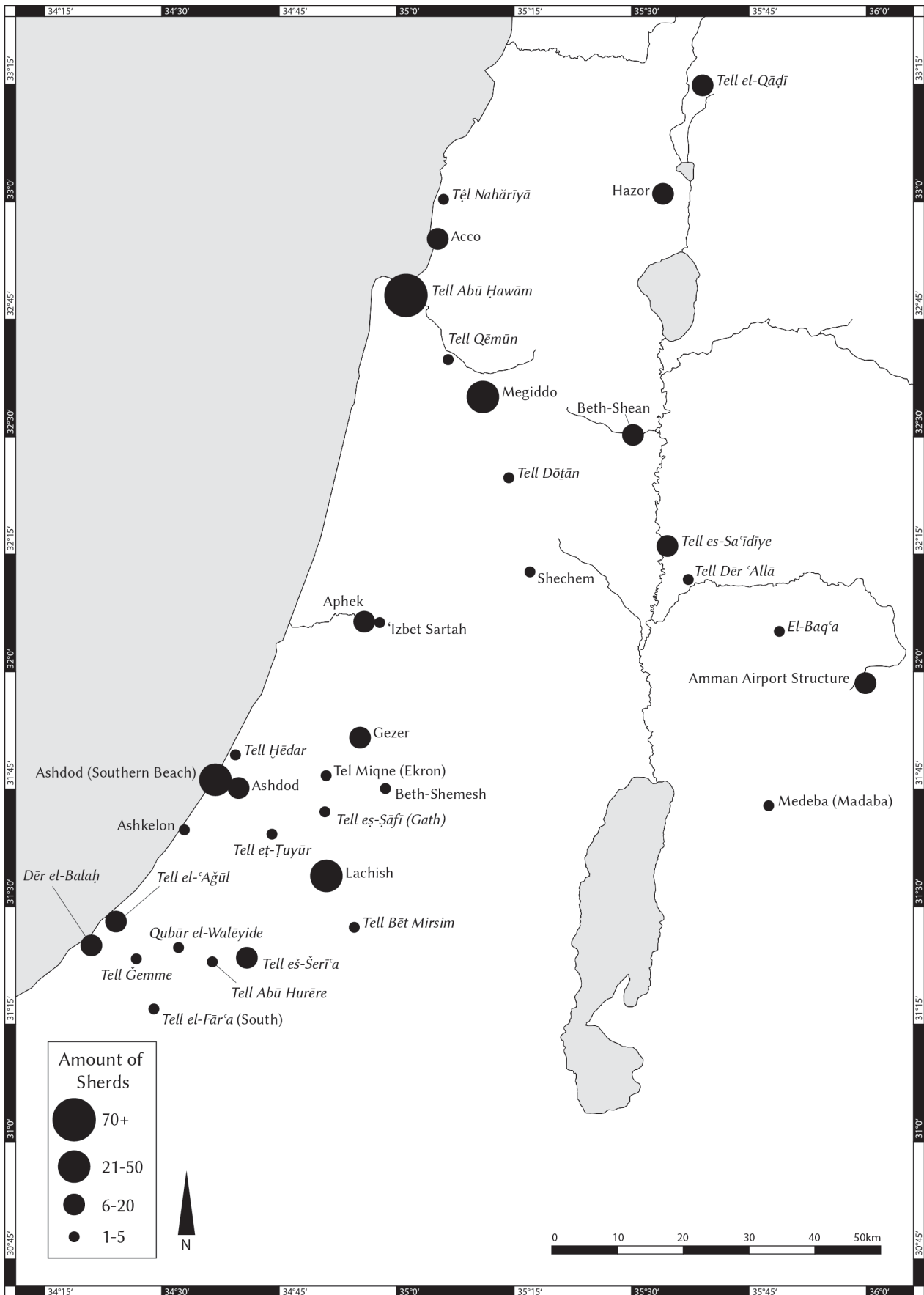
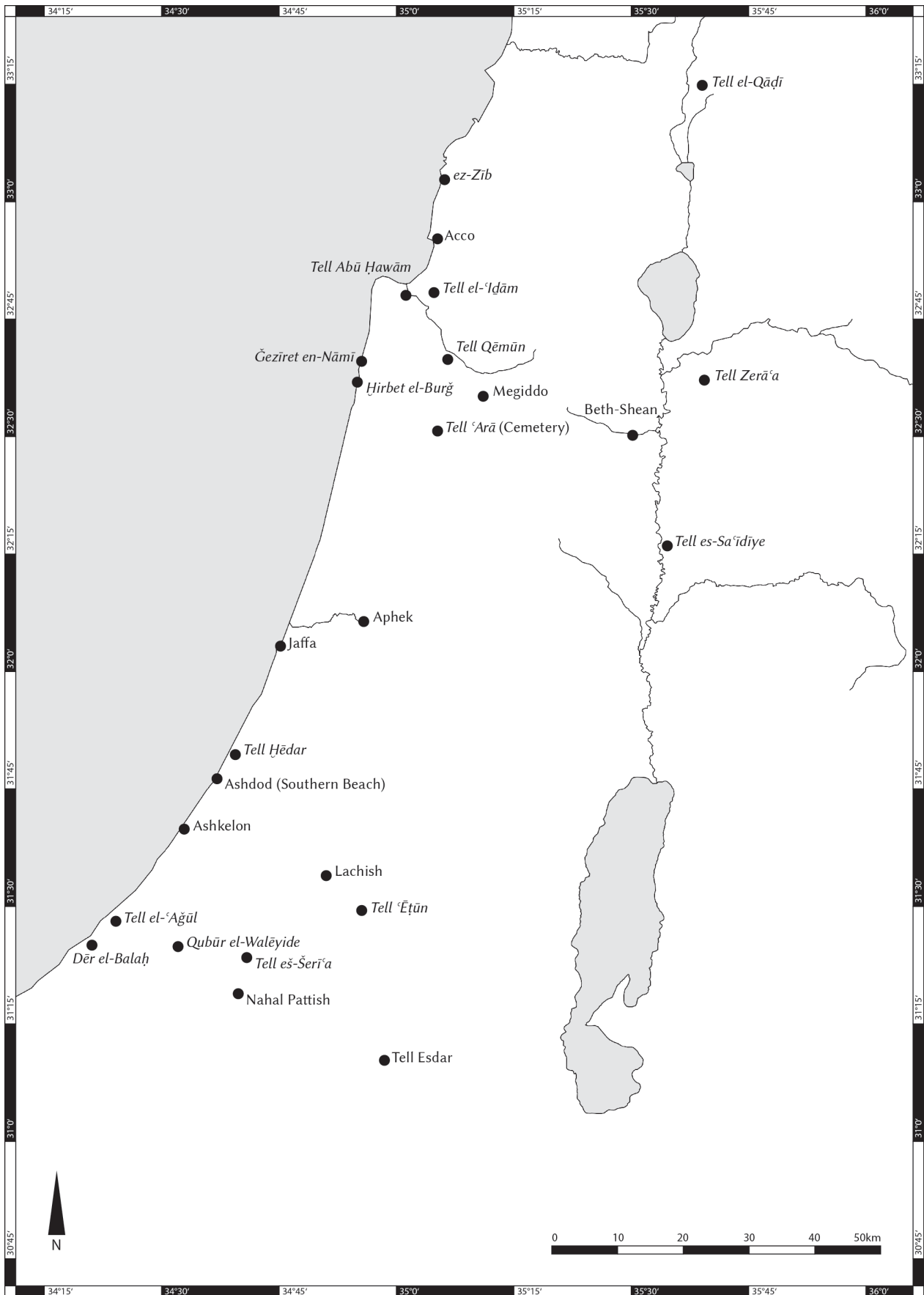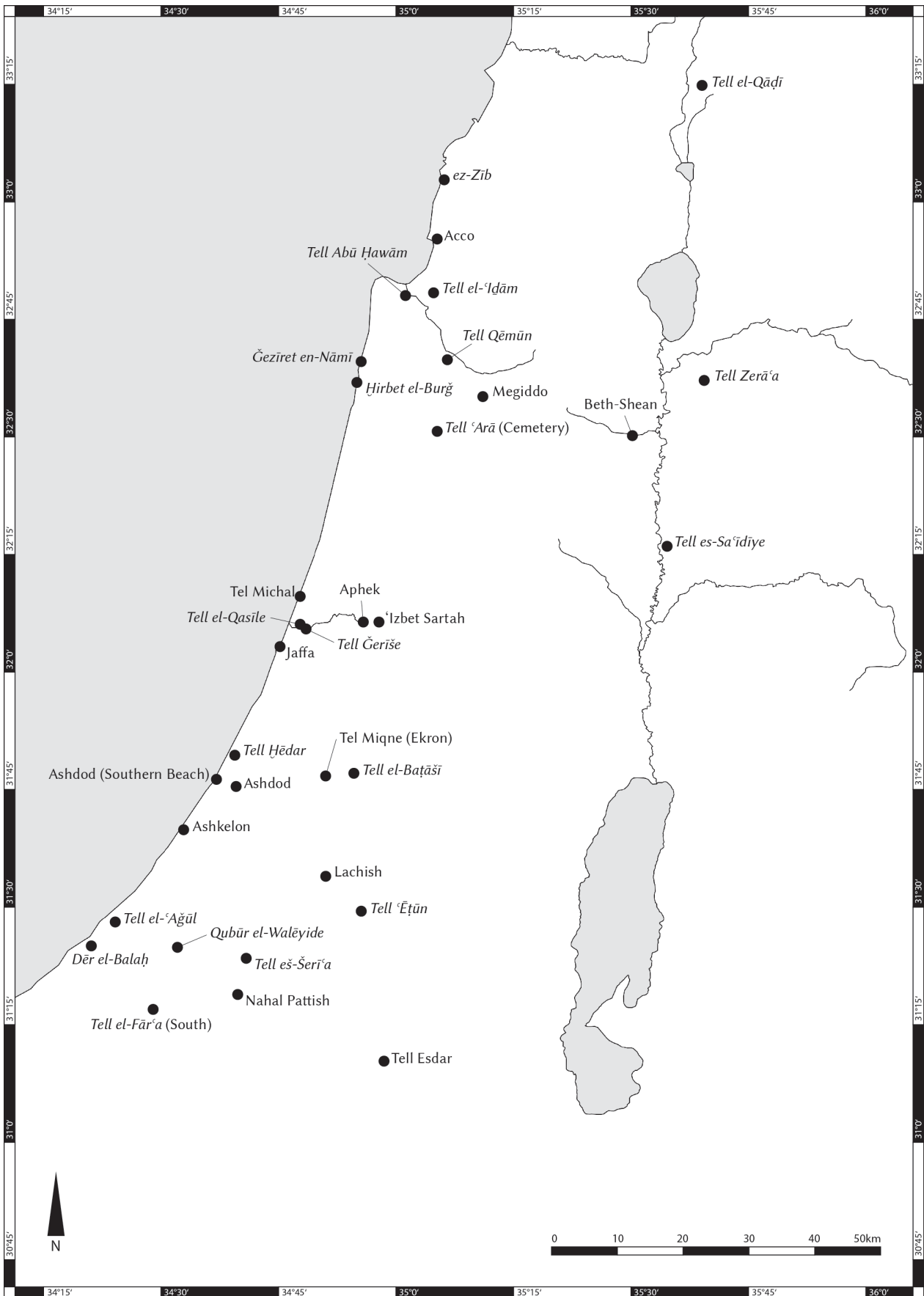**Map 8.**   Regional distribution of LH IIIB pottery.
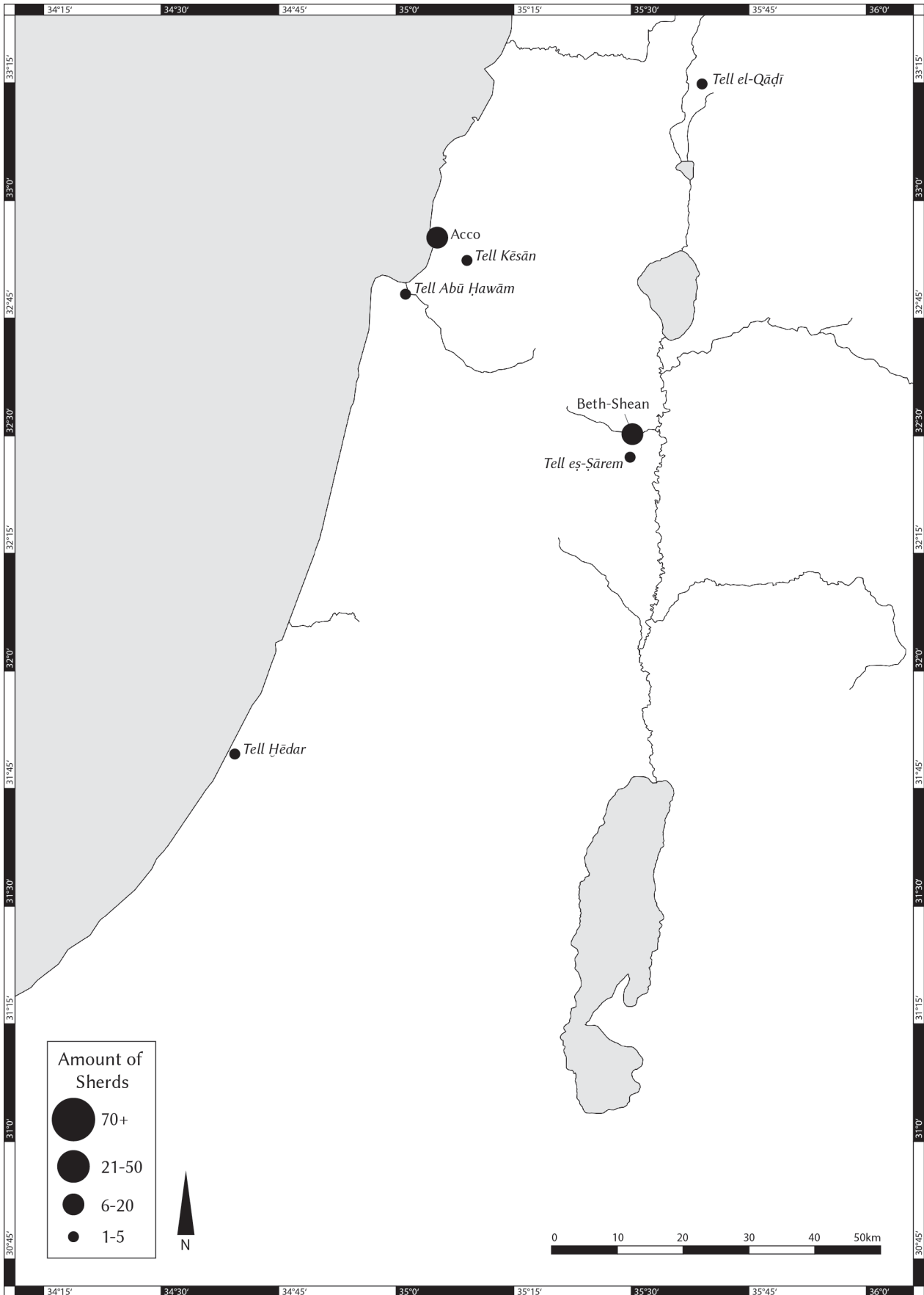
Map 9.   Regional distribution of LH IIIC pottery.

Map 10.   Regional distribution of Qurayya ware.

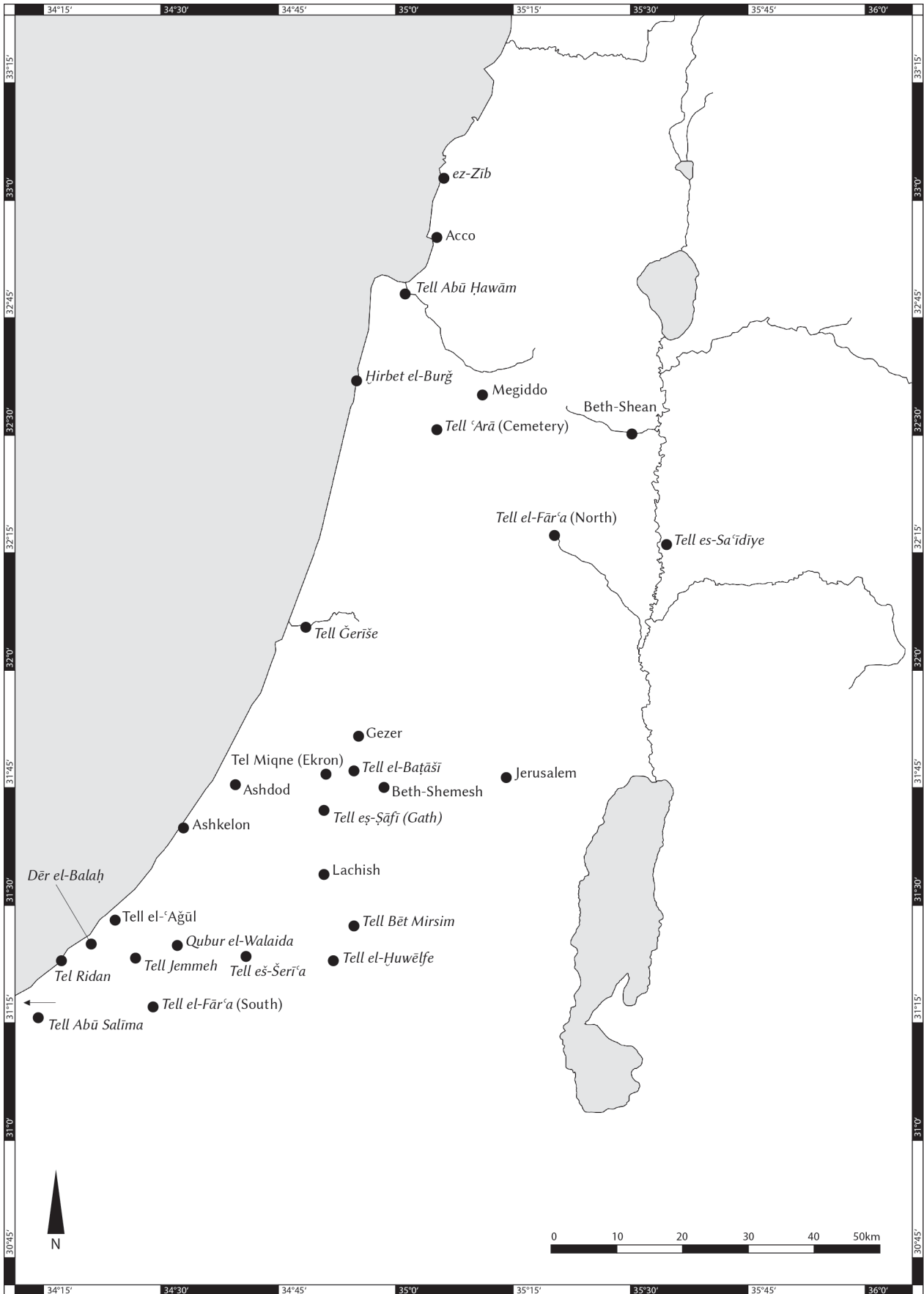**Map 11.** Regional distribution of Northwest Anatolian grey ware.

Map 12.   Regional distribution of imported Egyptian pottery.

Map 13. Regional distribution of imported Egyptian and Egyptian-style pottery.
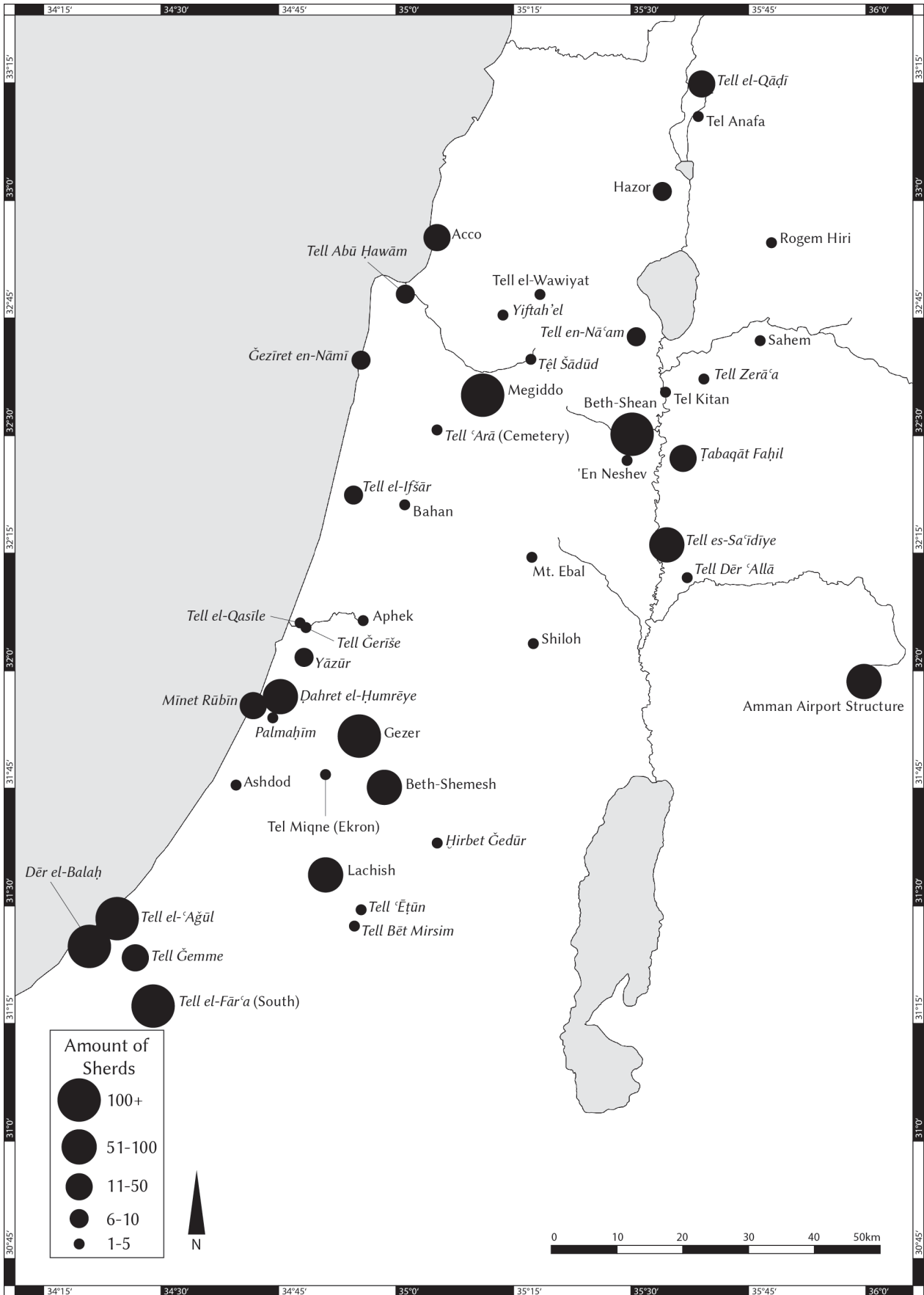
Map 14.   Regional distribution of Egyptian stone vessels.

Map 15.   Regional distribution of Egyptian amulets.

Map 16.   Regional distribution of Egyptian Nile perch.

Map 17. Regional distribution of precious metals.

RESSOURCENKULTUREN 9

EXCHANGE, DESTRUCTION, AND A TRANSITIONING SOCIETY

The end of the Late Bronze Age ca. 1200 BC in the Eastern Mediterranean is traditionally viewed as an end point. Great empires collapsed, prominent cities were destroyed, interregional exchange disappeared, and writing systems were all but lost in most of the Eastern Mediterranean. The goal of this volume is to examine one key aspect of the transition from the Late Bronze Age to the Iron I in the Southern Levant, the development and changes in interregional exchange both over time and regionally.

Twelve non-local types of material culture were collected into a database in order to track the development of interregional exchange over the course of the LBA to the Iron I. With this data, this volume explores what affect, if any, did changes in interregional exchange have on the 'collapse' of the LBA societies in the Southern Levant. Another key aspect of this work is an examination of the supposed wave of destruction which took the Southern Levant by storm to see if these events might have affected trade and contributed to the transitions during the end of the LBA into the Iron I. In all this work seeks to understand what changes took place in interregional exchange, how might destruction have affected this, and was this the cause for the transition to the Iron I.