

Durham E-Theses

*Edged weapons and knives of the late bronze age
southern levant*

Jenifer Cathran Elam

How to cite:

Elam, Jenifer Cathran (2004) Edged weapons and knives of the late bronze age southern levant. Masters thesis, Durham University.

Use policy

The full-text may be used and/or reproduced, and given to third parties in any format or medium, without prior permission or charge, for personal research or study, educational, or not-for-profit purposes provided that:

- a full bibliographic reference is made to the original source
- a <https://etheses.durham.ac.uk/id/eprint/3061/> is made to the metadata record in Durham E-Theses
- the full-text is not changed in any way

The full-text must not be sold in any format or medium without the formal permission of the copyright holders.

Please consult the [full Durham E-Theses policy](#) for further details.

Edged Weapons and Knives of the Late Bronze Age
Southern Levant

**A copyright of this thesis rests
with the author. No quotation
from it should be published
without his prior written consent
and information derived from it
should be acknowledged.**

Jenifer Cathran Elam

MA by Research
University of Durham
Department of Archaeology
2004



4 OCT 2004

Edged Weapons and Knives of the Late Bronze Age Southern Levant

Jenifer C. Elam

MA by Research, 2004

The weaponry of the Late Bronze Age of the Southern Levant has been little-studied in recent decades. This work examines which kinds of edged weaponry and knives were used during the Late Bronze Age in Palestine and Transjordan and sets the whole within the wider historical and cultural development of the LBA. A type system in which to classify these objects is developed in an effort to determine any patterns which may exist with relation to the weaponry and projectiles in use during the LBA and between the distribution and contexts of the period in which the objects are found.

Edged Weapons and Knives of the Late Bronze Age
Southern Levant

Jenifer Cathran Elam

MA by Research
University of Durham
Department of Archaeology
2004

Table of Contents

Acknowledgements	4
List of Abbreviations	5
List of Weapon Figures	6
List of Maps	7
List of Tables	8
Declaration of Original Work	9
Statement of Copyright	9
Introduction	10
Chapter 1: The History of the Late Bronze Age Southern Levant	17
The Sources	17
The Late Bronze Age Southern Levant	18
The Importance and Use of Metal	22
Chapter 2: General Discussion of the Edged Weaponry and Knives	27
Swords and the Scimitar	27
Daggers, Blades, Small Blades, Spearheads, and Knives	28
Axes and Adzes	30
Projectiles	31
Chapter 3: Summary of the Sites Producing Relevant Evidence	32
Akko Tombs Near the Persian Garden	32
Amman Airport Temple	33
Beth Shean	34
Beth Shemesh	38
Deir el-Balah	38
Gezer	39
Hazor	40
Irbid	41
Jatt	42
Madaba	42
Megiddo	43
Pella	49
Sahab	50
Sahem	50
Tell Abu al-Kharaz	51
Tell Abu Hawam	51
Tell Batash (Timnah)	52
Tell Beit Mirsim	52
Tell Dan	53
Tell Dothan	54

Tell ed-Duweir (Lachish)	55
Tell el-'Ajjul	56
Tell es-Sa'idiyeh	64
Tell Farah (South)	65
Tell Mevorakh	66
Chapter 4: The Typology	67
Introduction	67
Typology Key	70
Typology Key Definitions	71
Type Families	74
<u>Daggers</u>	74
TF 1	74
TF 2	76
<u>Blades</u>	77
TF 3	77
TF 4	78
TF 5	81
TF 6	83
TF 7	84
TF 8	85
Blade Individuals	87
Blade fragments	88
<u>Knives</u>	91
TF 9	91
TF 10	91
TF 11	92
Knife Individual 211	93
TF 12	93
TF 13	93
Knife Individual 122	95
TF 14	95
TF 15	96
TF 16	96
<u>Small Blades</u>	97
TF 17	97
TF 18	99
TF 19	99
Small Blade Individuals	100
<u>Spearheads</u>	100
TF 20	101
TF 21	102
TF 22	102
TF 23	103
TF 24	104

Spearhead Individuals	104
Spearhead fragments	105
<u>Items not pictured</u>	105
<u>Objects Not Included in the Typology Proper</u>	108
Swords and the Scimitar	108
Axes and Adzes	108
Chapter 5: Discussion and Conclusions	112
The Type Families and Other Objects Discussed	113
Some Sites Discussed	122
Comparisons and Conclusions	124
Appendix 1: Figures, Maps and Tables	131
The Weapon Figures	132
The Maps	149
The Tables	166
Appendix 2: The Catalogue	181
The Catalogue Explained	182
The Catalogue Entries	184
Cited References	226

Acknowledgements

First and foremost, I would like to thank my family and friends, for all of their encouragement before I began this thesis and throughout its writing. Specifically, I would like to thank my parents, Tom and Sharon Elam, for their financial and emotional support which eased the process of completing this work.

I would like to thank Graham Philip for answering those initial emails, for his guidance and expertise in this field, and for his patience in reading the many drafts of this work enabling me to make this thesis what it is.

I would like to thank: Doug Edwards and Rosanna Gatens for their references and continued support and Anthony Harding and Kay Prag for agreeing to examine this work. I would also like to thank Kay for patiently answering my many questions when I interrupted her work in Jerusalem that morning.

Thanks also goes to Louise Steele of the University of Wales, Lampeter for her helpful advice on people to contact for information on Tell el-'Ajjul and Rachael Sparks, curator of Petrie's Palestinian Collection at the University College of London, who continues to shed new light on 'Ajjul through her work with the pottery. She and Peter Fischer were a great help to my understanding of Petrie's recording methods and thus a better understanding of the site itself. I also need to thank Peter for his continued help in providing information about an object from Tell Abu al'Kharaz, a site he will soon be publishing. Without his help I would not have been able to include the blade in this study. Thanks also goes to Rachel Ben-Dov for providing information from the new Tell Dan publication. Because of her, I was able to include the weapons from the 'Mycenaean Tomb' in this work.

Many people helped make my trip to the Near East much easier. I would like to thank: Bill Finlayson, Jack Green and Nadja Quasi for answering my many questions about negotiating travel and the museums in Jordan; Alegre Savariego, Ossi Brandl, and Hava Katz for being so helpful with finding the artefacts I needed to see in the Israeli Museums and at the Antiquities Authority; and finally, Tobias Richter, John Harte, Kristina Pfeiffer, and especially Andy Garrard and Tanios Yazbek for letting me tag along and be a tourist and for making my travels a truly enjoyable experience.

List of Abbreviations

<i>AASOR</i>	Annual of American Schools of Oriental Research
<i>B</i>	Blade
<i>Bf</i>	Blade fragment
<i>Bldg</i>	Building
<i>BSAE</i>	British School of Archaeology in Egypt
<i>Cat. #</i>	Catalogue number
<i>F</i>	Flat Axe
<i>FB</i>	Fowling Bolt(s)
<i>frag</i>	fragment
<i>IA</i>	Iron Age (1200-586 B.C.)
<i>IA IA</i>	Iron Age IA (1200-1150 B.C.)
<i>Indiv.</i>	Individual
<i>K</i>	Knife
<i>L</i>	Lugged Axe
<i>LBA</i>	Late Bronze Age (1550-1200 B.C.)
<i>MBA</i>	Middle Bronze Age (2200-1550 B.C.)
<i>MBII</i>	Middle Bronze II (2000-1550 B.C.)
<i>NEAEHL</i>	New Encyclopaedia of Archaeological Excavations in the Holy Land
<i>n</i>	none
<i>not pic'd</i>	not pictured
<i>P</i>	Pierced Adze
<i>pers. comm.</i>	personal communication
<i>Pl</i>	Plain Adze
<i>Proj.</i>	Projectile(s)
<i>S</i>	Socketed/Shaft-hole Axe
<i>Scim.</i>	Scimitar
<i>S-H</i>	Spearhead
<i>Sm. B</i>	Small Blade
<i>St.</i>	Street; found in the Street
<i>T.</i>	Tomb
<i>TF</i>	Type Family

*Dates for the Middle, Late, and Iron Ages were taken from NEAEHL vol. 4, p. 1529.

List of Weapon Figures

<i>Figure #</i>	<i>Description</i>	<i>Page</i>
1	Dagger Type Family 1 (Cat. # 1)	133
2	Dagger Type Family 2 (Cat. # 193)	133
3	Blade Type Family 3 (Cat. # 197)	134
4	Blade Type Family 4 (Cat. # 70)	134
5	Blade Type Family 5 (Cat. # 146)	134
6	Blade Type Family 6 (Cat. # 114)	135
7	Blade Type Family 7 (Cat. # 76)	135
8	Blade Type Family 8 (Cat. # 205)	135
9	Blade Individual 84	136
10	Blade Individual 131	136
11	Blade Individual 179	136
12	Blade Individual 180	137
13	Blade Individual 196	137
14	Knife Type Family 9 (Cat. # 161)	138
15	Knife Type Family 10 (Cat. # 135)	138
16	Knife Type Family 11 (Cat. # 38)	138
17	Knife Type Family 12 (Cat. # 37)	139
18	Knife Type Family 13 (Cat. # 171)	139
19	Knife Individual 122	139
20	Knife Type Family 14 (Cat. # 20)	140
21	Knife Type Family 15 (Cat. # 173)	140
22	Knife Type Family 16 (Cat. # 203)	140
23	Small Blade Type Family 17 (Cat. # 42)	141
24	Small Blade Type Family 18 (Cat. # 213)	141
25	Small Blade Type Family 19 (Cat. # 79)	141
26	Small Blade Individual 134	141
27	Small Blade Individual 158	141
28	Spearhead Type Family 20 (Cat. # 94)	142
29	Spearhead Type Family 21 (Cat. # 101)	142
30	Spearhead Type Family 22 (Cat. # 175)	143
31	Spearhead Type Family 23 (Cat. # 167)	143
32	Spearhead Type Family 24 (Cat. # 91)	143
33	"khepesh" Sword (Cat. # 7)	144
34	Sword (Cat. # 209)	145
35	Scimitar (Cat. # 11)	146
36	Socketed/Shaft-hole Axe (Cat. # 15)	147
37	Lugged Axe (Cat. # 18)	147
38	Flat Axe (Cat. # 8)	147
39	Pierced Adze (Cat. # 27)	148
40	Plain Adze (Cat. # 16)	148

List of Maps

<i>Map #</i>	<i>Description</i>	<i>Page</i>
1	Tell el-'Ajjul and the approximate locations of its lettered areas and surrounding cemeteries.	62
2	Sites with edged weapons and knives.	150
3	Distribution of the general contexts in which LBA weapons and knives were found.	151
4	Type Family 1 Distribution	152
5	Type Family 2 Distribution	152
6	Type Family 3 Distribution	153
7	Type Family 4 Distribution	153
8	Type Family 5 Distribution	154
9	Type Family 6 Distribution	154
10	Type Family 7 Distribution	155
11	Type Family 8 Distribution	155
12	Type Family 9 Distribution	156
13	Type Family 10 Distribution	156
14	Type Family 11 Distribution	157
15	Type Family 12 Distribution	157
16	Type Family 13 Distribution	158
17	Type Family 14 Distribution	158
18	Type Family 15 Distribution	159
19	Type Family 16 Distribution	159
20	Type Family 17 Distribution	160
21	Type Family 18 Distribution	160
22	Type Family 19 Distribution	161
23	Type Family 20 Distribution	161
24	Type Family 21 Distribution	162
25	Type Family 22 Distribution	162
26	Type Family 23 Distribution	163
27	Type Family 24 Distribution	163
28	Distribution of Axes	164
29	Distribution of Adzes	164
30	Distribution of Swords and the Scimitar	165

List of Tables

<i>Table #</i>	<i>Description</i>	<i>Page</i>
1	Summary of weaponry at Beth Shean arrayed by context type.	38
2	Summary of weaponry and knives at Hazor arrayed by context type.	41
3	Summary of the tomb weaponry and knives from Megiddo.	44-45
4	Summary of the weaponry and knives on the tell of Megiddo arrayed by context type.	49
5	Albright's summary of Tell el-'Ajjul's chronology.	58
6	Various suggestions for the chronology of the 'Palaces', Cities, and cemeteries at Tell el-'Ajjul.	60-61
7	Tell el-'Ajjul weapons summary.	64
8	Summary of Type Families at Beth Shean.	167
9	Summary of Type Families at Hazor.	168
10	Summary of Type Families in the tombs at Megiddo.	169
11	Summary of Type Families at the tell of Megiddo.	170
12	Summary of Type Families at Tell el-'Ajjul.	171
13	Summary of Dagger Type Families by context and date.	172
14	Summary of Blade Type Families by context and date.	173
15	Summary of Knife Type Families by context and date.	174
16	Summary of Small Blade Type Families by context and date.	175
17	Summary of Spearhead Type Families by context and date.	175
18	Summary of Individuals by context and date.	176
19	Summary of Blade and Spearhead fragments by context and date.	176
20	Summary of Objects Not Pictured by context and date.	177
21	Summary of Swords and the Scimitar by context and date.	177
22	Summary of Axes by context and date.	178
23	Summary of Adzes by context and date.	178
24	Summary of weapons and projectiles by general context type.	179
25	Type Family 4 associated weaponry.	180

Declaration of Original Work

This thesis is the original work of Jenifer Cathran Elam and has been submitted for the degree of Master of Arts by Research in the Department of Archaeology of the University of Durham, England, on the 7th of January 2004.

Statement of Copyright

The copyright of this thesis rests with the author. No quotation from it should be published without their prior written consent, and information derived from it should be acknowledged.

Introduction

Little is known about the weapons used during the Late Bronze Age (LBA) Southern Levant. Though the history and settlement patterns of the LBA have been studied in the past (Bunimovitz 1995; Gonen c1992), its weaponry has not been considered in depth. This work intends to shed some light on the edged weapons and knives of the LBA by first outlining the historical context in which they were used. I will also examine the influence of the chariot on warfare and the chariot's influence on what sorts of metal weaponry may have represented an elite warrior's prestige. A brief summary will be made of the basic kinds of weapons in use during this period which will be followed by a discussion of where these items were discovered by site and context. A typology has been developed in order to better understand the styles developed in the LBA and any spatial and temporal patterning that may occur. Through the analysis of this data, several inferences will be made with regard to the weaponry of the LBA, and in comparison to the preceding MBA period.

While I make references to the continuity and change between the MBA and LBA, I will not make comparisons between the LBA weapons and those of the Iron Age. The Iron Age material is far too limited and scattered to make a coherent comparison. For one, there is very little Iron Age grave evidence. Much of the Iron Age material is generally found in hoards (Kletter 2003; Ilan 1992: 260-263) and not in graves and various settlement contexts like the bulk of the LBA material. Furthermore, iron and bronze differ greatly in terms of manufacture and production. The change in forms adopted with the use of iron make a direct comparison to the LBA forms difficult. Finally, the time required to research each of these components would have exceeded the limits of time and space afforded the writer in the completion of this thesis.

Within the confines of an MA thesis, it seemed inappropriate to compare in detail weapons found in neighbouring regions to those found in the LBA Southern Levant. While some material from other regions of the Near East is published, little of it is well-provenanced, and so a meaningful comparison would have been difficult in many cases.

Warfare and the Chariot

One aspect of the Late Bronze Age that gets a great deal of attention is warfare. Several publications exist which outline the history of this period and the use of chariots

in war, but few look critically at the edged weapons contemporary with these events. Yadin's (1963) account of the nature of warfare in the ancient Near East from ca. 7000-586 BC, considered weaponry and tactics but avoids a detailed discussion of artefacts and typology. Also, it is now forty years old and therefore does not include the information available from more recent excavations and publications.

A more recent and period specific account of the warfare in the region is given by Drews (1993). He chronicles the Late Bronze Age and its tactics of warfare and the weaponry used therein. But, again, there is no detailed discussion or analysis of the weaponry itself, only warfare in general. Drews also discusses 'The Catastrophe'; his word for the collapse of many Palestinian sites at the end of the Late Bronze Age and the various theories used to explain its occurrence. He goes on to theorize that the Sea Peoples were not foreign invaders but were actually Palestinians who rose up against Egypt. He also speculates about the use of the chariot in battle and as a status symbol and how the main battle strategy of the LBA changed from using the chariotry to utilizing the infantry ca. 1200 B.C. Drews suggests that foot soldiers would use javelins to injure the chariot's horses thus immobilizing all the chariot's parts: horse, chariot, and driver/archer (1993: 180-182).

Even so, the introduction of the chariot as the newest development in warfare technology at the MB/LB transition had a definite impact on the material culture of the time. Moorey (1986) discusses LBA warfare in light of the evidence for the light, horse-drawn chariot in Western Asia in the period prior to the Late Bronze Age. He explores the importance of the horse and its management by the rulers of the area. He also discusses the different theories regarding the evolution of the heavy vehicles with block wheels to the light, spoke-wheeled, horse-drawn chariot utilized in the Near East and its role in warfare.

Hulit (2002) discusses further technology of the Late Bronze Age by exploring the use and manufacture of armour and the composite bow used in conjunction with the light, horse-drawn chariot to make an effective 'tripartite' combination of weapons. The chariot, used in conjunction with the composite bow, was an important combination in the warfare of the LBA (Moorey 1986; Drews 1993). As such, the status the weaponry conveyed was reflected in the grave goods where the bulk of the weapons and projectiles was found.

Dawson (2001) supplies a summary of the 'first armies' from the tribes of African and Mayan cultures to the empires of the first millennium B.C. In his chapter

four, he discusses relations between the Great Kingdoms reigning between 1700 and 1100 B.C. and discusses the rise of chariot warfare among these kingdoms. He also narrates the Battles of Megiddo and Kadesh and includes maps of the armies' positions at different stages in each battle. Dawson explains the two person chariot which carried a skilled driver as well as an 'expert archer armed with a composite bow', the most powerful weapon of its time (Dawson 2001: 122). He also describes the Egyptian army as a body consisting of chariotry and two types of infantrymen. One type of heavy infantryman would carry a shield and spear, while the others carried a self bow—a smaller, less powerful weapon than the composite bow (Dawson 2001:149).

While my emphasis is not on warfare or the use of chariotry in the LBA, I will be considering how these aspects of the LBA impacted upon weaponry generally. For instance, in regard to weapons, there is an obvious difference between the contents of MBA grave assemblages and those of the LBA—notably, the absence of socketed axes, and their associated weapon sets, i.e. the disappearance of 'Warrior Burials' so prevalent in the MBA (see Philip 1995; Chapter 1). The LBA corpus will show how the chariot played a major role in the evolution of the 'heroic' image of the foot soldier of the MBA into the 'heroic' elite chariot warrior of the LBA. The innovation in military activity was to impact the material expression of status and therefore affect the range of weapons found in graves.

The foot soldier regarded so highly for his proficiency in hand-to-hand combat in the MBA, would be overlooked for a new type of warrior who would utilize his mobile firing platform in combination with the composite bow to attain the greatest damage in LBA warfare. However, charioteers were not the only soldiers on the LBA battlefield. It is plausible that an infantry archer would carry a weapon, in addition to his bow, for times when enemy foot would get too close for his bow to be effective. Perhaps the array of plainer blades found largely in LBII graves with projectiles indicates the burials of infantrymen, some of which were archers (see Chapter 5). While infantrymen were as professional a soldier as the chariot crews, they did not enjoy as elite a status as the charioteers (Drews 1993: 147). The evidence to be presented would seem to suggest that the infantry, in addition to the charioteers, were also honoured in death by being buried with the weapons of their trade.

Metal within an International Culture

The LBA is generally seen as a period of internationalism in styles of elite material culture (Ahituv 1999, Higginbotham 2000, Liverani 1990, Moran 1992, Zaccagnini 1987). Edged weapons and knives were not simply utilitarian objects; some communicated status, while metal, its use and control, implied wealth (Liverani 1990; Moorey 1986).

Zaccagnini (1987) discusses why and how gifts were exchanged among the elite of the Late Bronze Age and the social and political bonds such gifts reinforced. Liverani (1990) explores the relationship between the rulers of this period, the Palace structure and the rules for communication, gift exchange, and war followed among the elite. Higginbotham (2000) examines the 'Direct Rule' and 'Elite Emulation' models of political Egyptian influence on the architecture and objects used during the 13th and early 12th centuries B.C.

A translation of the Amarna Letters, Moran (1992), gives insight into the political relations of the 14th century B.C. and the gifts exchanged obligating the recipient to return a gift in kind as best they could, and Ahituv (1999) summarizes the quantity and types of gifts exchanged between the elite of the LBA in the 14th and 13th centuries B.C. Gifting was an integral part of political life for rulers of the LBA.

Metal weapons were much more significant than for their utilitarian purposes in battle. Metal in general, as well as metal weapons, bestowed prestige upon its owner. When given as a gift, they invoked a debt of reciprocity upon the receiver, who if not wealthy enough to repay the gift in kind, was obligated to find another means of repayment (see Liverani 1990; Chapter 1). The fact that most of the weaponry of the LBA was found in grave contexts (see Table 24) further suggests its significance and importance in connection with conspicuous consumption of the period (see Chapter 5).

Examining the Objects

Chronology

The chronology of the Near East is no stranger to debate and as such should currently be taken as a general framework in which to work, rather than absolute periods of time in which events took place. The chronology used for the duration of this study was taken from the New Encyclopaedia of Archaeological Excavations in the Holy Land (vol. 4, p. 1529). The Late Bronze Age will be divided and defined as in the table below, and the Middle Chronology, as used by Van de Mierop (2003), will be

followed when discussing the historical events. Egypt's 18th dynasty occurred between 1539 and 1292 B.C., and the 19th dynasty took place between 1291 and 1190 B.C. (Warburton 2000: 71). For further information on the other available Near Eastern chronologies currently in use, see Warburton (2000).

LBI	1550-1400
LBIIA	1400-1300
LBIIIB	1300-1200

Contexts

Throughout this volume various context types have been defined to describe the locations of where different objects were found. The basic general divisions are domestic building, public building, settlement, grave, and uncertain. A domestic building is generally defined as a structure that served as a residence. The term 'public building' may refer to any number of non-domestic buildings from Palace or Fort to Temple. Temples may also be referred to as 'cult contexts'. Forts and residences of leading officials may also be called 'administrative buildings' according to my discretion. Settlement contexts are those buildings which cannot be securely identified as either domestic or public buildings and may refer to areas of a site which contain contexts of a more uncertain nature such as pit, debris, or rubbish which lie in developed areas. A grave, being fairly obvious, is a context in which an individual has been placed upon his/her death. Graves may occur in cemeteries or within settlement contexts. The uncertain category may contain items found in pits, tunnels or open spaces outside an area containing architecture. Also, each larger category may be divided or simplified at the writer's choosing.

At times, when comparing regions within the Southern Levant (especially in Chapter 5) the writer will refer to northern Palestine, southern Palestine, and Transjordan. These divisions were made in the hopes of discovering patterns among the weaponry and knives. The dividing line for northern and southern Palestine lies between Jatt and Gezer. Instances involving Transjordan are those sites east of the Jordan River, with Sahab being the easternmost of the sites included in this study (see Map 2). A comparison of the Southern Levant between the inland and the coastal regions proved futile in that no patterns were found when examining these regional divisions. For this reason, the only spatial regions recognized in discussion are northern and southern Palestine, and the region of Transjordan to the immediate east of the Jordan River.

Typologies

The edged weaponry and knives of Late Bronze Southern Levant have received little attention since the 1940s when Maxwell-Hyslop (1946) put a wide range of weaponry, dating from Western Asia's prehistory to 600 B.C. into a single typology. Maxwell-Hyslop's work (1946, 1949, & 1953) ranks among the few studies of classifying edged weaponry that exists. Her typology dealt mostly with objects found east of the Southern Levant and was developed in the 1940s and 1950s. The only other work of this kind previously conceived was that by Petrie (1917). However, Petrie's work is dated, many of the objects are of poor provenance, and the objects are only represented by the most basic of line drawings.

The only typologies devised since Petrie and Maxwell-Hyslop are those of Philip (1989), Miron (1992), and de Maigret (1976). Philip (1989) describes and categorizes the weapons of Early and Middle Bronze Age Syria-Palestine. He developed his own typology of the weaponry as well as discussing their place within the culture and warfare of the time. Philip also studied the axe-and-dagger-set of the 'Warrior Burial' grave phenomenon (1995) and its socio-cultural implications.

Miron (1992) deals exclusively with axes and adzes of 'Canaan'. Though concisely and thoroughly recorded and illustrated, many of the objects he discusses are of poor provenance and so little can be determined or said about them other than they exist. De Maigret (1976) provides a concise and easy to use spearhead typology. However, no other weapons are included in his study and there is no significant analytical discussion of the spearhead types defined.

The artefacts included in this study have been divided into two broad categories: edged weapons and projectiles. 'Weapons' and 'projectiles' are then further divided into subcategories. Within the 'weapons' category lie swords, scimitars, daggers, blades (weapons that could be daggers, spears, etc.), blade fragments, small blades, axes, adzes, socketed spearheads, spearhead fragments, and knives. In the 'projectiles' category lie the subcategories of arrowhead, javelin, fowling bolt. As the projectiles are of a somewhat secondary importance to this work they are usually only described under their blanket term 'projectiles'.

The purpose of the two broad categories of weapons and projectiles is to enable the comparison of the two groups. When finding weapons does one also always find projectiles and vice versa? Are both categories found in settlement contexts or are they

only found in tomb groups? What could this mean during a time when the chariot was the newest martial elite status symbol? Using these broad categories and the subsequent typology enables the writer to address these and similar questions which will bring a greater understanding of the styles and meaning of the weaponry of the LBA Southern Levant.

Chapter 1

The History of the Late Bronze Age Southern Levant

The Sources

The key events of the Late Bronze Age Near East can be enumerated by using a combination of sources. Still, many holes exist in the documentary fabric through which much of its history still slips. The description of sources below is in no way comprehensive, but instead gives a taste of the diversified means used to untangle the complicated web of events strung between the 16th and 13th centuries B.C.

Perhaps the clearest picture of the nature of Egypt's control of the Southern Levant during the reigns of Amenophis III, Akhenaten, and Tutankhamun is given by the Amarna Letters, a collection of clay tablets written largely in Babylonian (Moran 1992). Spanning the first half of the 14th century B.C., they consist of correspondence between the King of Egypt and his vassal princes in the Southern Levant as well as between the Pharaoh and his royal counterparts in Anatolia, Cyprus, Babylonia, Mitanni, and Assyria (Kuhrt 1995: 187, 194).

An assortment of inscriptions on temples, written documents, treaties and stele found from Syria to Nubia also broaden our knowledge of the events during this time. When the dates of the documents themselves are not known, the approximate regnal years of the corresponding king are given (Warburton 2000: 71).

Some other sources providing insight into the Late Bronze Age Southern Levant include: Tuthmosis I (1493-1482 B.C.) and Tuthmosis III (1479-1425 B.C.): respective victory stele recording their campaigns in Syria (Klengel 1992: 90; Warburton 2000: 71); the Annals of Tuthmosis III (1479-1425 B.C.) inscribed on the temple of Karnak, describe daily campaign records; Amenophis II (1425-1397 B.C.): sphinx stele 'praises royal military and hunting prowess'; Tuthmosis IV (1397-1388 B.C.): dream stele 'commemorates cult-foundations'; Amenophis III (1388-1351 B.C.): stele records building activities as does the boundary stelae of Akhenaten (1351-1333 B.C.); Tutankhamun (1333-1323 B.C.): restoration stele restates the ideals of royal policy; and Horemheb (1319-1292 B.C.): edict relates the process for correcting wrongs performed during revenue collection; and the Papyrus Anastasi, a journal written by a frontier official late in dynasty XIX (ca. 1200-1190 B.C.) lists 'movements of messengers and

soldiers between Egypt and the Levant' and records details of the Egyptian control in the region (Kuhrt 1995: 186-188; Warburton 2000: 71).

The treaties between Hatti, Egypt, Mitanni and their vassal states in places such as Syria, also offer information regarding the events of the Late Bronze Age. The treaty between Rameses II of Egypt and Hattusili III of Hatti in the mid-13th century B.C. is 'one of the best-known texts concerning Egypt's foreign relations' (Kuhrt 1995: 187). It is unique in that both the Hittite and the Egyptian versions have been discovered (Kuhrt 1995: 187). The treaty between Idrimi of Syria and Hurri-Mitanni details how the vassal king was obligated to support the overlord militarily by attacking enemy flanks in combat (Klengel 1992: 88). These documents, as well as many others not mentioned here, inform us of a number of events ranging from royal policy and tax collection, building activities and military triumphs to the daily life of administration, land use, family structure and education in Egypt and the lands with which it interacted (Kuhrt 1995: 186-188; Klengel 1992: 89, 118).

From Old Assyrian merchant texts can be learned the nature of Hatti before it emerged as a dominating force; however, details of the Hittite rise to power are lost to us. No written evidence has been found on how the Hittites blossomed from small, independent kingdoms into a united political entity that played an instrumental role in the events of the Late Bronze Age Near East (Kuhrt 1995: 225).

As there are very few direct sources from the area, information regarding the Levant can be garnered mostly through the writings from Egypt and what these sources say about the people in this region. As always, supplementing the written documents is the information drawn from archaeological excavations in the Levant and surrounding areas. When combined, the written, inscribed, and excavated information provides scholars with an historic outline of this volatile region.

The Late Bronze Age Southern Levant

Understanding the history is an integral part of understanding the objects used during any age. To that end, certain publications were helpful in deciphering the history of the Late Bronze Age. Kuhrt (1995) provides an intensive review of the history of the Near East in a two volume set. The first volume was very informative in regards to the Late Bronze Age. *The Archaeology of Society in the Holy Land*, edited by T.E. Levy is another work summarizing the events of the ancient Near East. The chapters on the Middle Bronze Age (Ilan 1995), Late Bronze Age (Bunimovitz 1995), and Iron Age (Stager 1995) summarize each period so that they are easily comparable. Events of the

LBA, with a focus on Syria, are explained in Klengel's work of 1992. It is divided into two sections; the period of Mittanian and Egyptian rule (1600-1350 B.C.) and the time of Egyptian and Hittite overlordship (1350-1200 B.C.). It provides insight into the overlords' relationships with their vassal kings. Chapter five in Ahlstrom's *History of Ancient Palestine from the Palaeolithic Period to Alexander's Conquest* provides yet another vantage point of the Late Bronze Age (1993). The most recent publication of the history of this region is Van de Meiroop (2003). It is an extensive overview of the events of the Near East from 3000-323 B.C. and uses the middle chronology throughout.

The dates of anything occurring in ancient times are an assumed approximation. The Late Bronze Age Southern Levant is no exception to this rule. But whatever the exact dates, it seems to be generally accepted that the Late Bronze Age begins with the expulsion of the Hyksos from Egypt and ends with the Sea Peoples' invasion of the same area (ca. 1550-1200 B.C.). The following merely highlights the events of the Late Bronze Age within the Southern Levant and its influential surrounding areas of Egypt, Mitanni, and Hatti.

At the end of the Middle Bronze Age, the Egyptians expelled the Hyksos from Egypt, thus ushering in the New Kingdom; a time of wealth and prosperity for the Egyptian people (Bunimovitz 1995: 320; Kuhrt 1995: 1185). By taking Avaris, the principle city of the Hyksos, Ahmose, king of Egypt, ended more than a hundred years of Hyksos dominance in the region (Kuhrt 1995: 173, 179). The Egyptians gaining their independence enabled them to gain a strong foothold in the Southern Levant and for subsequent kings to eventually campaign all the way into northern Syria (Kuhrt 1995: 193). This in turn brought them into conflict with Mitanni and later with the Hittites who were also vying for control of the city-states in that region (Kuhrt 1995: 189).

In Hatti, the Late Bronze Age begins with the termination of a period of internal political upheaval. After seventy years of turmoil, the leadership of Hatti was finally settled with the beginning of the reign of Telepinu (c. 1525). The 'Edict of Telepinu' records the violent deeds of the preceding era and credits Telepinu with the newfound order and stability (Kuhrt 1995: 244). The edict is an important document offering insight into the Hittite royal courts, the structure of the Hittite state, and contains information which fills in some blanks left by the history of this period (Kuhrt 1995: 248). However, it most likely exaggerates the amount of violence in the region before Telepinu came to power and his subsequent role in bringing peace (Kuhrt 1995: 250).

At any rate, it was at the conclusion of this murderous period that Hatti began expanding its empire.

Within Syria and the Levant, respective city-states tried to survive the exploits of the dominating forces surrounding them. Remembering the campaign of Tuthmosis I, a united Syro-Palestinian army fought Tuthmosis III at the Battle of Megiddo in the mid-15th century B.C. (Klengel 1992: 91). This resistance was most likely the brainchild of Mitanni, a state which acted as overlord to many of the city-states in the Levant and Syria and which therefore had an interest in keeping Egypt out (Klengel 1992: 91). Despite the Syro-Palestinian effort, Egypt was triumphant and from then through the middle of the twelfth century (during the reign of Rameses VI), held control of the Southern Levant (Kuhrt 1995: 317). Following the battle, the opposing 'coalition' was made to swear loyalty to Egypt in exchange for their lives and to pay tributes of 'vast sums in silver and personnel' to the Egyptian overlords as well (Hasel 1998: 115). As another result of the battle, Egypt left troops in Syria to maintain a military presence, at least temporarily (Klengel 1992: 99).

Egypt continued to compete with Mitanni for control of the locally autonomous Levantine states but they had difficulty maintaining control of these states and simultaneously fighting off Mitanni. In an effort to sustain their control over so vast an area, the Egyptians were forced to protect their interests by allying with Mitanni. This alliance was reinforced by much negotiating and a further series of royal marriages during the reigns of Amenophis III and Akhenaten. However, their agreement, which lasted only about fifty years, dissolved when Mitanni's power was nullified as a result of a series of attacks inflicted by the Hittites and Assyrians in the early 14th century BC.

Not many years after the Battle of Megiddo, the Hittites experienced a period of vast territorial expansion. Tudhaliya I (ruling from ca. 1430-1410) and his successors exploited Egypt's advances into the Levant and Syria for their own gain. While Mitanni was distracted fighting Tuthmosis III, the Hittites advanced into northern Syria (Kuhrt 1995: 250). It was during the reign of, Suppiluliuma I, that the Hittites began raiding Syria, and by the latter part of his reign (late 14th century B.C.), they had invaded and conquered northern Syria (Klengel 1992: 109). Suppiluliuma I solidified his predecessors' conquests and eventually ruled a realm extending from Western Anatolia to northern Syria (Kuhrt 1995: 231). When Mursili II gained the Hittite throne, the region was still recovering from a virulent plague. He was able to further broaden Hatti's territories by conquering parts of Arzawa, a region to the west that had been

ignored by his predecessor, Suppiluliuma I (Kuhrt 1995: 254, 256). Consequently, Egypt's power in the Southern Levant was undermined (Kuhrt 1995: 193-194).

The Hittites usurping Mitanni's power and mobilizing into Syria engaged the Hittites in a 'permanent' war with Egypt. The war finally culminated in the Battle of Kadesh (ca. 1275) (Klengel 1992: 107, 109; Van de Mieroop 2003: 121, 130). When Rameses II tried to expand his territories into northern Syria, Muwatalli met him with an army. Though the battle was a 'draw militarily', the walls of the temple at Karnak tell a different story. In these inscriptions, Rameses boasts of his army defeating the Hittites. Indeed, at the end of the battle, the Hittites were in control of Kadesh, an obvious contradiction to Rameses' claims (Ahlström 1993: 271-273). It was an important triumph for the Hittites, for it decisively strengthened their control in the Levant and made the local princes question Egyptian authority (Kuhrt 1995: 258; Ahlström 1993: 273).

It was because of this doubt in Egyptian authority that some have suggested Egypt initiated some changes in how they ruled the Levant in the 19th dynasty. One theory states that local kings were no longer left to rule their cities on their own while remaining loyal and paying tribute to the Pharaoh as they had under 18th dynasty Egypt (cf. Moran 1992: 248-251, 256, 257). Instead, Egyptian garrisons were installed throughout Canaan to exercise Egyptian control that much more thoroughly (Gonen 1992: 217). Hasel argues that the 'high occurrence of stelae, plaques and monumental inscriptions' commemorating military victories and the domination of certain sites supports a heavy Egyptian presence remaining in the region (1998: 116). However, Higginbotham (2000) disagrees. She believes, except for four imperial centers, that Palestine was still ruled largely by 'circuit officials' and 'royal envoys' dispatched only as needed to oversee the region. Palestine as a whole was still governed by their vassal princes serving under Egyptian overlords during the 19th dynasty as they were in the 18th dynasty (Higginbotham 2000: 138). Indeed, the weapons within the grave record of the LBA do not seem to indicate a greater Egyptian influence in the Southern Levant in the 13th century (see Chapter 5).

Nevertheless, as Assyria became a steadily increasing threat, Egypt once again, to protect its interests, allied with an adversary. Rameses II signed a peace treaty with Hattusili III of Hatti (c. 1269), thus initiating a time of peace and stability within the Levant (Kuhrt 195: 263). But this peace would not last.

At the end of the Late Bronze Age, the so-called 'Sea Peoples' began moving into the Southern Levant and challenging the then Pharaoh, Rameses III (Stager 1995: 332, 336). While the origins of the 'Sea Peoples' are speculated, their impact is certain (Sherratt 1998: 307). Unlike the Hittites and Egyptians, the 'Sea Peoples' did not invade and rule by military occupation; they leveled cities, annihilated populations and then built-up and occupied the sites they had just utterly destroyed (Stager 1995: 332, 342). By the end of the 13th century, they had significantly undermined Egyptian authority in the Southern Levant and began expanding into Palestine from their original coastal settlements (Stager 1995: 348). They replaced the 'old centralized politico-economic orders by a decentralized economic system which steadily encroached from within or from the margins of the former' thus substituting the age of large centralized governments with a system largely based on the 'industrial and mercantile city-state' (Sherratt 1998: 307). This politico-economic upheaval brought the end of the Late Bronze Age.

The Importance and Use of Metal

Metalwork in the Late Bronze Age Near East held a special place in society. Metal objects performed many functions in addition to their utilitarian purposes. A luxury item, metalwork was used for cultic or burial offerings, gifts among the elite, and as a status symbol for both (Ilan 1995: 313).

The elite regulated the value of metal as a commodity as well as its gift and status value (Philip 1988: 190). Metal (especially weapons) were considered valuable gifts. They bestowed prestige upon both those giving and those receiving, and carried with them an implied debt of reciprocity (Philip 1989: 160-1). Those without sufficient wealth to fulfill the burden of receiving a gift were obligated to repay the debt using other avenues such as pledges of allegiance, crop yields, and military conscription (Ilan 1992: 262).

Gifts and letters using familial nomenclature among the elite were frequently exchanged between peaceful states. It was common practice among kings and Pharaohs of the Late Bronze Age to refer to each other in correspondence as 'brother' or 'father'. 'Brother' was used between royals of equal standing, while 'father' was reserved for vassal kings addressing an overlord (Zaccagnini 1987: 62). In this way, the social hierarchy was further outlined and maintained.

It has been suggested that during the MBA a particular style of weaponry would become too common and, subsequently, less valuable. In order to reassert the boundaries between the social classes and reaffirm the metal's value, the 'elite-controlled production centers' would create newer, slightly altered weapon styles (Ilan 1995: 312). Personal weaponry, then, changed stylistically largely because of changes in its perceived value rather than for any significant utilitarian reasons (Philip 1989: 155). Hoarding was another method used during the MBA to control metal's value. By hoarding, one could more easily regulate the supply and value of metal because one was controlling the amount of metal in circulation (Ilan 1992: 262). Perhaps it is because of the centralized governments of the LBA, and their control of metalwork, that hoarding does not take place like it did in the Middle Bronze and Iron Ages.

An important technological innovation in the production of weaponry was the introduction of tin into the metalwork during the Early and Middle Bronze Ages (Ilan 1995: 309-310). Tin-bronze weapons were harder, stronger, and longer-lasting than their predecessors. This alloy was also more malleable and allowed the implementation of more complicated casting methods (Ilan 1995: 312). Tin was obviously a very valuable trade item. Its exchange could conceivably have been affected by peace or war and could consequently affect a state's ability or desire to trade valuable commodities such as tin and other metals with its potential foes. Trade routes could have been severed or access granted or denied depending on the ever-changing alliances.

The use of tin-bronze, the elite regulation of metal and its significance all coalesced in the chariot. The light, horse-drawn chariot is one of the most important innovations of the MB/LB transition. It would help shape the warfare and the material culture of the Southern Levant throughout the Late Bronze Age. The chariot first appears in this region in the 16th century B.C. and was therefore well-established for use in warfare throughout the Late Bronze Age (Moorey 1986: 205; Hulit 2002: 16-17). The horse, cart and driver were a valuable trio on the battlefield, both monetarily and militarily; a trio that without even one of its components would become completely useless (Hulit 2002: 18; Drews 1993: 181-182).

The expense of providing a significant quantity of chariotry was such that only large governmental institutions could afford to sustain and control their use (Moorey 1986: 211-2; Hulit 2002: 18). The state would provide much of the equipment for the poor soldiers especially, while the wealthy, elite soldiers may have had the means and the desire to provide their own weaponry. Using their own weapon(s) with which they

would be familiar would provide these elite soldiers with greater confidence on the battlefield than they would otherwise experience with state issued weaponry (Hulit 2002: 191-192).

The exact use of chariots in warfare is still debatable. In the MBA, warfare may have been the least common use for chariots. They were more likely to be used as 'prestige vehicles for men of status' for use during parades than for purposes of conquest (Moorey 1986: 205). However, their popularity in battle grew in the LBA. Many agree that chariots were used as a mobile firing platform for archers (Hulit 2002: 17). They very likely had a similar psychological impact on enemy armies as the tank did in the 20th century, though they were too fragile to be used in the same manner, for they would never survive a head-on charge and they were too expensive to sacrifice and waste as battle fodder (Hulit 2002: 18).

The design of the chariots of the Late Bronze Age was such that it would be wide enough for its driver and archer to stand abreast in the vehicle which came up to their hips and was open in the back (Hulit 2002: 19). They would be armed with a composite bow, armour, and spears, javelins, clubs and/or swords in case they were forced into hand-to-hand combat (Hulit 2002: 23).

During the Middle Bronze Age, a phenomenon of common weapon sets found in graves was in use. The 'Warrior Burial' was typically defined in Palestine as a male burial found with an axe, a dagger and small spearheads. This weapon set seemed to be the means of communicating the 'heroic' image ascribed to a foot soldier who had gained great prestige through his role in hand-to-hand combat in the military using these weapons (Philip 1995: 143, 153).

However, the coming of the chariot would change this 'heroic' idiom. It is evident from the reliefs of the time that the chariot and accompanying archery equipment epitomized a new elite 'heroic' image during the Late Bronze Age (Dawson 2001: 126-127, 143; Hulit 2002). In fact, the distinctive MBA weapon sets disappear in the Late Bronze Age and are replaced by a plethora of different types of edged weapons often accompanied by projectiles (Philip 1995: 153-154). If prestige in warfare was transferred from soldiers in hand-to-hand combat on foot to the mobile firing platform of the charioteers and their composite bow, it follows that the axe and dagger assemblages of the MBA would be replaced by weapons representing the new elite warrior. The 'heroic' image had evolved.

The cost and organization required to enlist and maintain a chariot corps required a centralized government such as Egypt (Hulit 2002: 18). To say the army of Egypt was an important part of Egyptian society would be a severe understatement. Every Egyptian family had at least one member in the army (Kuhrt 1995: 219). Massive military metal workshops such as the one revealed at Qantir, the 19th dynasty capital of Piramses, was probably just one such place that produced the weaponry for such a vast army (Pusch 1990 and 1994). Veterans and military officers received grants of land for their services (Kuhrt 1995: 218), and in the 18th dynasty, it was the soldiers, especially the members of the chariot corps, which received 'the most influential court appointments' (Kuhrt 1995: 217).

The charioteers originally consisted of members of the elite, upper classes or the royal family. Great status was ascribed to those individuals whose service in this highly trained force was used for a multitude of situations; not only battle but in guarding shipments and the royalty itself (Hulit 2002: 182). Charioteers were clearly the most highly regarded position for soldiers of the LBA.

Internal problems within much of Levantine society aided the Egyptians' conquests at the transition between the Middle and Late Bronze Ages. With resources being channeled into the importation of metal and the 'expanding, non-productive elite' and their work projects (such as building ramparts, temples and palaces), the populace as a whole suffered. Also, at some point, agricultural production reached its peak and could not support the growing population (Ilan 1995: 314).

With the Egyptian campaigns in the Levant came economic, social and political change (Bunimovitz 1995: 323; Hasel 1998: 117). It was in the interest of the Egyptians to take control of and stabilize a region which was their 'crossroads' to the east (Hasel 1998: 254). Whatever the Egyptians did to alter the political structure in the region, the international culture, including burial and cult practices, remained much the same (Bunimovitz 1995: 315). However, it is probable that Egyptian metalwork styles would be integrated or adopted into the states they occupied for articles used on a daily basis (Higginbotham 2000). Local artisans may have been conscripted into service to produce metal objects for the administration and army especially in those places where a garrison may have been left behind to ensure obedience to the Egyptian throne.

Weaponry in the LBA was not solely for use in battle. Within Hatti, evidence has been found for the use of bronze weapons in cult rituals. One description of a Hittite cult practice has been interpreted in two ways. The first interprets it as a purification

ceremony. The Hittite people needed to be cleansed from the occurrence of some sort of violent death. By staging a mock battle, involving bronze weapons, they were able to do this. Two groups of men, the 'men of Hatti' and the 'men of Masa', were given bronze and reed weapons, respectively. The battle predictably ended with the 'men of Hatti' as victor. The other interpretation: a legendary battle being re-enacted as part of a certain autumn festival (Kuhrt 1995: 274).

Does the presence of weaponry in temple contexts in the Southern Levant (Table 24) indicate that similar rituals to those in Hatti were taking place farther south? If so, would weaponry found in temples represent evidence of Hittite influence in the Southern Levant and/or vice versa? Or would it simply indicate the continuation of cultic practices from the MBA Southern Levant? (see Chapter 5) In the MBA Southern Levant, there is evidence for an association held between goddess and weapons and also a 'wider inference' that 'man's relationship with deity should be examined in terms of gifting and reciprocity' (Ilan 1992: 262). The evidence in this study seems to point to a continued, though somewhat limited, importance of weaponry in cultic practices of the LBA.

The revolving door of 'friendship' within the Near East must have affected the metalwork and the gifting that took place between states. As gifts and city-states were exchanged among the ruling powers and as trade routes were utilized, the styles of metalwork reflected the governing powers of the Late Bronze Age. The people of the Southern Levant most likely emulated those items consumed by those in power in the hopes of rising in status themselves. The controlling powers of Mitanni, Hatti and Egypt influenced metal processing, its design, and its distribution thus controlling its value and the social stations it represented. The elite status of certain warriors would continue to be expressed by their weaponry and other costly accoutrements given in burial. These weapons' styles, different from those in use in the MBA, would leave clues as to the change in the elite warrior idiom. The weaponry used in the LBA and its possible meanings and uses are what occupy the remainder of this study.

Chapter 2

General Discussion of the Weaponry and Knives

The styles of weaponry utilized in the LBA are varied in style and purpose. The basic divisions are: sword, scimitar, dagger, blade, small blade, socketed spearhead, knife, axe, adze, and projectile. They will each be discussed in turn.

Swords and the Scimitar

Only three Late Bronze Age objects classified as swords or scimitars have been found in the sites included in this study: one sword from the Amman Airport Temple (Figure 33) dating broadly to the LBA, one sword from an LBA grave at Tell es-Sa'idiyeh (Figure 34), and one scimitar from an LBA temple at Beth Shean (Figure 35) (Map 30, Table 21).

I have chosen to define a sword as a single or double-edged weapon with a long blade attached to a handle that would generally contain a hand guard of some sort, and is usually used in hand-to-hand combat for slashing and thrusting. A scimitar is recognized as a type of sword but one which has a sickle-shaped blade.

Despite the propensity for swords portrayed in reliefs, especially of the Sea Peoples and the Egyptians, the swords themselves are very rarely found in the archaeological record. The reliefs show the Sea Peoples on their ships using large swords with triangular-shaped blades in combat and Egyptian arsenals complete with 'khepesh' swords similar to the one found at the Amman Airport Temple (Hulit 2002: figs. 8, 16, 86, 91). Nevertheless, these seemingly often-used weapons are not often buried with those who used them.

This could mean that swords as a military status symbol, as an object made of metal, or as an object that belonged to the group (or larger centralized government) and not the individual may have been too valuable, or not one's own, to bury. The fact that those found for this study were either discovered in a grave or in a temple context leads one to believe they had some significance or value beyond the usual use for a sword or scimitar. Perhaps their function evolved from a utilitarian to a more religious one as either temple offerings, grave goods, or objects used in cult practices.

Daggers, Blades, Small Blades, Spearheads, and Knives

Use is the ultimate dividing factor of weaponry. It is also the aspect of an object that is the most elusive to ascertain and therefore makes classification all the more difficult. While not strictly weapons in the battle-sense of the word, knives and small blades have been included in this study of edged weapons because of the difficulty in distinguishing them from 'proper' weapons. They have also been included to make a comparison between the contextual distribution of knives and small blades and those of daggers, blades, and spearheads.

Daggers, blades, small blades, spearheads, and knives are all categories excavators tend to lump artefacts into based on their own biases as to what each of these objects should look like. There are as many opinions as there are archaeologists as to what makes a blade a dagger and what makes it a knife or even a spearhead.

Spearheads I have tried to avoid all classification that has not been generally agreed upon such as the generally accepted notion that a double-edged object, usually with a pronounced midrib and a socket is a socketed spearhead. Thus, the only spearheads classified as such are those with any sort of socket used in the affixation of a handle. A great many of the spearheads included in this study come from the MB/LB transition and indeed may actually be MBA weaponry. The phasing out of the socketed spearhead in the LBA leads one to wonder if it was not replaced with some other type of weapon.

Daggers In this study, anything called a dagger will be double-edged and have some sort of 'hand-guard', albeit usually a very small one, in the form of a flanged handle or a pronounced stop-ridge. I have allowed myself the indulgence of calling the pronounced stop-ridge, long slim tanged blades daggers as well. This assumption was made upon the observation that the only real difference between the flanged handled and the stop-ridge, long slim tang blades were the hafting methods. These blades had similar shapes and lengths and the propensity for decoration, they just happened to differ in the way the handle was attached; one, cast as a piece with the blade and typically inlaid with bone or ivory, the other's tang being inserted into a separate substance used as the handle.

Blades and Small Blades The term 'blade' refers to any object which is not easily identifiable under any other classification and generally consists of a blade and tang. Some will have rivets for affixing a handle, or rivets in their shoulders with no protuberance at the tang juncture. Some will have slim tangs and some slim, hooked tangs. Any other classification but the broad term 'blade' would carry no weight as its

only evidence is my opinion. Anything else unless it is 'obviously' a dagger or knife has been classified as a blade or a small blade depending on the object's total length; a small blade's total length usually measuring between 5 and 12 cm.

The hooked tang blades are of special interest because it has been more difficult to reach an agreed classification for them. Are they daggers or are they spearheads? Weinstein-Balthazar, through her study of Early to Middle Bronze Age Cypriot hook-tang weapons argues that the Late Cypriot period socketed spearheads must have had a predecessor and the hook-tang weapons seem the most likely candidate (1990: 309). She also notes the absence of hafting remains, such as is present on Cypriot knives of the same period, and the presence of thongs or laces around the tang, possibly for the use of securing the blade once it was inserted into a spear shaft (Weinstein-Balthazar 1990: 309-310). Philip (1991) is another advocate for the hook-tanged weapon as spearhead and not dagger. His arguments range from the typological to the hook-tanged weapons' metallurgical composition (Philip 1991: 67-69).

Conversely, Biran and Ben-Dov, when discussing a hook-tang weapon found at Tell Dan suggest 'tang like this were usually inserted into wooden or bone handles' (2002: 120). However, this particular weapon (Catalogue No. 166) also has a very pronounced decorative stop-ridge and would most likely be considered a variation of a dagger anyway, while the objects Weinstein-Balthazar and Philip considered did not possess a pronounced stop-ridge.

Would the possibility of hook-tanged weapons being used as spearheads in Cyprus necessarily indicate that they were used in the same manner in the Southern Levant? Could they have had a different use for those living on the mainland? Most of the hook-tang weapons are found in Transjordan instead of Palestine. They are found only in graves and public buildings and are more popular in the former. With socketed spearhead use declining in the LBA, could the hooked-tang weapon be the socketed spearhead of the LBA?

Knives Objects classified as knives will be those which are usually single-edged, and whose assumed use is to cut and chop. As daggers are used to slash and stab, objects for the primary use of 'cut and chop' are labelled knives. While some of the knives in question have two edges, they also have a blunt tip, and cannot therefore be assumed to be a stabbing weapon and are therefore still considered to be knives.

Axes and Adzes

Within the Late Bronze Age, the socketed or shaft-hole axe so prevalent in Middle Bronze Age contexts all but completely disappears. The LBA sees no such pattern as the Middle Bronze 'warrior burials' (Philip 1989: 147) containing axe and dagger sets. In fact, the only axes that seem to have been in regular use during the LBA were flat axes or adzes which are generally accepted to be tools and not weapons.

Two types of flat axes were found within the sites researched for this study. Five, known as lugged axes, were Rachel Maxwell-Hyslop's Type II (Maxwell-Hyslop 1953: fig. 5). These axes generally have 'lugs' which are located somewhere just short of halfway up the blade, one directly across from the other (Figure 37). Three were found at Beth Shan in Levels VII and VIII, and two were found at Hazor in Area F, Stratum I. The second type of axe, known as flat axes, has no such lugs at the centre of each side (Figure 38). They typically have a butt and edges that flare outward slightly as they approach the cutting edge. One is from the Amman Airport Temple, the other from Megiddo Stratum VIIA, Locus W=1793.

Six adzes were discovered to include in this study; three of the plain variety and three of the pierced variety. Plain adzes such as those found at Beth Shean (James and McGovern 1993: fig. 155.3), Megiddo (Loud 1948: pl. 182.10), and Hazor (Yadin, et al. 1960: fig. CXXXVI.22), can sometimes be called flat axes, in that they are very similar both having butts that usually flare out toward a rounded cutting edge (Figure 40). The pierced variety, such as those found at Beth Shean (James and McGovern 1993: fig. 155.4) and Megiddo (Loud 1948: pl. 182.11, 13), looks identical except for a hole punched in the centre of the adze at the butt end (Figure 39) (Maps 28 & 29).

Only one socketed axe was found in an LBA context from Palestine and Transjordan. At Beth Shan in Level VIII, beneath the floor of Locus 1068, the altar room of the temple was found an axe of Maxwell-Hyslop Type 19 (Maxwell-Hyslop 1949: pl. XXXV). The fact that this is the only axe in an LBA context that is not flat, coupled with the fact that it was found in a temple, leads me to agree with Rowe's suggestion that the axe 'was no longer used as a weapon but was, instead, a prized possession put beneath Locus 1068 as part of a foundation or votive deposit' (1940: 209). It is also possible the axe was a 'battle trophy brought to Beth Shean by one of the Egyptian soldiers stationed there' (Rowe 1940: 208). Regardless of how or why the axe ended up in Beth Shean, it was definitely not a local style as the only parallels for this type are found in Ras Shamra, Alalakh and Boğazköy. Interestingly enough, the

parallels all date from the LBA (Curtis 1983: 73-4). Could this axe indicate rituals being held in Beth Shean similar to those held in Hatti? (See Chapters 1 & 5)

For whatever reason, socketed axes were not used in LBA Palestine and Transjordan and yet they were utilized in the LBA of Syria and Turkey. And while the Egyptians never used socketed axes, there is evidence that flat axes were used in battle. The body of Tuthmosis IV's chariot depicts the Pharaoh wielding a flat axe from the chariot in battle against the Sea Peoples (Hulit 2002: fig. 12). Did the socketed axe lose its status as a warrior's weapon in Palestine and Transjordan? Was it replaced by another object as a symbol of prestige? Did battle styles change rendering the axe obsolete? The answers to all of these questions may lie in the chariot. (See Chapters 1 & 5)

Projectiles

Projectiles, as defined for the purposes of this study, are small usually double-edged metal objects that can be hurled or fired, and were most likely used in combat or hunting. These objects include javelins, arrowheads, and blunt arrowheads, or fowling bolts, only.

The only true judge of the difference between arrowhead and javelin is weight. Because of the unreliability (due to corrosion, cleaning, breakage, etc.) and rarity of this calculation given in publications, these artefact categories have been lumped together in an attempt to make them more useful as a comparative study with the aforementioned daggers, blades, spearheads, etc. and are therefore only of secondary importance.

Chapter 3

Summary of the Sites Producing Relevant Evidence

The following are the sites which produced relevant edged weapons and knives for this study. A short description of each site and its location is given, followed by a summary of the edged weapons, knives, and projectiles found therein.* Approximately half of the sites studied are tomb groups either associated with a tell that contained no edged weapons, knives, or projectiles, or they were simply isolated tombs with no related settlement (Map 3).

Akko Tombs Near the Persian Garden

A rescue excavation was conducted by the Department of Antiquities of Israel to recover the artefacts and information from five undisturbed, fourteenth century, Late Bronze Age tombs a quarter of a km north of Tell Akko (Ben-Arieh and Edelstein 1977: 1, 19). Of the five tombs excavated, only two contained weaponry; however, a number of weapons and projectiles were also found among the surface and section finds. The tombs were all pits dug in the sand with outlines difficult to determine due to the homogeneity of 'the sand filling the grave and the surrounding soil' (Ben-Arieh and Edelstein 1977: 1). Because of the similarity of objects found within the graves, and the fact that few individuals were buried in each grave, the tombs were probably only used during a short period of time and not reused (Ben-Arieh and Edelstein 1977: 15). The metal weapons discovered as surface finds have not been included here because of their contextual uncertainty.

Tomb B3 This tomb contained three 'superimposed' skeletons (Ben-Arieh and Edelstein 1977: 1). The first a male with his head toward the north, the second a

* At times, determining if certain objects were indeed from the LBA proved difficult. To this end, these publications were helpful:

-Amiran (1970) gives a comprehensive overview of the pottery in the Near East in circulation from the Neolithic through the Iron Age. The explanations and illustrations of the pottery of the Late Bronze Age encouraged a knowledge of the pottery which enabled some of the more difficult contexts of certain sites to be dated generally and specific imports to be identified.

-Steel (2002) explores the corpus of Mycenaean pottery found at Tell el-'Ajjul, the trade networks involved, and the influence of Egyptian society on 'Ajjul. Through her discussion of the contexts in which this pottery was found, a further understanding of the chronology of 'Ajjul was gained by relating which contexts contained Mycenaean pottery and were therefore from the LBA period.

-Khalil (1980) discusses the metal artefacts found at Jericho, the Amman Airport Temple, and Sahab; their chemical composition and manufacture. This thesis was instrumental in collecting the data for the material from Sahab and especially the Amman Airport Temple whose artefacts have essentially been scattered and/or lost since its excavation.

female whose head pointed south, and the third a male with his head to the north (Ben-Arieh and Edelstein 1977: 2). Two daggers (ibid.: pl. VII.1, 3), a blade (ibid.: pl. VII.2), and five projectiles (ibid.: pl. VII.4-7) were found in this tomb. The daggers were each found next to the male bodies at their respective right sides. The blade was found in front of the face of the female body or to the left of the shin of the male bodies. Two of the projectiles were found amidst the pottery near the female body's face (Ben-Arieh and Edelstein 1977: 3).

Tomb A2 This tomb contained fragments of a single skeleton with its head to the north and 'scattered bones of domestic cattle' (Ben-Arieh and Edelstein 1977: 5). A single dagger (ibid.: pl. XI.6) was found where the body's right side may have once been (Ben-Arieh and Edelstein 1977: 6).

Section Finds These finds include those found in the section pushed aside by the bulldozer in the area of the tombs (Ben-Arieh and Edelstein 1977: 13). One dagger (ibid.: pl. XVIII.9), one blade (ibid.: pl. XVIII.13), one spearhead (ibid.: pl. XVIII.12, fig. 20.2) and 49 projectiles (only some pictured, ibid.: pls. XVIII.12; XIX.1-18, 20, 25, 27-35, 37) were found in the section. In addition to the nine projectiles found scattered in the section, three distinct groups of projectiles were found. One group contained 10 projectiles, another 30 projectiles and the final contained eight projectiles (Ben-Arieh and Edelstein 1977: 14-15). It has been suggested that projectiles found in isolated significant quantities may actually be the only surviving remains of a quiver (Philip 1989: 146). It is likely that this is true of the group of thirty projectiles found among the section finds.

Amman Airport Temple

In 1955, pieces of an 'Egyptian *khepesh* sword' were found in the middle of the aerodrome during bull-dozing operations made in connection with the construction of the civil airport in Amman, Jordan (Harding 1958: 10; Hennessy 1966: 155). By the time the 1966 excavations came to an end, what was initially thought to be an isolated find proved to reveal a temple with 'three successive architectural stages' (Harding 1956: 80; Hennessy 1966: 157). The building is an isolated structure that does not seem to be affiliated with any other structures or ancient settlement (Hennessy 1966: 159). The finds at the temple seem to be related to a series of 'dedications associated with the initial construction of the temple' (Hennessy 1966: 157).

The masses of imported pottery, including Mycenaean and Cypriot wares, seem to suggest that the temple had a relatively short use-span from ca. 1300-1200 B.C.

(Hennessy 1985: 92). Also of note, was the amount of fragmentary, burned bone found at the site and the discovery that it was 'almost exclusively' human (Hennessy 1985: 95, 97). Indeed this temple seems to have been a traditional place associated with ritual killings/human sacrifice, a 'fact of life' known to many who lived in the Bronze Age and later (Hennessy 1985: 103).

A comprehensive publication of the Amman Airport Temple was planned but made impossible by the war of 1967. The artefacts were subsequently divided between Amman and Jerusalem and the final report left incomplete when J.B. Hennessy left Jerusalem in 1970 (Hankey 1974: 131). The artefacts I have managed to find published have no more specific context than that most were found in the central rooms of the temple (Harding 1958: 10). Furthermore, several projectiles were also found at the top of the foundation trench (Hennessy 1966: 157). From the original excavation I have been able to include in this study the sword (Khalil 1980: fig. 20.61), two blades (Khalil 1980: fig. 16.36, 38), an axe (Khalil 1980: fig. 21.66), and fifteen projectiles (Khalil 1980: fig. 18.44-50; fig. 19.51-53, 55-59) two of which are inscribed. In 1976 new excavations were undertaken at the temple and revealed one projectile (Herr 1983: 24.O333) in Locus A.4:2, a rock pile to the east of the temple (Herr 1983: 59).

Beth Shean

Beth Shean lies in the north of Palestine, at the eastern end of the Jezreel Valley, on the southern side of the River Jalud (Rowe 1930: 1). The 'site was occupied almost continuously from the Late Neolithic to the Early Arab periods' (Mazar 1993: 214). Only the three Late Bronze Age levels, VII-IX, will be discussed here. Levels VII and VIII are both of Late Bronze IIB, respectively of the 2nd and 1st halves of the 13th century B.C. (James and McGovern 1993: 5). Level IX has an 'uncertain stratigraphic basis' and can only be 'broadly dated to the LBA' until further studies can be conducted (James and McGovern 1993: xxvii).

The so-called 'Four Canaanite Temples' (Rowe 1940) are all superimposed and were reused through the centuries (James and McGovern 1993: 5). They lie on the southern side of the tell within the 'great outer brick walls' (Rowe 1940: 1). The relevant artefacts have been grouped by level, temple vs. administrative/domestic context, and locus number.

Level IX Temple Contexts

The only artefacts found in the Level IX temple were a scimitar (Rowe 1929: pl. XV.2) and a possible knife (Rowe 1930: pl. 35.3). No more specific contextual information was given.

Level VIII Temple Contexts

In Locus 1068, below the floor of the temple's altar room, two blade fragments (Rowe 1940: pl. XXXII.11; James and McGovern 1993: fig. 152.5, 6), one axe (Rowe 1940: pl. XXXII.2; James and McGovern 1993: pl. 51.e, fig. 155.6), one adze (Rowe 1940: pl. XXXII.1; James and McGovern 1993: fig. 155.3), and three projectiles (James and McGovern 1993: fig. 157.7, 8, 15) were unearthed. Also in Locus 1068, but below the east wall (instead of the floor) of the temple's altar room, one spearhead (James and McGovern 1993: fig. 158.4) and two projectiles (James and McGovern 1993: fig. 157.12) were found.

In the southern side of Locus 1091, located in the temple of Level VIII, two blade fragments (Rowe 1940: pl. XXXII.4; James and McGovern 1993: fig. 159.4), one knife fragment (Rowe 1940: pl. XXXII.5; James and McGovern 1993: fig. 152.4), and one projectile (Rowe 1940: pl. XXXII.13) were discovered. In Locus 1108, the area beneath the temple entrance hall and the south-eastern room, three projectiles (Rowe 1940: pl. XXXII.6-8; James and McGovern 1993: fig. 157.1) were found.

Level VIII Administrative and Domestic Contexts

Outside a domestic building, in Locus 1230, the open area south of Loci 1290 and 1302, one projectile (James and McGovern 1993: fig. 157.14) was discovered. In the north of the south-eastern sector, Locus 1286, consisting of two perpendicular wall stubs in a domestic building, contained one axe (James and McGovern 1993: fig. 155.5). Locus 1288, the centre hall of the proposed Egyptian-style building, contained two projectiles (James and McGovern 1993: fig. 157.13, 16).

Locus 1301, the north-eastern-most room of the proposed Egyptian-style centre hall building, contained one spearhead (James and McGovern 1993: pl. 51.f, fig. 158.3). Locus 1303, probably the south-eastern corner of a room in a domestic building west of Locus 1304, contained two projectiles (James and McGovern 1993: fig. 157.9, 10). Locus 1311, the main north-south street of the south-eastern sector which runs between domestic buildings, directly below the Level VI and VII streets, contained one adze (James and McGovern 1993: fig. 155.4). Locus 1317, a probable street which lies directly below Street Locus 1263 in Level VII, contained one fowling bolt (James and

McGovern 1993: fig. 157.17). Within Locus 1399, one of three rooms that underlay the north-western corner of the commandant's house, one blade (James and McGovern 1993: fig. 159.3) was uncovered.

Level VII Temple Contexts

Locus 1068, the temple's upper altar room, contained one dagger (Rowe 1940: pl. XXXII.3; James and McGovern 1993: pl. 51.h, fig. 159.5), one blade (Rowe 1940: XXXI.9; James and McGovern 1993: pl. 51.g, fig. 159.2) one fowling bolt (James and McGovern 1993: fig. 157.3), and one projectile (Rowe 1940: XXXII.14). Locus 1072, the temple court, contained just one projectile (Rowe 1940: XXXI.3; James and McGovern 1993: fig. 157.1).

Locus 1089, the room south of the temple anteroom and room 1085, produced three projectiles (Rowe 1940: pl. XXXI.6-8, James and McGovern fig. 156.2) and one fowling bolt (James and McGovern 1993: fig. 157.4). One of the projectiles, (James and McGovern 1993: fig. 156.2, Rowe 1940: pl. XXXI.8), is more specifically from the floor of locus 1089.

In Locus 1105, a room outside the temple to the north; a northern outer courtyard, one spearhead (Rowe 1940: pl. XXXII.10; James and McGovern 1993: fig. 158.2) was discovered. Within Locus 1213A, directly underneath the northern portion of locus 1213, north of the outer courtyard, a temple storeroom, three projectiles (James and McGovern 1993: 48, figs. 158.1; 156.6, 7) were found.

Locus 1260, the courtyard(?) east of temple, one projectile (James and McGovern 1993: fig. 156.8) was discovered. In Locus 1262, the passageway outside the north-eastern corner of the temple, one axe (James and McGovern 1993: pl. 51.c, fig. 155.2) and one projectile (James and McGovern 1993: fig. 157.2) were found.

Level VII Administrative and Domestic Contexts

In Locus 1090, an area south of Locus 1087; the southern periphery, one fowling bolt (James and McGovern 1993: fig. 157.6) was unearthed. Within Locus 1243, the south-eastern-most room of the proposed 'Egyptian-style centre hall building' whose floor is probably a level VIII surface, one blade (James and McGovern 1993: fig. 159.1) was discovered.

In a street between domestic structures, Locus 1244, borders the southern end of the south-eastern sector to the southwest. Two projectiles (James and McGovern 1993: fig. 156.3, 9) were found in this street. Another projectile (James and McGovern 1993:

156.10) was also found in Locus 1250, in the central north-south street of the south-eastern sector.

In Locus 1255, at the foundation of the cul-de-sac of a courtyard at the northern terminus of Street Locus 1088, one projectile (James and McGovern 1993: fig. 156.1) was found. In Locus 1257, a trapezoidal room in a domestic building east of Locus 1261, one projectile (James and McGovern 1993: fig. 156.12) was discovered. Within Locus 1275, a domestic building east of temple, across the Street 1250, one axe (James and McGovern 1993: fig. 155.1) was found.

One projectile (James and McGovern 1993: fig. 156.11) was discovered in a room in the Commandant's house, at Locus 1373, which lies west of temple. Another projectile (James and McGovern 1993: fig. 156.4) was also found west of the temple in Locus 1380 of the Migdol tower. In the courtyard Locus 1381, between the Commandant's house and the Migdol tower, one knife (James and McGovern 1993: fig. 152.1) and one fowling bolt (James and McGovern 1993: fig. 157.5) were found.

The Northern Cemetery

The Northern Cemetery of Beth Shean is located north of the River Jalud (Oren 1973: 1). The early cemetery of Beth Shean was in use during Early Bronze IV, Middle Bronze I, Late Bronze I and II, and Iron Age I (Oren 1973: 5). Tombs 27 and 42 were the only Late Bronze tombs containing weaponry. Both tombs are located in the centre of the cemetery in squares C2 (T. 27) and C3 (T.42) (Oren 1973: fig. 1).

Tomb 27 Originally an EB IV tomb, all five chambers of this multi-chambered shaft tomb were fully reused during the Late Bronze Age leaving nothing from the earliest burials but a few sherds (Oren 1973: 6). One projectile was found in this tomb (Oren 1973: fig. 38.16).

Tomb 42 This tomb may have been a single-chambered shaft tomb when it was originally cut in the EB IV period, but it has since been greatly altered and is now asymmetrical in shape with a collapsed roof. While the amount of grave goods found suggests multiple interments, it was only in use for a short period of time in Late Bronze I (Oren 1973: 7-8, 98). One small blade was discovered in this tomb (Oren 1973: fig. 34.10).

Context	Level or T. #	Scim.	Dagger	Blade	Sm. B	K	S-H	Projs.	FB	Axe	Adze
Temple	IX	1				1?					
	VIII			4 frags		1 frag	1	9		1	1
	VII		1	1			1	10	2	1	
Administrative	VIII			1 frag			1	2			
	VII			1 frag				2	1		
Courtyard	VII					1		1			
Domestic	VIII							3	1	1	1
	VII							4		1	
Southern Periphery	VII								1		
Northern Cemetery	T. 27							1			
	T. 42				1						

Table 1: Summary of weaponry at Beth Shean arrayed by context type.

Beth Shemesh

This site sits on a ridge west of Jerusalem located south of the Sorek Valley and east and north of the Wadi 'Illun (Bunimovitz and Lederman 1993: 249). The tell dates from the Middle Bronze through the Iron Age, and from the Hellenistic through Medieval periods (Bunimovitz and Lederman 1993: 250-251). The cemeteries to the southwest of the tell were in use during the Middle and Late Bronze periods (Grant 1929: 221).

All of the cemetery finds in this study came from the Second Cemetery in the 'Southwestern Excavations' (Grant 1929: 221). From the cemetery in general came one blade (Grant 1929: p. 153 #83); in Tomb D was discovered one blade (Grant 1929: p. 153 #308); and Tomb B contained one projectile (Grant 1929: p. 153 #426) as did the tunnel of the same tomb (Grant 1929: p. 153 #425).

The Northwest Necropolis, 'a natural grotto opening out north at the foot of the limestone bluffs...on which Beth Shemesh is built' yielded Tomb 1 which contained six projectiles, three made of bronze and three of iron (Mackenzie 1912-1913: 52, 59, pl. XXVII.B.1-6). The tomb dates to the Second Beth Shemesh Period (1300-1100 B.C.) or LBIIB-IA IB (Mackenzie 1912-1913: 36).

Deir el-Balah

Dier el-Balah is located approximately 14 km south-west of Gaza. The cemetery to the south 'spans the thirteenth century B.C., with a possible beginning in the fourteenth century and extension into the twelfth' (Dothan 1979: 1, 3). Within this cemetery, Tombs 114 and 118 were the only two to bear weaponry. Both are anthropoid coffins, oriented to the west, found buried deep in the sand dunes (Dothan 1979: 1, 5).

The tombs contained many objects common in Egyptian material culture. Anthropoid coffins are themselves of Egyptian origin and therefore, those buried at Deir el-Balah are thought to be the graves of 'Egyptian officials or garrisons stationed in Egyptian strongholds in Canaan' or, at the very least, the dead were thought to be 'members of a flourishing and prosperous community imbued with Egyptian culture' (Dothan 1979: 103-104). While these tombs were not the final resting places of the very rich, those buried were not very poor either due to 'the occasional mummified body and the rich burial gifts' (Dothan 1979: 103).

Tomb 114 This tomb contained two individuals and the fragments of two other individuals. The uppermost skeleton, an adult male lying on his back, lay atop the skeleton of a young person of undetermined sex also lying on his back. 'A temporal bone and two teeth of a third adult and the teeth of a 3-4 yr old child were also present' (Dothan 1979: 92). Within tomb 114, three knives were found (Dothan 1979: figs. 32-35); two near the left shin and one next to the left knee or thigh (Dothan 1979: 9).

Tomb 118 This tomb was found undisturbed with two adults lying face to face; a male on his left side and a female on her right side (Dothan 1979: 94). One knife was found behind the female's knee (Dothan 1979: 59, fig. 157).

Gezer

Gezer is located on 'the last of the foothills in the Judean Range, where it slopes down to meet the northern Shephelah' (Dever 1993: 496). The site was inhabited to at least some extent from the Chalcolithic through the Byzantine and later periods with slight gaps in occupation scattered throughout (Dever 1993: 498-506). The only section of the excavated mound relevant here is a single cave in Field I. Cave 10A was in use during the LBI and LBIIA transition (Seger 1988: 47). It was the resting place of a minimum of 88 individuals; men, women and children (Seger 1988: 56). The cave contains a number of imported objects representing several foreign lands such as Egypt, Cyprus, North Canaan, and Minoan Crete (Seger 1988: 50). It also contained weaponry within just two contexts, Loci 10079.P and 10070.P.

Locus 10079.P This phase of burials was in use from 1380-1300 B.C. (LBIIA) and contained one knife (Seger 1988: pl. 76A, fig. 14.8).

Locus 10070.P This phase of burials, which were all placed on a bench surface, was in use from 1450-1380 B.C. (LBIB-LBIIA) and contained a dagger (Seger 1988: pl. 76A, fig. 19.10) and a blade (Seger 1988: pl. 76A, fig. 22.11).

Hazor

Hazor is located in the Upper Galilee, 14 km north of the Sea of Galilee and 8 km south-west of Lake Hula (Yadin 1993a: 594). The site consists of an Upper City and a Lower City. The Upper City spans from the 29th century B.C. to the Hellenistic period, while the Lower City was only inhabited from the 18th through the 13th century B.C. (Ben-Tor 1993: 606). All the Areas with LBA weaponry lie in the Lower City in Areas C, D, E, F, and H (Yadin 1993a: 595-599).

Area C One small blade, one blade fragment, and three projectiles were found in Area C. The small blade (Yadin, et al. 1958: pl. CLX.17, fig. LXXXVIII.24) was found in Stratum 1A, Locus 6072, a domestic building floor that overlays Silo 6077. The blade fragment (Yadin, et al. 1960: pl. CLXXIX.11, fig. CXXVI.29) was discovered in an undefined area at Locus 6186 in Stratum 2. One projectile (Yadin, et al. 1958: pl. CLXI.16, fig. XCII.19) was found in Locus 6062 in Stratum 1A; another (Yadin, et al. 1958: pl. CLX.13, fig. LXXXVI.23) was found in Locus 6100 of Stratum 1B, an open square in a public building. The final projectile (Yadin, et al. 1960: pl. CLXXIX.10, fig. CXXVII.25) found in Area C, was unearthed in Locus 6184, an undefined area outside a domestic building in Stratum 1B.

Area D One blade fragment and three projectiles were found in two different Sub-Areas of Area D. In Sub-Area D2, Square R15, the blade fragment (Yadin, et al. 1958: pl. CLXX.10, fig. XCVIII.33) was found in domestic building floor. In Sub-Area D3, Locus 9017, three projectiles (Yadin, et al. 1958: pl. CLX.14-16, fig. CX.14-16) were discovered in a rock-cut cistern outside of a domestic building,

Area E Only one blade (Yadin, et al. 1958: pl. CLXVI.17, fig. CXLII.21) was found in Locus 7021, a cistern just outside a domestic building in Area E.

Area F Two blades, two axes, an adze, and two projectiles were found in Area F. One blade (Yadin, et al. 1961: pl. CCCXLII.4, fig. CCXLII.11) was found in Stratum 2, Locus 8164, in a room in a domestic building. The other blade (Yadin, et al. 1961: pl. CCCXLII.7, fig. CCXLIV.24) was found in Stratum 2 of Square Q6 in a tunnel or depression hewn in the rock. The two axes were both found in Stratum 1. In Locus 8032, the south part of courtyard 8068 within a domestic building, an axe was found (Yadin, et al. 1960: pl. CXCVI.8, fig. CL.12); and in Square P7 the second axe (Yadin, et al. 1960: pl. XCXVI.9, fig. CL.13) was found inside the north wall, 8501. The adze (Yadin, et al. 1960: fig. CXXXVI.22) was found in Tomb 8144 in Stratum 1B as were three projectiles (Yadin, et al. 1960: pl. CLXXXVII.18, fig. CXXXVI.19, 20; CXXXVII.21). Also, in Stratum 1B, another projectile (Yadin, et al. 1961: pl.

CCCXLII.6, fig. CCXLIV.22) was found in Square H3 in the Locus 8005 channel. The final Late Bronze Age projectile to be found in Area F (Yadin, et al. 1960: pl. CXCVI.10, fig. CL.11) was discovered in Stratum 1 at Locus 8139 in a room in a domestic building.

Area H Two blades, one knife, one small blade, and four projectiles were found in Area H. One blade (Yadin, et al. 1961: pl. CCCXLII.8, fig. CCLXXXIII.36) was discovered in the Stratum 1A temple at Locus 2113. Another blade (Yadin, et al. 1961: pl. CCCXLII.16, fig. CCLXX.25) was found in the Stratum 2 temple's threshold or doorway, Locus 2143. Also found in a room or hall of the Stratum 2 temple was a knife (Yadin, et al. 1961: pl. CCCXLIII.26, fig. CCLXX.26) discovered in Locus 2139. A small blade (possibly a projectile) (Yadin, et al. 1961: pl. CCCXLII.11, fig. CCLXXVIII.18) and one projectile (Yadin, et al. 1961: pl. CCCXLII.11, fig. CCLXXVIII.18) were found in a large pit outside the temple in Stratum 1B at Locus 2156. Also in the Stratum 1B temple, a projectile (Yadin, et al. 1961: pl. CCCXLII.12, fig. CCLXXVIII.19) was found in the open court Locus 2119. The last two projectiles found in Area H were both found in soundings outside the Stratum 2 temple; one was found in Locus 2117 (Yadin, et al. 1961: pl. CCCXLII.13, fig. CCLXX.27), the other in Locus 2120 (Yadin, et al. 1961: pl. CCCXLII.14, fig. CCLXX.28).

Area/ Sub-Area	Context	B	Sm. B	Knife	Axe	Adze	Projs.
C	Public Bldg						1
	Shrine						1
	Domestic Bldg		1				
	Undefined	1 Bf					
D2	Domestic Bldg	1 Bf					
D3	Cistern outside Domestic Bldg						3
E	Cistern outside Domestic Bldg	1					
F	Tomb 8144					1	3
	Domestic Bldg	1					1
	Domestic Bldg Courtyard				1		
	North Wall				1		
	Tunnel/Depression	1					
Channel							1
H	Temple	2		1			1
	Pit outside Temple		1?				1
	Outside of Temple						2

Table 2: Summary of weaponry and knives at Hazor arrayed by context type.

Irbid

Irbid is located approximately 70km north-north-west of Amman and about 26 km east of the Jordan River. Of the many tombs excavated by the Department of

Antiquities at the tell of Irbid, only one has been published: Tomb D (Dajani 1964: 99). The tomb was in use between LBIIB and IA IA (Dajani 1964: 101). Only two objects relevant to this study were found in this tomb (Dajani 1964: 99-101); a dagger (Dajani 1964: pl. XL.24) and a blade (Dajani 1964: pl. XL.25).

Jatt

On the eastern end of the Sharon Plain, 7 km east of the town of Hadera, lies Tell Jatt. On the northern slope of a chalk hill southeast of the tell, Tomb 7 was discovered and partially damaged as a result of construction work. The Israel Antiquities Authority conducted a salvage excavation on this Late Bronze Age tomb in 1992 (Yannai 2000: 49). Based on the large number of interments and the artefacts found, it appears the tomb was in use 'during two phases, separated by a long hiatus' and was possibly a family tomb (Yannai 2000: 61). The first phase lies within the LBI period, while the second belongs to the second half of the 12th century B.C. (Yannai 2000: 61, 62).

Six bronze weapons were found in Tomb 7 and are thought to be associated with the early phase of burial (Yannai 2000: 60). However, one of the objects is excluded from this study due its functional ambiguity. Of the five remaining, there are four blades (Yannai 2000: fig. 12.133-135, 138) and one blade fragment (Yannai 2000: fig. 12.137).

Madaba

Madaba is located on the 'Trans-jordanian high plateau' in central Jordan about 30 km south of Amman (Piccirillo 1993: 992). It was inhabited from the 4th millennium B.C. through the Umayyad period (Piccirillo 1993: 992-993; G. Philip pers. comm.). A Christian village existed on the plateau from the end of the third century into the fourth (Piccirillo 1993: 992), and a Roman-Byzantine town was built toward the northern end of the same plateau on which the ancient city was laid (Piccirillo 1993: 993). The necropolis area west of the tell provides the only archaeological evidence that Madaba was inhabited before the 9th century. Two tombs, one used in the final phase of the LBA and the other from the Iron Age, were found in this area (Piccirillo 1993: 993).

The Late Bronze Age tomb, the only one of concern here, was robbed in antiquity and was found completely filled with soil (Harding 1953: 27). Regardless, two daggers (Harding 1953: pl. IV.162, 163), one blade (Harding 1953: pl. IV.164) and one small blade (Harding 1953: pl. V.179) were found in the tomb.

Megiddo

Megiddo is located approximately 2 km from the entrance of Wadi 'Ara on the western edge of the Esdraelon Valley near the eastern ridge of the Carmel in northern Palestine (Kempinski 1989: 3). It is a large mound that covers an area of 15 acres that at some periods in time was expanded by the use of a lower city (Yadin 1993b: 1003). Megiddo contains 20 strata spanning time from the Pre-Pottery Neolithic to the Persian period. Subsequent research indicated that more attention needed to be given to the dating of several aspects of Megiddo. Kathleen Kenyon (1969) amended the dates of the strata and many of the tombs found on the tell, and Kempinski (1989) slightly modified the dates of the strata on the tell. Where appropriate, these new considerations have been applied.

The Late Bronze Age levels VII-IX contain weapons in varied contexts. Many were found in the tombs on the east slope as well as in and around the temple and settlements on the tell. All tombs are listed in numerical order, while the objects found on the tell are broken down and listed by Area, Strata, Square and Locus. Strata VIIA and VIIB are divisions within Stratum VII designated by the excavator. If an object is listed under a Stratum VII heading, it is either from Stratum VIIA or Stratum VIIB and simply has not been specified (Loud 1948: 4).

East Slope Tombs

Tomb 3 in Square R18 produced one projectile (Guy 1938: pl. 135.10). Among the contents of Tomb 4, was one projectile (ibid.: pl. 153.9) found 'intentionally bent or "killed"' (ibid.: 101). In Tomb 26, in Square V18, one small blade (ibid.: pl. 154.23) was found. Tomb 36B, in Square U-V 19, yielded one spearhead (ibid.: pl. 156.4) and one projectile (ibid.: pl. 156.5). Tomb 37A, also in Square U-V 19, produced one spearhead (ibid.: 74, 75, pl. 137.8).

Tomb 84, in Square T18, yielded two spearheads (Guy 1938: pl. 163.9). One blade (ibid.: pl. 89.12) and one projectile (ibid.: pl. 89.2) were discovered in Square U 17-18 in Tomb 217A. One blade (ibid.: pl. 94.2) was found in Square W16 in Tomb 877 A1. In Tomb 877 B1, Square W 16, four blades (ibid.: pls. 94.18; 96.1-3) were found.

Tomb 911B, found in Square V17, yielded one blade (Guy 1938: 67, pl. 119.18, fig. 172.1) and one knife (ibid.: pl. 119.17, fig. 172.3). Tomb 911C, in Square V17, held one blade (ibid.: pl. 120.14) and one projectile (ibid.: pl. 120.12). One blade (ibid.: pl. 123.21) and one projectile (ibid.: pl. 123.20) were found in Square V17, in Tomb 912A. Six blades (ibid.: pl. 125.3-5, 13-15) and five fowling bolts (ibid.: pl. 126.5-9) were

found in Tomb 912B in Square V17. Tomb 912D, in Square V17, yielded one blade (ibid.: pl. 133.20). Tomb 989B1, in Square W15-16, contained one small blade (ibid.: 40, pl. 99.3).

Tomb 1100A, in Square W16, contained five spearheads (Guy 1938: pl. 145.10, 11; fig. 170.7) and one projectile (Guy 1938: pl. 145.9). Two blades (Guy 1938: pl. 146.5, 6; fig. 171. 9, 10) and two spearheads (Guy 1938: pl. 146.3, 4; fig. 170.8, 9) were found in Square W16, Tomb 1100B. One dagger (Guy 1938: pl. 149.8; fig. 171.8), ten spearheads, and some spearhead fragments (Guy 1938: pl. 149.1, 4; fig. 170.5, 6) were discovered in Square W16, in Tomb 1100D.

Tombs on the Tell containing relevant material

One projectile (Loud 1948: pl. 174.19) was discovered in Area BB, Square N15, Stratum VIII, Tomb 2104; an MBIIB-LBI tomb which lay in a domestic building east of the temple (Kenyon 1969: 59). Tomb 2108, found in Area BB within a small building in Square N15, produced one small blade (Loud 1948: pl. 179.28). One projectile was found in the west of Tomb 2127, an LBI tomb within a small building in Area BB Square N15.

Two blades (Loud 1948: pl. 180.34, 35) and three projectiles (Loud 1948: pl. 175.22-24) were found in Area BB, Square O14, Stratum VIII, Tomb 3018 A-B. This MBIIB-LBI tomb was located in Room W in a domestic building south-east of the temple (Kenyon 1969: 59). In Area AA, Square L6, Stratum VIIB, in Tomb 3094, located west of the Palace, one blade (Loud 1948: pl. 180.41) was discovered. This tomb dates to sometime after the 14th century B.C. (Kenyon 1969: 59).

Context	Tomb #	Dagger	Blade	Sm. B	Knife	S-H	Projs.	FB
East Slope Tombs	3						1	
	4						1	
	26			1				
	36B					1	1	
	37A					1		
	84					2		
	217A		1				1	
	877A1		1					
	877B1		4					
	911B		1			1		
	911C		1				1	
	912A		1				1	
	912B		6					5
	912D		1					
	989B1				1			
1100A						5	1	

	1100B	2	2
	1100D	1	10+frags
Tell Tombs	2104		1
	2108	1	
	2127		1
	3018 A-B	2	3
	3094	1	

Table 3: Summary of the tomb weaponry and knives from Megiddo.

The tell tombs in general were single interments located within residential buildings and the Palaces. The tombs on the slope were generally larger cave tombs which were used for multiple interments (Gonen 1992: 117). Although there were at least thirty LBA Tell Tombs, only three contained weaponry. It is obvious from the figure above that during the LBA many more tombs containing weapons occur among the East Slope Tombs than among the Tell Tombs. A further examination by date and Type Family reveals that during the MB/LB transition or LBI, the majority of weapons found in the tombs were socketed spearheads and a few blades with riveted tangs. In contrast, the favoured weapons for LBII burials were two different types of blade with long, slim tangs (see Chapters 4 and 5). Also, the majority of projectiles were found among the LBII tombs (Table 10). Perhaps this is another indication that prestige shifted from those soldiers who carried spearheads in their weapon sets (see 'Warrior Burials' discussion in Chapter 1) to those who carried blades and bows and were associated with the archery whether foot soldier or charioteer. Those buried in the cemetery were most likely not of the most elite class of warriors as none of the graves included the fancy daggers. However, this could indicate a recycling of resources or that status was conveyed by some other means for warriors of Megiddo.

Gonen states that burial within the old and new palaces of Areas AA and BB had ceased by the end of the MBII period, a practice that at the time was still being used in the more residential parts of town (1992: 117). The elite status associated with metal, its possession and control and the amount of it found in the East Slope Tombs as compared to the Tell Tombs, suggests that the more affluent people of Megiddo began burying their dead on the slope instead of within their residences. Also, the amount of weaponry in association with projectiles including fowling bolts may indicate members of the archery corps were buried in this cemetery as well. Perhaps being buried within the cemetery instead of within a residence carried a certain level of prestige in itself during the LBA.

The Tell

Kempinski slightly altered the dates of the strata at Megiddo from the original publications (1989: 10). The Late Bronze Age strata are dated as follows:

IX	1530/20 (LBI)
VIII	1520-1380 BC (LBI-LBIIA)
<u>VII</u>	<u>1380-1140 BC (LBIIA-IA IA)</u>
VIIIB	1380-1250 BC (LBIIA-LBIIB)
VIIIA	1250-1140 BC (LBIIB-IA IA)

Contextually, the tell's areas form blocks of different types of architecture (Loud 1948: 1). Area AA consists of approximately 24 m² of excavated earth of the area and buildings surrounding a Palace. A total of four weapons and nineteen projectiles were found in and around this Palace. Area BB consists of the temple and its surroundings. Again, another 24 m² of earth was removed producing a total of eight weapons and eleven projectiles. Area CC was a residential block which also contains part of the city wall. Only about 16 m² of dirt was excavated, generating a total of nine weapons and seventeen projectiles. The smallest area, approximately 9m square, the test trench known as Area DD which produced only one weapon and five projectiles.

Area AA

Stratum IX. Square K8, Locus 2134 produced one adze found within the temple.

Stratum VIII. Square J9, Locus 3178, a pavement, yielded one blade (Loud 1948: pl. 179.33). Square K7, Locus 3100, a room in the north-west of the Palace, yielded one fowling bolt (Loud 1948: pl. 175.33) and one projectile (Loud 1948: pl. 174.18). In Locus 3102, a room in the north of the Palace, one projectile (Loud 1948: pl. 174.17) was uncovered. One fowling bolt (Loud 1948: pl. 175.32) was found in Square K8, the city gate. One projectile (Loud 1948: pl. 175.31) was found in Square K-L 7-8, the Palace court; in Locus 2041, below doorway to Locus 3091.

Stratum VIIIB. Square K6, Locus 3187, a room outside of the Palace and to the west, yielded one small blade (Loud 1948: pl. 180.43). The floor of the same locus yielded one projectile (Loud 1948: pl. 175.35). One projectile (Loud 1948: 158, not pictured) was discovered in Square K-L 7-8, Palace Locus E=2041.

Stratum VIIA. In Square L7, Locus N=3061, a room in the west of the Palace, one blade (Loud 1948: pl. 180.46) and one adze (Loud 1948: pl. 182.13) were found.

Twelve projectiles (Loud 1948: pl. 176.45-56) were discovered in Square K-L 7, Locus 3073 A-C, the palace treasury.

Area BB

Stratum IX. Square N14 yielded one small blade (Loud 1948: pl. 179.26) dating to the LBI. In Square O13, two projectiles (Loud 1948: pl. 174.10, 11) were found. Square O14 produced one small blade (Loud 1948: pl. 179.27). Also, in Square O14, but in Locus N=3011, in a room south of the temple a knife (Loud 1948: pl. 179.25) was found. One projectile (Loud 1948: pl. 174.9) was found in Locus E=5025 of Square M12. Square M13, Locus 5029 produced one adze (Loud 1948: pl. 182.10) and two projectiles (Loud 1948: pl. 174.7, 8) from a wall north of the temple. Locus E=5239, a location within a building northwest of the temple, yielded one projectile (Loud 1948: pl. 174.6).

Stratum VIII. Square M12, Locus S=5227, a domestic building to the northwest of the temple yielded one knife (Loud 1948: pl. 179.32). A projectile (Loud 1948: pl. 174.14) was discovered in Square M13 in a building of uncertain function. One blade (Loud 1948: pl. 180.37) was found in Square M14, in a space empty of architecture well north of temple 2048. Square N-O 13-14, Locus 2048, the Stratum VIII temple, contained one small blade (Loud 1948: pl. 180.39), one projectile (Loud 1948: pl. 175.27). Locus S=2048 in the temple, yielded two projectiles (Loud 1948: pl. 175.25, 26). Locus 2048, the floor (VIIB-VIIA) of the temple, held one blade (Loud 1948: pl. 180.38) and one projectile (Loud 1948: pl. 175.28). Locus 2048, in the doorway of the temple, contained one projectile (Loud 1948: pl. 175.29). In Square O14, in a public building, one small blade (Loud 1948: pl. 179.31) was discovered. Square N-O 13-14, Locus 2048, the area below the Stratum VIIA platform, in the Stratum VII temple yielded one projectile (Loud 1948: pl. 175.36). Locus N=2048 in the Stratum VII temple also held one projectile (Loud 1948: pl. 175.40).

Stratum VII. One axe (Loud 1948: 162, not pictured) was uncovered in Square N14, Locus E=2087, a room in a building east of the temple. In Square O14, a Stratum VII public building, one blade fragment (Loud 1948: pl. 180.45) and one projectile (Loud 1948: pl. 175.37) were found. In Locus S=2056, a room south of the temple contained one blade (Loud 1948: 160, not pictured) and two projectiles (Loud 1948: pl. 175.38, 39).

Area CC

Stratum VIII. In Square R10, in a domestic building, one dagger (Loud 1948: pl. 180.36) and two projectiles (Loud 1948: pl. 175.20, 21) were discovered.

Stratum VII. In Square R 10, a Stratum VII domestic building yielded one projectile (Loud 1948: pl. 175.41).

Stratum VIIB. Square R9, Locus N=1829, a domestic building, yielded one blade (Loud 1948: pl. 180.44). One projectile (Loud 1948: 156, not pictured) was found in Square R10, Locus E=1830, a domestic building. One projectile (Loud 1948: 156, not pictured) was found in Square S8, Locus 1831, a domestic building.

Stratum VIIA. One projectile (Loud 1948: 154, not pictured), was found in Square Q9, Locus 1812, a domestic building, and one projectile (Loud 1948: 154, not pictured) was also found in Locus S=1812, domestic building. One projectile (Loud 1948: pl. 175.44) was discovered in Square Q10, Locus S=1827, a domestic building.

One projectile (Loud 1948: 154, not pictured) was found in Square R8, Locus N=1805, a domestic building. One blade (Loud 1948: pl. 180.47) and one flat axe (Loud 1948: pl. 182.12) were found in Square R9, Locus W=1793, a domestic building. Another projectile (Loud 1948: 153, not pictured) was also discovered in Locus N=1793, a domestic building. One blade (Loud 1948: pl. 181.51) was found in domestic building Locus N=1813 in Square R9, and one projectile (Loud 1948: 154, not pictured) was found in Locus 1813, a domestic building. Locus E=1820, a domestic building yielded one projectile (Loud 1948: 155, not pictured) as did Locus W=1820, (Loud 1948: 155, not pictured) also a domestic building. One projectile (Loud 1948: pl. 176.57) was discovered in Square R10, Locus N=1771, a domestic building.

One projectile (Loud 1948: 153, not pictured) was also found in Square R-S 9, Locus S=1792, a domestic building. One projectile (Loud 1948: 153, not pictured) was found in Square S9, Locus 1787, a domestic building, and one fowling bolt (Loud 1948: pl. 175.34) was found in Locus N=1794, a domestic building. One blade (Loud 1948: pl. 181.48) and one possible axe (Loud 1948: 153, not pictured) were discovered in Square S 9-10, Locus N=1779, a domestic building. In Locus W=1779, a domestic building, one blade (Loud 1948: pl. 181.49) was found. One small blade (Loud 1948: pl. 181.50) was discovered in Square S 10-11, Locus N=1796, a domestic building.

Area DD

Stratum VIII. Square K11, Palace(?) Locus 5020 yielded one fowling bolt (Loud 1948: pl. 175.30) while Palace(?) Locus 5028 contained one small blade (Loud 1948: pl. 180.42) and two projectiles (Loud 1948: pl. 174.15-16).

Stratum VIIA. Square K11, Palace(?)Locus N=5011, contained two projectiles (Loud 1948: pl. 175.42, 43).

Area	Stratum	Context	Dagger	Blade	Sm. B	Knife	Projs.	FB	Axe	Adze
AA	IX	Temple								1
	VIII	Palace City Gate Pavement		1			3	1		
	VIIIB	Palace Settlement			1		1			
	VIIA	Palace		1			12			1
BB	IX	Domestic Bldg Uncertain				1	4			1
	VIII	Temple Domestic Bldg Settlement Uncertain		1	2		5			
	VII	Public Bldg Settlement		1 Bf			1			
	VIIA	Temple		1			2		1	
CC	VIII	Domestic Bldg	1				2			
	VII	Domestic Bldg					1			
	VIIIB	Domestic Bldg		1			2			
	VIIA	Domestic Bldg		4	1		11	1		2
DD	VIII	Palace			1		2	1		
	VIIA	Palace					2			

Table 4: Summary of the weaponry and knives on the tell of Megiddo arrayed by context type.

Pella

Pella overlooks the northern Jordan Valley from the lower foothills of the region east of the Jordan River (McNicoll, et al. 1982: 12). The site's strata indicates the occupation of Pella from the Paleolithic through the Ummayyad period with sporadic occupation occurring after its destruction via earthquake in A.D. 746/7 and some interlaying periods, such as the Roman period, being represented largely by tombs (McNicoll, et al. 1982: 13-14). The site encompasses a nearby mound and hill respectively called Tabaqat Fahl and Tell el Husn (McNicoll, et al. 1982: 12).

The McNicoll excavations yielded two knives, and twelve projectiles. One projectile (McNicoll, et al. 1982: 43, not pictured), from extremely early in the LBI

period was found in Area XI, Tomb 20 on the slope of Tell el-Husn. Scattered bones were present in the centre of the tomb (McNicoll, et al. 1982: fig. 5). The projectile presumably washed down from T. 22, a late Middle Bronze Age tomb, and is therefore not considered to be part of the original T. 20 offerings (McNicoll, et al. 1982: 36, 43).

One knife (McNicoll, et al. 1992: pl. 46.1) was found in Area IIIC, Phase VA, Locus 52134, within a domestic building. It was recovered in the north of the room near Wall 15 and dates to the LBI period.

The other knife (McNicoll, et al. 1992: fig. 61.20) and eleven projectiles (McNicoll, et al. 1992: 70, 76, not pictured) were found in Area XI, Tomb 62, on the north-east crest of Tell el-Husn. Only undiagnostic pieces of bone badly fragmented by fallen rock and water action were found in the tomb. Based on the number of teeth, there were approximately 100-150 individuals buried here. The tomb and its contents date to MBIIC-LBI, the MB/LB transition (McNicoll, et al. 1992: 69-70).

Later excavations have yielded a possible dagger, an axe and several projectiles. These artefacts were recently published in *Levant* volume 35 (Philip, et al. 2003) but were not pictured. Therefore, the classification of these artefacts are those given by the writers of said article and are not my own.

The LBIIB dagger(?) was found in a settlement context at IIIP 104.50. The axe, of LBI date, was found in a settlement context at IIIQ 121.12. All of the projectiles and fowling bolts were found in a hoard dating to the LBII. Three projectiles and one fowling bolt were found at XXXIVF 17.3, and eight projectiles and two fowling bolts were found at XXXIVF 17.4 (Philip, et al. 2003: 74).

Sahab

On a mound 11 km south of Amman lies the village of Sahab. Sahab was briefly inhabited from the Late Bronze Age through the Iron Age. Five tombs have been discovered at Sahab since 1929. The only tomb of interest here, Tomb C, is located in the village centre (Dajani 1970: 29). Five blades (Dajani 1970: pl. XVIII.153, 166, 202, 288, 292; Khalil 1980: fig. 16.35, 37, 39, 40), three blade fragments (Dajani 1970: pl. XVIII.290, 291, 298), and eight projectiles (Dajani 1970: pls. XVIII.299, XIX.302, 303, XX.300, 323, 348, 349, 350) were discovered in this tomb whose contents can date anywhere between LBIIA and IA IIB (Dajani 1970: 30).

Sahem

Sahem is located 22 km north-west of Irbid and 5.5 km south of the Yarmouk River and the Syrian border, overlooking Lake Tiberias and the south-eastern Golan

Heights' (Fischer 1997a: 13). In 1992, a tomb was discovered during the construction of an elementary school. Rescue excavations were subsequently begun by the Irbid Department of Antiquities (Fischer 1997a: 13). The L-shaped tomb was cut into soft rock. It contained few skeletal remains and those that were present were almost disintegrated. The tomb was probably in use from the end of the 15th century to the beginning of the 12th century B.C. and so dates to the LBI through to the early Iron Age (Fischer 1997a: 84). Along with a multitude of pottery, scarabs and other finds, the tomb contained one dagger (Fischer 1997a: pl. 39.4), five blades (Fischer 1997a: pl. 39.1, 3, 5-7), one knife (Fischer 1997a: pl. 39.2), and two projectiles (Fischer 1997a: pl. 39.8, 9).

Tell Abu al'Kharaz

The tell is located north of Wadi al-Yabis about 4 km east of the Jordan River (Fischer 1997b: 129). Excavations have shown that it was occupied during the Bronze and Iron Ages. Only one blade (Fischer, in press) has been discovered in the Late Bronze Age levels. It was found in Area 1, Phase V, on the tell, in 'the casemate room (built against the city wall)...just above the floor' and belongs to the early LBI time period (Fischer, in press).

Tell Abu Hawam

Tell Abu Hawam was a harbour city on the northern coast of Palestine located within the confines of what is now known as Haifa. The site consists of one settlement, two necropolises, three anchorage facilities, and two cemeteries, both within one kilometre of the ancient city (Balensi, et al. 1993: 7). The tell contains six different strata ranging from the MBII period through the scattered surface remains of the Hellenistic, Roman, Byzantine and medieval periods (Balensi, et al. 1993: 9).

The stratigraphic divisions used by one of the original excavators of the site, R.W. Hamilton, though still in use, required some 'chronological adjustment' (Balensi, et al. 1993: 8). According to Hamilton Strata IV and V contained LBA material (Hamilton 1935: 28, 35). But according to Balensi, et al., only Strata V (sub-divided into 3 layers) and VI contain LBA material with Stratum IV (sub-divided into 2 layers) containing solely Iron Age findings (Balensi, et al. 1993: 9). The bulk of the Late Bronze Age weaponry was found in the Stratum V settlement areas dating, according to Hamilton, to the Late Bronze II period (Hamilton 1935: 11). According to Balensi, et al., Stratum V spans from the last half of the LBI period to the Iron Age I period. No LBA weapons were discovered in the cemeteries.

Stratum V Within Square C6, outside the temple and close to the sand, one blade (Hamilton 1935: pl. XXXIII.365) was discovered. Two projectiles were found in Square D6. One was found west of building 51 (Hamilton 1935: pl. XXXIII.360) and close to the broken end of the east wall of building 32 in Stratum IV. It may therefore belong rather to the subsequent Iron Age level than to the Stratum V domestic buildings. The other projectile (Hamilton 1935: pl. XXXIII.361) was found inside the nest of bowls at building 51.

Square E4 yielded one knife (Hamilton 1935: 60, #374A) from the east corner of domestic building 62. And one projectile (Hamilton 1935: pl. XXXIII.362) was found in Square G4 within the outer wall of the town. One projectile (Hamilton 1935: pl. XXXIII.189) dated by Hamilton to LBIIB-IA IB was discovered in Square F5 amongst what he called 'the mixed Stratum IV walls' at domestic building 37 (Hamilton 1935: 8, 32).

Tell Batash (Timnah)

Tell Batash is located 7 km north-west of Beth Shemesh and 8 km south of Gezer (Kelm and Mazar 1982: 1). Though a scattering of finds were found from the Chalcolithic and Neolithic periods, the occupation of the tell did not begin in force until the Middle Bronze Age. It was then inhabited until the Persian period (Kelm and Mazar 1982: 4). In Area B, the north-eastern corner of the mound, Iron Age I and Late Bronze Age II remains were found (Kelm and Mazar 1982: 4). It was in a domestic building in Stratum VII of this area that the few weapons, dating to LBIIA, were found. A fused cluster of projectiles (Kelm and Mazar 1982: fig. 11) was found in Locus 437 in the storeroom below the staircase. In the same Locus, an unspecified number of 'spearheads' and 'projectiles' (Kelm and Mazar 1982: 12, not pictured) were found scattered on the floor in the hall. The building is thought to have been 'destroyed in a major conflagration' (Kelm and Mazar 1982: 9).

Tell Beit Mirsim

Tell Beit Mirsim lies approximately 25 km northeast of Beersheba and about 20km southwest of Hebron (Albright and Greenberg 1993: 177). The site covers the Bronze and Iron Ages and includes a cemetery in its necropolis in which many of the tombs were robbed. The tombs dated to the Middle and Late Bronze Ages as well as to Iron Age II (Albright and Greenberg 1993: 180). All the relevant weaponry was found in the South-east Area, from strata lettered E to B, from oldest to youngest, with dates from MBIIB-LBI to LBII (Albright and Greenberg 1993: 178-9).

In Square 23, a domestic building in Stratum E or D produced one spearhead (Albright 1938: pl. 41.18). From a Stratum D domestic building came one blade (Albright 1938: pl. 41.11). In Stratum D, Square 23 in general, one dagger (Albright 1938: pl. 41.19) was discovered in a domestic building. Locus 3 in Stratum D Square 23 yielded one projectile (Albright 1938: pl. 41.8) also from a domestic building. One small blade (Albright 1938: pl. 41.24) was uncovered in a Stratum D, Square 22, Locus 8, domestic building, while in the same stratum at Square 33, Locus 4; a blade was found in a domestic building (Albright 1938: pl. 41.6).

One blade (Albright 1938: pl. 41.17) and one projectile (Albright 1938: pl. 41.16) were found in Stratum D or C domestic buildings in Squares 12 and 13 respectively. Three knives were found in Stratum C; one (Albright 1938: pl. 41.12) in the Square 33 debris, one (Albright 1938: pl. 41.23) in a domestic building in Square 13, and one (Albright 1938: pl. 41.22) in a domestic building in Square 3.

Stratum C also contained some projectiles all from domestic building contexts; two projectiles and one projectile (Albright 1938: pl. 41.20, 21) were found in Square 23, and one projectile (Albright 1938: pl. 41.25) was found in Square 22, Locus 8. Stratum B produced only one projectile (Albright 1938: pl. 41.7) and that was found in the Square 32 debris.

Tell Dan

This site, also known as Laish, is found at the foot of Mount Hermon in the north of Palestine (Biran 1994: 21). It is an extremely rich site containing the remains of occupation from the Pottery Neolithic, the Bronze Age and the Iron Age continuing through the Roman period (Biran 1994: 11). However the only Late Bronze Age weaponry derives from a single tomb: Tomb 387, the 'Mycenaean Tomb'. This tomb was discovered while trying to find the base of an MBA rampart on the south edge of the tell in Area B (Biran 1994: 111).

The tomb was badly disturbed by later burials as previous burials were pushed aside for new interments. The condition of the tomb was also further debilitated by the roof's collapsing in antiquity (Biran 1994: 111). The skeletal remains in the tomb consisted of 40 skeletons, of which 25 were male, 9 were female, and 6 were of undetermined sex. The ages of the bodies ranged from a man aged 60 years to a 5 year old child. The average ages of the bodies fall between 25 and 30 (Biran 1994: 114).

Within the tomb, one dagger (Biran and Ben-Dov 2002: pl. 2.88 #117, fig. 2.90 #117) was found on the pavement in the tomb centre next to a bronze lamp and

projectiles. Another dagger (Biran and Ben-Dov 2002: pl. 2.88 #118, fig. 290 #118) was found on the floor of the tomb near the northern wall, alongside the spine of a male skeleton. This dagger was found with a group of other bronze artefacts including two projectiles and a fowling bolt. The third and final dagger found in the tomb (Biran and Ben-Dov 2002: fig. 290 #119) was in the southwest next to a skull. One spearhead (Biran and Ben-Dov 2002: pl. 2.89 #120, fig. 290 #120) was discovered on the pavement in the south of the tomb. A total of 72 projectiles, 6 fowling bolts, and one projectile/knife (Biran and Ben-Dov 2002: figs. 2.91, 2.92, 2.93) were found in T. 387 (Biran and Ben-Dov 2002: 124-136).

Tell Dothan

Tell Dothan is located 22 km north of Shechem in a wide valley and has been situated as the 'eastern-most of the three main passes between the Sharon Plain and the Jezreel Valley ...and had the advantage of being the shortest route between the coast and the Jezreel Valley' (Cooley and Pratico 1993: 372; 1994: 148). Material recovered from the site dates from the Chalcolithic, Bronze, Iron, Hellenistic, Roman, and Mameluke periods (Cooley and Pratico 1993: 372-373). In addition to the settlements, on the west side of the mound was discovered a cemetery now known as the Western Cemetery which contains one of the richest tombs ever found in Palestine (Cooley and Pratico 1993: 374; 1994: 150). But, Tell Dothan has not yet been fully published. The Dothan Publication Project is, however, underway, and the progress of those involved can be followed on this website: <http://www.gordonconwell.edu/dothan/>

Cooley and Pratico (1994) provide a list of findings from Tomb 1 of the Western Cemetery, and it is indeed just that; a list. No measurements, pictures, descriptions, or parallels of the artefacts have been given. The relevant Tomb 1 finds date from three different phases of burial: the LBIIA, LBIIB and a mixed LBIIB and EI I context (Cooley and Pratico 1994: 161-162). It was most likely a family tomb used over two or three centuries (Cooley and Pratico 1993: 374). Within the LBIIA phase were 26 daggers, 1 projectile, 5 spears, and 1 knife. The LBIIB phase yielded 18 daggers, 1 projectile, 5 spears and one knife. And lastly, within the mixed context were unearthed 18 daggers, 10 projectiles, 7 spears, and 2 knives (Cooley and Pratico 1994: 162-163). Tomb 1 is extremely rich and contains the only LBA weaponry to be found at this site.

Tell ed-Duweir (Lachish)

The tell is located on the edge of Wadi Ghafir, a stretch of land which served as an ancient pass from the Coastal Plain to the Hebron Hills (Ussishkin 1993: 897). Lachish is a very large rich site that was occupied from the Pottery Neolithic through to the Babylonian, Persian, and Hellenistic periods (Ussishkin 1993: 898). The settlement mound contained domestic structures as well as the 'Fosse Temple', 'Acropolis Temple', Palaces and other public buildings as well as several cemeteries surrounding the tell (Ussishkin 1993: 898-910; Tufnell 1958: 62, ff.). The LBA weaponry was mostly found in the cemeteries though a few objects were discovered in the 'Fosse Temple'.

Cemetery North-west of Tell

Tomb 216, an LBI-LBIIA tomb, contained one blade (Tufnell, et al. 1958: pl. 54.41, 23.3), five knives (Tufnell, et al. 1958: pl. 54.42-46, 23.4-8), two spearheads (Tufnell, et al. 1958: pl. 54.39, 40; 23.9), and twenty-two projectiles (Tufnell, et al. 1958: pl. 54.30-38, 25.19-22). Tomb 221, also an LBI-LBIIA tomb, contained one blade (Tufnell, et al. 1958: pl. 23.17) and six projectiles (Tufnell, et al. 1958: pl. 25.54-57).

Cemetery South-west of Tell

Tomb 501, an LBI-LBIIA tomb contained two projectiles and one fowling bolt (Tufnell, et al. 1958: pl. 25.26, 27). Tomb 532 yielded five projectiles (Tufnell, et al. 1958: pl. 55.43-47, fig. 25.58-62) and dates from the LBII period. Tombs 537 and 538, both LBII tombs, contained one knife (Tufnell, et al. 1958: pl. 23.19) and three blades (Tufnell, et al. 1958: pl. 23.18, 20, 21) respectively. Tomb 542 contained one spearhead (Tufnell, et al. 1958: pl. 23.16) and one projectile (Tufnell, et al. 1958: pl. 25.43) dating to the LBII period. Tomb 543, dating to the LBI-LBIIA period, yielded one projectile (Tufnell, et al. 1958: pl. 25.66). Tomb 547 contained one projectile and one fowling bolt from the LBI-LBIIA period (Tufnell, et al. 1958: pl. 25.32, 35). One dagger (Tufnell, et al. 1958: pl. 23.15), one blade (Tufnell, et al. 1958: pl. 23.14), one blade fragment (Tufnell, et al. 1958: pl. 23.13) and four projectiles (Tufnell, et al. 1958: pl. 25.17, 18) were found in the LBI-LBIIA tomb, Tomb 555. Finally, Tomb 559, an LBIIA-IA IA tomb, yielded one spearhead (Tufnell, et al. 1958: pl. 23.12).

Cemetery South of Tell

Tomb 1003, dating to the LBI-LBIIA period, yielded one projectile (Tufnell, et al. 1958: pl. 25.30).

Cemetery North of Tell

Tomb 4004 contained one spearhead (Tufnell, et al. 1958: pl. 23.11) and 18 projectiles (Tufnell, et al. 1958: pl. 25.1-6) from the LBII period. Tomb 4013 yielded one projectile (Tufnell, et al. 1958: pl. 25.52) also from the LBII period. In Tomb 4019, one projectile (Tufnell, et al. 1958: pl. 25.36) from the LBI-LBIIA period was discovered.

Cemetery East of Tell

Tomb 6016 yielded one projectile and one fowling bolt (Tufnell, et al. 1958: pl. 25.47, 48), from the LBII period.

Temple

One blade (Tufnell, et al. 1940: pl. XXVII.34) was found in the rubbish, against the south wall of the west chamber, in room B in the LBA temple. The blade dates to the XVIIIth Dynasty, according to a parallel found in Petrie (1917), and is the only example of a weapon from the temple area (Tufnell 1940: 67). Tufnell thought it would probably be 'better classed as a knife used in the preparation of temple offerings' (Tufnell, et al. 1940: 67).

Tell el-'Ajjul

Tell el-'Ajjul is situated in southern Palestine, approximately four miles southwest of modern Gaza on the edge of the Wadi Ghazzeh (Petrie 1931: 1). The tell, which contains a range of structural ruins, is bordered, at its north and east, by three large cemeteries located just off the tell. The site was first excavated in four consecutive field seasons, from 1931-34, by W.M. Flinders Petrie. It was again opened in 1938 by Ernest Mackay and Margaret Murray (Mackay and Murray 1952: 3). In 1999 and 2000, excavations were begun anew by Peter Fischer and Moain Sadeq (Fischer and Sadeq 2000 & 2002). The tell and adjacent cemeteries have produced many examples of weaponry as well as a great number of artefacts outside the scope of this work including an extremely large collection of goldwork.

Unfortunately, the importance of 'Ajjul has always been clouded by the inconsistencies, inaccuracies and omissions of the four initial publications. The discrepancies in Petrie's *Ancient Gaza I-IV* make it difficult to differentiate between artefacts from different phases, or to learn much at all in the evolution of technology in a site that was continuously inhabited over several centuries. However, much can still be salvaged through the quagmire of vague provenances and incomplete plans. Since

the original publications, many scholars have re-examined the tell and its cemeteries in an effort to clarify Petrie's largely incorrect chronology. The following is what sense I could make of Tell el-'Ajjul.

Excavation Method

One might argue Petrie was at an archaeological disadvantage. He was digging in the 1930s and archaeology was still young; basic excavation methods were still being formed. Prior to 'Ajjul, Petrie had worked at Tell Jemmeh and Tell Fara, both sites with vastly differing ages between strata. He had no experience working with buildings whose walls were used, reused and rebuilt across generations as at 'Ajjul (Drower 1985, 389). In fact, it was a contemporary of Petrie's, Mortimer Wheeler, excavating at Verulamium and Maiden Castle in England who first insisted upon the 'careful labelling of each level [soil layer] and the drawing of sections in each trench' (Drower 1985: 389). Within *Ancient Gaza I-IV*, there are no top plans drawn of the levels, very few illustrations of tombs and their contents, no proper sections, and a disturbing lack of completeness in the plans. (Many of the artefacts are from blocks of buildings and areas of excavation that are nowhere to be found on the plans.) But Petrie valued fast publication over checking and rechecking data until years had passed without publishing a word, and this definitely shows (Drower 1985: 432).

The fact is; Petrie chased architecture. Finding the extent of the buildings was what held importance to him. Petrie inferred from his previous excavations at Gerar and Beth-Pelet that the 'important buildings' would be located at the greatest height on the tell (Petrie 1932:1). He describes their work as follows:

On beginning a wide clearance there, we soon found walls 4 ft. thick, of large square buildings. Toward the north were smaller irregular buildings, which led to nothing. Our clearance was spread southwards, as far as the larger walls extended. Having found the length of frontage, the work was then widened eastward, as much as the time allowed in one season. In any case we went down to the basal marl over this area, so as to have a complete history of the region which we cleared (Petrie 1932:1)

It is obvious the structures were the important finds to Petrie. Apart from their relation to height above sea level, Petrie paid little attention to the contexts in which artefacts were found. Interestingly enough, incomplete as his plans are, the one thing he did not shy away from was including the measurements of the base and top of the walls in relation to height above sea level in inches. These appear on, the vast majority if not all, the walls included on the plans.

Stratigraphy

The three different levels of occupation within the site have interchangeably been referred to as Level, Stratum, or City depending on the writer. Palaces I-V are sometimes all referred to as Palaces, and sometimes only Palaces I and II are considered residences, while 'Palaces III-V' are thought to be fortresses (Albright 1974, Tufnell and Kempinski 1993). For consistency's sake, the various 'town' strata will be referred to as 'Cities III-I'. 'Palaces I-V' will be referred to as Palaces I and II, and Forts III, IV, and V individually, while buildings I-V will be referred to as 'Palaces' collectively.

By the end of the second season, Petrie had found several cemeteries around the north and east of the tell and one within the 'Palace' structures. In 1931, he found the cemetery he would come to call the 'Hyksos' cemetery, and in 1932, he found the Courtyard Cemetery (within the 'Palace' structures), a cemetery to the north of the tell, the 'Copper Age' cemeteries and the '18th Dynasty' cemetery (Petrie 1932: pls. XLVIII, LI, LII). The names of all of the cemeteries (except the '18th Dynasty' and Courtyard cemeteries) have been changed for clarity's sake. The cemetery to the north of the tell is now called the 'Lower' cemetery. The supposed 'Hyksos' cemetery, is now the Eastern Cemetery (named for its geographical location rather than an incorrect chronological reference). To its immediate southeast is one of the 'Copper Age' cemeteries now known as the '100-200' cemetery. The other 'Copper Age' cemetery, just to the west, the 'Lower' cemetery, is now called the '1500' Cemetery (Gonen 1992: 71, 72 and Petrie 1932: pl. LI). To sum up, the cemeteries outside the tell of 'Ajjul clockwise from west to east are the 1500, Lower, 18th Dynasty, Eastern, and 100-200 cemeteries.

Because of the aforementioned inaccuracies and inconsistencies within Petrie's publications, many scholars have re-examined 'Ajjul in the hopes of making some sense of the stratigraphy and thus determine accurate dates for the occupation, destruction, and again occupation of the site. W.F. Albright, the first to tackle this task in 1938, summarized his findings in the following chart:

Period	Petrie's Chronology		Albright's Chronology	
	Dynasty	Time (B.C.)	Dynasty	Time (Century)
"Copper Age" Cemetery	5th-6 th	3500-3200	10th-11th	22nd-21st
Courtyard Cemetery	10th-11 th	2800-2600	13th	18th
Palace I	6th-8 th	3200-3000	15th-16th	17th-16th
Palace II (residence)	12 th	2600-2400	18th	16th-15th
Palace IIIA (fortress)	15 th	2400-	18th	15th-14th
Palace IIIB (fortress)				14th
Palace IV (fortress)	16 th	2100-	19th	14th-13th
Palace V (fortress)	18 th	1500-	21st-22nd?	10 th -9 th ?

Table 5: Albright's Summary of Tell el-'Ajjul's chronology (Adapted from Albright 1938: 359)

In addition to Albright's work on Tell el-'Ajjul, significant contributions to the understanding of the stratigraphy of this site have been made by Aharon Kempinski and Olga Tufnell. Going beyond just the dating of the cemeteries and 'Palaces', Kempinski and Tufnell, along with several others, looked at the various City strata and blocks of excavation that lay within the site.

Kempinski agreed with Albright that 'Palaces III-V' were more likely to be forts than residences. Kempinski determined that during the Early to Middle Bronze Age, prior to City III, was the time of occupation contemporary with Petrie's 'Copper Age'. The MBIIA period was the time of the early City III, the Courtyard Cemetery, and when the houses west of Palace I were most likely 'razed' by the builders of Palace I around the 12th Dynasty. The height of City III and Palace I occupation lay within the MBIIB period and the 13th Dynasty. Block P and Lower G were also contemporary with this phase. Around 1670 (in the MBIIC period), City II was founded and Palace II was in use. Kempinski believed City II to have fallen around 1570, though he used the High Egyptian chronology to date the end of Hyksos rule; most now prefer the date of ca. 1520 for this (Warburton 2000: 63). In the LBI period, City I and Fort III were in use, followed by Fort IV in the LBIIA and first half of the 13th century, and Fort V at the end of the 13th century to the mid 12th century (Tufnell and Kempinski 1993: 52-53). One slight variation to Kempinski's theory is Rivka Gonen's thoughts on City I. She believed it was destroyed sometime in LBI and therefore didn't span the entire length of this period of the LBA (Gonen 1992: 39). City I is definitely Late Bronze Age.

Tufnell agreed with Kempinski that the first two Palaces lay within the MBII period. She also added that the graves in Block G were from the 16th Dynasty, that City II, Block A fell around the time of Avaris' destruction in the 16th century. The Upper Level of Block G belonged to the beginning of the LBA. Tufnell also thought that blocks A-D in area LA belonged to the LBA, but Kempinski disagreed, suggesting that all of area LA belonged to City II and thus to the MBA (Tufnell and Kempinski 1993: 51, 52 & Kempinski 1992: 124). Kempinski also believed the bulk of areas A, E and T to belong to Cities III and II (Kempinski 1983: pl. 5). Peter Fischer and Moain Sadeq add that the fortification around the tell, represented by the fosse and rampart, dates to the MBIIA period (2000: 211). Gonen agrees but is less specific suggesting that the fosse dates from MBII (1992: 128).

J.P. Dessel believed City III to be destroyed in the early 16th century and the City II Palace to be destroyed around 1530 B.C. (synonymous with Kempinski's 1570

B.C. City II destruction date) (Dessel 1997: 39-40; Tufnell and Kempinski 1993: 53). Dessel attributed Palace III to LBIB, Palace IV to LBIIA and Palace V to LBIIB (Dessel 1997: 39, 40). W.G. Dever believed City III/Palace I to have been in the MBIIB and CityII/Palace II to have its roots in the MBIIB period and extend into MBIIC (1992: 7). As can be seen by the many publications and differences of opinion, 'the duration and chronology of each of City III-I and Palace I-V represent a long-debated and as yet not satisfactorily solved problem' (Fischer and Sadeq 2000: 211).

The cemeteries are chronologically a bit more agreed upon. Kathleen Kenyon (1956: 47), Dessel (1997: 38, 39), Tufnell (Tufnell and Kempinski 1993: 49), and Fischer and Sadeq (2000: 211) all agree that the 100-200 and 1500 cemeteries are from the EBIV period. Dever (1992: 7), Fischer and Sadeq (2000:211), Kempinski (1993: 53), James Stewart (1974: 59) and K. Rachel Maxwell-Hyslop (1971: 108) all agree that the 'Courtyard Cemetery' was in use in the MBIIA period. Dessel (1997: 39) and Fischer and Sadeq (2000: 212) agree that the Lower, 18th Dynasty and Eastern Cemeteries belong to the LBA though Dessel attributes their initial use to the LBI while Fischer thinks they weren't in use until LBII. Fischer and Sadeq (2000: 212), Albright (1974: 74), and Gonen (1992: 80) all agree that T. 419, the 'Governor's Tomb', is of the LBII. Gonen believes T. 419 to be LBIIB and has dated many of the tombs on her maps of the Lower, Eastern and 18th Dynasty cemeteries though she labels very few of the tomb numbers on her maps (two or three per map for reference when compared to the Petrie volumes) (Gonen 1992: 72, 74, 76).

To summarize and clarify the bulk of the discussion above:

	100-200 & 1500 Cemeteries	Lower, Eastern, & 18th Dynasty Cemetery	Courtyard Cemetery	Governor's Tomb (419)
Albright			MBIIB	
Dessel	EBIV	LBA		
Dever	EBIV		MBIIA	
Fischer	EBIV	LBII	MBIIA	LBII
Gonen		LBA		LBIIB
Kempinski			MBIIA	
Kenyon	EB-MB (EBIV)			
Maxwell-Hyslop			MBIIA	
Stewart			MBIIA	

Table 6a

	Palace I	Palace II	Fort III	Fort IV	Fort V	City III	City II	City I
Albright	MBIIB-C	MBIIC-LBIA	LBI	LBIB-EIA				
Dessel			LBIB	LBIIA	LBIB	MBIIB-C	MBIIC	
Dever	MBIIB	MBIIB-C	LBIA			MBIIB	MBIIB-C	
Gonen								-LBI
Kempinski	MBIIB		LBI	LBIIA-B	LBIB-EIA	MBIIB	MBIIB-C	LBI

Table 6b

Table 6: Various suggestions for the chronology of the 'Palaces', Cities, and cemeteries at Tell el-'Ajjul.

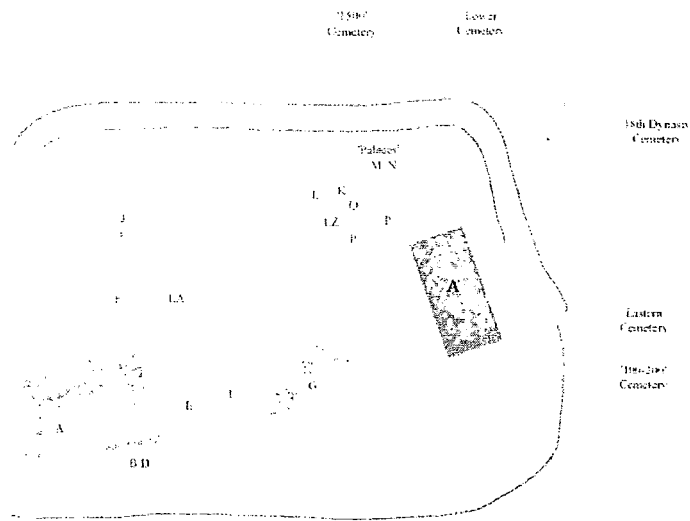
Using these charts, and a great amount of data from the various publications and maps, I was able to quickly identify the units of relevance to my work. I came to the conclusion that the general consensus was that the Lower, Eastern and 18th Dynasty Cemeteries (including T. 419) were LBA cemeteries and that anything from the City I level and Forts III, IV and part of V would be securely LBA.

The Artefacts

The task was then to find the edged weapons and knives that had verifiable contexts to fit within this framework. Where possible I tried to date the artefacts by associated artefacts and their contexts. This proved difficult as Petrie provided no lists of artefacts of a single provenance and only some of the pottery was included in the publications. Personal communications with Peter Fischer and Rachael Sparks, were instrumental to my understanding of Petrie's recording system. With their help I was able to decide which artefacts were relevant to my study. However, even with all the information they gave me, contexts for several of the weapons were still uncertain and therefore not included. Surface finds were also excluded for similar reasons.

The great majority of edged weapons and knives from 'Ajjul are from the MBA (See Philip 1989). Only a few can definitely be ascribed to the LBA, and very few of those have a context that is more specific than block letters and number of inches above sea level. The tombs are where the most care was taken when recording the placement of the bodies and artefacts, but even then drawings are scarce and only very few of them are present in the publications.

The majority of the LBA edged weapons and knives were found in the 18th Dynasty and Lower cemeteries as well as in and around the Forts in areas Q, L, and LZ. Very few were found in the settlement areas at the south end of the tell; areas A and G held the only artefacts of interest. Several weapons of uncertain date and vague provenance were also found in areas E, H, J, and T. Because of this uncertainty, they were excluded from this discussion.



Map 1: Tell el-'Ajjul and the *approximate* locations of its lettered areas and surrounding cemeteries. The shaded Area A is the estimated location of the new excavations in which Trenches 5 and 8 are located. Adapted from Petrie 1934: pls. LXII & LXIII, Kempinski 1992: fig. 3, Yassine 1974: fig.1, and Fischer et al. 2000: 214, fig. 2

18th Dynasty Cemetery In the 18th Dynasty cemetery five tombs held LBA artefacts relevant to this work. T. 1018 produced 7 projectiles, 3 of which were blunt, fowling bolts (Petrie 1932: pl. XVI.139, 140; pl. XVII.158, 160, 166-8). Tombs 1142, 1060, and 1141 each held one projectile (Petrie 1932: pl. XVI. 130, 133; pl. XVII.146, respectively) and Tomb 1149 held four projectiles (Petrie 1932: pl. XVI.130, 135, 138; pl. XVII.159).

Lower Cemetery Four tombs within the Lower cemetery produced LBA weapons. T. 1649 held 2 projectiles (Petrie 1934: pl. XXX.353-4). T. 336 contained one knife (Petrie 1933: pl. XIX.12) and T. 364 contained 1 blade and 1 blade fragment (Petrie 1933: pl. XIX.14-5). The most famous tomb in the Lower cemetery is T. 419, the 'Governor's Tomb'. It was a tomb of multiple interments, used over several years with three phases of burial. The first phase dates to Tutankhamun represented by a gold ring bearing his name. The second phase held similar objects to the first and therefore must have been used sometime fairly soon to the first. A scarab among the grave goods dates the third phase to the time of Rameses II (Gonen 1992: 80). This tomb contained 1 dagger (Petrie 1933: pl. IX.21) from phase two, 2 blades; one from phase one the other from phase two (Petrie 1933: pl. IX.26, 22, respectively), 2 fowling bolts and at least 35 projectiles (Petrie 1933: pl. IX.24, 29-34; Cross and Milik 1956: 18, pl.III; Gonen 1992: 80).

The Forts Within and about the forts, mostly projectiles were found. At the time of Fort III, block MN yielded 3 projectiles (Petrie 1932: pl. XVI.112, 119, 126), block OA yielded two (Petrie 1932: pl. XVI.106, 113), block OD one (Petrie 1932: pl. XVI.111), and block PE one projectile (Petrie 1932: pl. XVI.107) for a total of seven projectiles. The Fort IV blocks produced a total of seven projectiles. Block MF had one (Petrie 1932: pl. XVI.127), block MG: two (Petrie 1932: pl. XVI.118, 120), block MH: two (Petrie 1932: pl. XVI.109, 117), block OX: one (Petrie 1932: pl. XVI.98), and block PW: one (Petrie 1933: pl. XX.32). Fort V's block MA produced one projectile (Petrie 1932: pl. XVI.125), its block MB yielded 4 (Petrie 1932: pl. XVI.121-4) and block PM produced 1 projectile and 1 small blade (Petrie 1932: pl. XVI.99; Petrie 1933: pl. XVIII.5). Since the absolute date of Fort V is still in question, the artefacts from blocks MA, MB and PM may be from the LBIIB or the EIA. In all, a total of 20 projectiles and one small blade were found in and around the Fort area.

The Settlements In the settlement to the immediate west of the forts, areas Q, L and LZ, mostly blades and knives were found. Block QP yielded one knife (Petrie 1933: pl. XXI.38), as did block LZ⁶ (Petrie 1933: pl. XXI.36). Block LH produced a blade, block LK² produced one blade fragment, and block LA produced one blade (Petrie 1933: pl. XX.26*, 31 respectively; pl. XX.26).

As for the settlement area at the southern end of the tell, only areas A and G proved relevant. In area A the sole artefact of interest was a blade found in street AN (Petrie 1933: pl. XVIII.3). Area G proved more fruitful. In all, 3 blades, 1 knife and 7 projectiles of the LBA were found in and around the buildings of block G (Mackay and Murray 1952: pl. XI. 6, 10-1; pl. XIII. 49; pl. XII.24, 32, 34, 36, 39, 40, 42).

The New Excavations Fischer and Sadeq found one blade (2002: fig. 10.2) which is preliminarily dated to the LBI or LBIIA period in Trench 8, Horizon 2, Locus 47 at 25.58m above mean sea level in a domestic building (2002: 115, pers. comm.). A projectile (not pictured) was found in Trench 5, Horizon 1A-B, Locus 19 at 26.08m above sea level and preliminarily dates to the LBII period (Fischer and Sadeq 2002: 113).

To summarize, it is apparent that the bulk of the projectiles are found in the graves and the Forts. Knives appear almost exclusively in settlement contexts, while weapons are not very common in the settlements except for in Area G; an area that contains GER, a 'monumental building' (Tufnell and Kempinski 1993: 52). Not one axe or adze was found at Tell el-'Ajjul dating to the Late Bronze Age. The presence of

fowling bolts in tombs of the 18th Dynasty and Lower Cemeteries implies a possible association of social status with hunting, while the relative absence of weaponry found in the forts and in the graves (as compared to other sites with rich cemeteries such as Megiddo) would seem to imply looting, though it could simply be a contextual difference. I shall close this section with a chart summarizing the relevant LBA finds at Tell el-'Ajjul:

		Dagger	Blade	Sm. B	Knife	Projs.	FB
18th Dynasty Cemetery	T. 1018					4	3
	T. 1060					1	
	T. 1141					1	
	T. 1142					1	
	T. 1149					4	
Lower Cemetery	T. 336				1		
	T. 364		1, 1 Bf				
	T. 419	1	2			35	2
	T. 1649					2	
Fort III	MN					3	
	OA					2	
	OD					1	
	PE					1	
Fort IV	MF					1	
	MG					2	
	MH					2	
	OX					1	
	PW					1	
Fort V	MA					1	
	MB					4	
	PM			1		1	
Settlements West of Forts	QP				1		
	LA		1				
	LH		1				
	LK ²		1 Bf				
	LZ ⁶					1	
LZ ⁸					1		
Southern Settlements	street AN		1				
	area G		3		1	7	
Horizon 2	Trench 8, L 47		1				
Horizon 1B	Trench 5, L 19					1	

Table 7: Tell el-'Ajjul weapons summary.

Tell es-Sa'idiyeh

Tell es-Sa'idiyeh, situated just south of the Wadi Kufrinjeh and 1.8 km east of the River Jordan, consists of an upper and a lower mound (Pritchard and Tubb 1993: 1295). The upper mound was inhabited from at least the Iron Age through the Roman

period, though it did experience at least two 'gaps' in occupancy. Two tombs in the Late Bronze/Early Iron cemetery on the lower mound of this site contained the only Late Bronze Age weaponry (Pritchard and Tubb 1993: 1299).

Tomb 102 Found in Area 17-H-8, this LBIIB tomb contained very few badly preserved bones, most likely the body had been wrapped in cloth coated with bitumen (Pritchard 1980: 15). It yielded one sword (Pritchard 1980: figs. 52.10, 5.13) which was found in the bitumen with a scarab and a piece of ivory. A blade (Pritchard 1980: figs. 52.9, 5.12) was found at the head with two bowls and a jug with its handle riveted to the body. Two projectiles (Pritchard 1980: fig. 52.7, 8) were also found in this tomb.

Tomb 129 Found in Area 17-J-7, this tomb contained one body in the dorsal position, with its head to the west, and its arms to the side (Pritchard 1980: 24, 25). One spearhead (Pritchard 1980: figs. 63.3, 31.5) dating from the LBII period was discovered at the head with its point extending downward (Pritchard 1980: 24).

Tell Farah (South)

This site lies approximately 24 km south of Gaza and 20 km west of Beersheba (Gophna 1993: 441). It enjoyed 'nearly continuous occupation from the Middle Bronze Age IIB to Roman times' (Gophna 1993: 441). The site consists of a mound with several cemeteries off the mound to the north, west, and east (Gophna 1993: 441). Of the relevant artefacts at this site, only two came from the mound both dating from the LBA in general; a knife (Petrie 1930: pl. L.591) found at the fort at T 376.7 and one small blade (Macdonald, et al. 1932: fig. LXI.13) found in a domestic building at XP 370. All the remaining LBA weaponry came from the 900 Cemetery to the immediate northwest of the site.

Tomb 914 Within this tomb, an earlier interment was pushed to the back of the bench to make room for a later one. One dagger (Macdonald, et al. 1932: pl. XLVII, fig. XLVIII.2) and one spearhead (Macdonald, et al. 1932: pl. XLVII, fig. XLVIII.1) were found in this Late Bronze Age tomb.

Tomb 936 Within this tomb, the earlier burials had been pushed back into the corners of the chamber to make room for the later ones, and four skulls had been carefully stacked against the wall in the southeast corner. Two projectiles and two fowling bolts (Macdonald, et al. 1932: pl. LIV, fig. LV.248, 249, 266, 267) were found in this LBA tomb.

Tomb 960 This was the only chamber tomb 'found both unrobbed and structurally intact' (Macdonald, et al. 1932: 25). One spearhead (Macdonald, et al. 1932: fig. LV.293) was found in this LBII tomb.

Tell Mevorakh

This small mound is located on the 'southern bank of Nahal Tanninim (Crocodile River) which separates the Carmel coast from the Sharon Plain' (Stern 1984: 1). It contains fifteen different strata ranging from the Middle Bronze to the Persian and Hellenistic periods, though there are long gaps in its history: a large one occurs in the Iron Age (Stern 1984: 1).

The Late Bronze weaponry from this site was found in the temple. Three superimposed Late Bronze Age temples were discovered on Tell Mevorakh in Strata XI-IX. Only two of the strata are relevant here: Stratum X which dates to LBIIA and Stratum XI which dates to LBI.

The only weapon found in Stratum XI was a projectile (Stern 1984: pl. 31.7, fig. 3.8) in Locus 234, on the floor, near the main platform. From Stratum X, Locus 184, one projectile (Stern 1984: pl. 31.6, fig. 3.7) and one blade (Stern 1984: pl. 31.8, fig. 3.6) were found on the temple's platform. One knife (Stern 1984: pl. 31.9, fig. 3.5) was found at Stratum X, Locus 248, the north-east corner of the platform of the temple.

Chapter 4

The Typology

As stated earlier, typologies involving weaponry are scarce and none have dealt closely with the LBA material of the Southern Levant. As this typology developed, I consulted Philip (1989), Maxwell-Hyslop (1946) and de Maigret (1976) to examine how they had dealt with sorting the weaponry they had studied, in comparison to what I had in mind. I also considered the two models of typing discussed by Clarke (1978) and referred to Adams and Adams (1991) to expand and to further develop my ideas.

Clarke (1978) discussed two typing models: monothetic and polythetic. According to Clarke, models are 'hypotheses which simplify complex observations whilst offering a largely accurate predictive framework structuring these observations'. Models and hypotheses simplify 'complex situations by ignoring information outside their frame of reference and by accurate generalization within it' (Clarke 1978: 31). With Clarke's comments in mind, I considered the two models he proffered.

The monothetic method involves setting a 'unique set of attributes [which] is both sufficient and necessary for membership' to a group (1978: 36, 492). This method was not ideal because I wanted a typology to be more flexible than rigid. The polythetic method requires an object to possess a certain number of attributes where 'no single attribute is both sufficient and necessary' in order to be a member of a particular group (Clarke 1978: 36-7, 493). This model sounded more reasonable because it allowed the flexibility I wanted. Each object would be divided by certain attributes, and those with at least two or three matching characteristics could be placed within a group.

The characteristics of the artefacts in question have thus been divided into four main sections: tang/handle type, blade type, blade tip type, and shoulder type. The type of midrib (pronounced, subtle, none, etc.) and the number of edges for each artefact is also given, when discernible, as a way of providing the clearest picture possible of each artefact.

The characteristics are identified using arbitrarily assigned letters or numbers and are non-hierarchical meaning no one group or characteristic holds more importance than any other. The letters or numbers merely serve as a kind of 'short-hand' for certain characteristics; therefore, an object possessing a certain tang type, for instance, does not automatically exclude it from having other certain characteristics as in a hierarchical

system. They are 'equal opportunity' characteristics, if you will. The groups are arranged in order of the most variable characteristic group to the least. Tang/handle types are given in upper-case Roman numerals, blade types are labelled by Arabic numerals, blade tip types are given in lower-case roman numerals, and shoulder types are labelled by upper-case letters. Therefore, a sequence such as, VII.2.iv.A (see Typology Key), is known as an artefact's 'Type'.

These characteristics were then defined and summarized into a Typology Key. After using the Typology Key to divide the artefacts as objectively as possible by putting them in 'alphabetical' order, I then looked at the pictures and/or drawings of each object to ensure similar looking artefacts were indeed grouped together. Sorting the objects using the Type was much easier than trying to sort some two hundred objects using their plates alone. The objects were then divided into 'Type Families' and given an Arabic numeral, such as 'Type Family 1', 'Type Family 2', etc. The individual tang/handle type, blade type, blade tip type, and shoulder type are still given in the details for each individual object so that their uniqueness is not lost within their respective 'families'.

According to Adams and Adams all typologies are 'formulated through a feedback between object clustering and attribute clustering' (1991: 304). A few objects having two or three characteristics in common were generally similar enough in form to make a Type Family out of them, as in Clarke's polythetic method. Then I determined if the form could suggest an appropriate 'label'. Once objects with similar attributes, or physical characteristics, were grouped together, it was then that I tried to decide, using each object's form, whether any of them could 'obviously' fall under the more common labels such as dagger, knife, and spearhead. If an object was not classified, it was dubbed 'blade' or 'small blade' depending on its size (see Chapter 2).

Despite the effort put into developing types which incorporate all weaponry and knives of this period, some objects were unique enough that they could not be placed within a Type Family. The problem of the 'borderline specimens' (Adams and Adams 1991: 299) was solved by the incorporation of a different term. The unique specimens are listed as 'Individuals' and are identified by their respective Catalogue numbers. They are placed within this chapter near the Type Families they most resemble.

Adams and Adams point out, 'typing and sorting are in fact processes that involve continual, arbitrary decision-making', and any typologies made should be purposeful (1991: 22, 288). The purpose of my typology is to let the objects speak for

themselves; to see what characteristics the different objects have and then try to surmise how the groups that arise may have been used by looking for patterns in the associated objects and contexts in which the weapons were found. Did the weapons of the LBA change drastically within those few centuries, or did they remain much the same at the end of the period as at the beginning? Did different regions of the Southern Levant use different weaponry? These and other questions I hope to answer using this typology.

The daggers, blades, small blades, spearheads, and knives have all been included in the same typology because these labels have proved 'interchangeable'. What to some excavators is a spearhead is to others a dagger, and so forth. Combining spearheads and knives into the same typology with daggers and blades, etc. will allow their 'labels' to be modified as research progresses and new light is shed on the actual use of these objects.

It should be noted that first dividing the artefacts by Type and then assigning the objects to Type Families is a process which is only truly beneficial when working with a great amount of unknowns. While using the individual tang/handle type, blade type, blade tip type, and shoulder type allows for easy sorting within a database, it quickly becomes overkill when placing objects within a Type Family. When beginning this typology, I did not know what the basic forms of weapons used in the LBA looked like. I was working from a blank slate and so, listing and sorting by the various attributes seemed the easiest way to see what was present. However, once the Type Families were established it was fairly easy to see if any new objects added to the corpus belonged to a specific Family, if it was similar to an Individual and would thus create a new Type Family, or if it was an Individual itself.

Artefact types from different time periods and geographical regions vary dramatically; therefore this typology is only valid when discussing Late Bronze Age daggers, blades, small blades, spearheads and knives from the Southern Levant. No typologies were created for the swords, scimitar, axes, or adzes due to the extreme variety and scarcity of these objects. The swords, scimitar, axes, and adzes are simply listed and discussed at the end of this chapter.

Typology Key for Late Bronze Age Daggers, Blades, Spearheads, and Knives Found in Palestine and Transjordan

TANG/HANDLE TYPE

- I. animal hoof
- II. flanged
- III. hooked
- IV. hourglass
- V. long broad
- VI. long round, button-ended
- VII. long slim
- IX. flared socketed
- X. riveted and flanged
- XI. riveted shoulders
- XII. riveted tang
- XIII. short broad
- XIV. short slim
- XV. stop-ridge, long slim
- XVI. straight socketed

Midrib type and edge number listed in catalogue description if known.

b=broken=used when a piece of the object is missing and the actual type of the missing piece is indeterminable.

n= none=when a characteristic is not present or in the case of shoulder type, when a feature takes the place of or covers the blade's shoulder or when a blade flows directly into the tang with no shoulders at the tang juncture.

BLADE TYPE

- 1. concave (sharpened?)
- 2. convex
- 3. crescent-shaped
- 4. cut-out
- 5. half-tapering
- 6. leaf-shaped
- 7. recurved
- 8. tapering
- 9. straight
- 10. 'chopping'
- 12. 'dog-leg'
- 13. sickle-shaped
- 14. hourglass

ind=indeterminable= unable to tell due to poor picture quality, artefact's ceremonial(?) destruction, and/or corrosion or breakage of artefact

?= used in conjunction with a characteristic which is possible but unsure, or a close but inexact description (e.g. midrib?).

&=used when a characteristic has more than one type feature such as ii&iv (a curled and rounded blade tip).

#= fragment. This sign is added after a characteristic which is a fragment so that if the blade is broken, a # will appear after the Blade Type classification. (e.g. XIV.8#.v.A)

BLADE TIP TYPES

- i. blunt
- ii. curled
- iii. pointed
- iv. rounded
- vi. squared
- vii. triangular

Not pic'd=artefacts that are not pictured in the publications and have been placed within a certain artefact category (i.e. dagger, blade, etc.) based on the excavation report writer's classification.

example: XIV.8.iv.A

SHOULDER TYPE

- A. sloping
- B. squared
- C. 'catch'
- D. rounded
- F. lugged

Typology Key Definitions

TANG/HANDLE TYPE

Note: While it is understood that the flared and straight socketed 'tang's (IX and XVI) are not strictly tangs, the sockets in question occupy the same position on the relevant objects as proper tangs on the other weapons. Therefore, for the purpose of including the spearheads into this typology and increasing their comparability, the flared and straight socketed 'tang's are included in the Tang/Handle Type group.

- I. animal hoof: exclusively a knife handle type, this handle's end is in the shape of an animal hoof. Usually the hoof faces downward in the direction of the blade's sharp edge (Figures 10 & 18).
- II. flanged: Most commonly seen on daggers, this handle type has raised edges around the edges of the handle on the front and back of the handle allowing for a wood or ivory inlay to complete the body of the handle. It is cast as a piece with the blade (Figure 1).
- III. hooked: This tang type is usually long and slim ending in a slight bend or hook and is cast in one piece with the blade (Figure 5).
- IV. hourglass: this tang, cast as a piece with the blade, decreases then increases in width from the blade shoulders so that its end width is typically approximately equal to its original width near the blade's shoulders. Widths vary so that some slim down to a very thin tang before expanding to the end, others are less so (Figures 13 & 17).
- V. long broad: not so much a tang as it is usually the handle itself cast as one piece with the blade. As such, it is long and wide enough to suit as a handle (Figures 19, 21 & 22).
- VI. long round, button-ended: a rare tang type, it occurs on only one blade (Figure 11).
- VII. long slim: a straight, slim tang which is deemed long in comparison to the blade's length, usually almost half the blade's length or more (Figures 4 & 6).
- IX. flared socketed: a hollow 'tang' designed so that a handle is shoved into it. The socket is narrow toward the blade and grows wider toward its butt (Figures 30 & 31).
- X. riveted and flanged: a flanged handle whose inlay was attached by the use of rivets; occurs on blades, knives and daggers (Figures 9 & 20).
- XI. riveted shoulders: when the hafting method involved the use of rivets through the blade's shoulders to attach the now missing handle (Figures 7 & 27).
- XII. riveted tang: a tang of some sort is present but it contains a rivet hole by which means the handle was at one time attached (Figures 8 & 12).
- XIII. short broad: usually little more than a stub at the end of the blade, this type of tang is typically almost as wide as it is long (Figure 26).

- XIV. short slim: Typically two to five cms in length and is short in comparison to the blade's length, usually much less than half the blade's length. The blade is generally straight or tapering (Figures 3 & 24).
- XV. stop-ridge, long slim: a tang which begins with a miniature 'hand-guard' at the blade's shoulder area, a stop-ridge, and continues with a long slim, straight tang (Figure 2).
- XVI. straight socketed: a straight, hollow 'tang' designed so that a handle is shoved into it (Figures 28, 29, & 32).

BLADE TYPE

1. concave: If a blade's edges curve in on the sides it is generally assumed this is caused from the blade being sharpened in antiquity. This is most commonly more of a descriptor than an actual blade type, but it is possible that due to extensive sharpening another more accurate blade type is indeterminable (Figures 6 & 27).
2. convex: would be a straight blade except for its slight outward curve on both edges before reaching the tip. Much like a leaf-shaped blade except the base of the blade enters squarely into the tang instead of narrowing again as it connects to the tang (Figures 2 & 4).
3. crescent-shaped: a short blade that is curved into the shape of a crescent (Figure 21).
4. cut-out: a typically straight blade, with a notch in one edge toward the tip of the blade (Figure 16).
5. half-tapering: a slim blade that has one straight side and one side that tapers toward the tip (Figure 17).
6. leaf-shaped: a blade which has convex sides and tapers back toward the tang instead of continuing straight to the tang as a convex blade would. Usually leaf-shaped blades are double-edged and have pointed tips (Figures 1, 13, & 30).
7. recurved: a typically single-edged blade whose sharp edge turns up at the tip (Figures 18, 19, & 20).
8. tapering: a blade that tapers from the base toward the tip and generally does not curve outward as a convex blade does (Figure 3, 7, & 8).
9. straight: a blade whose edges do not taper at all until reaching the very tip (Figure 12, 14, & 24).
10. 'chopping': a blade which looks very similar to a modern day chopping knife; a wide single-edged blade (Figure 22).
12. 'dog-leg': the blade is straight until it turns abruptly upward at approximately a 45 degree angle near the tip of the blade (Figure 15).

13. sickle-shaped: a long, extended crescent-shaped blade (Figure 9).
14. hourglass: a blade which is equally concave on each edge and typically widens again toward the tip to its original base width (Figures 10 & 26).

BLADE TIP TYPES

- i. blunt: a wide rounded tip (Figures 6 & 7).
- ii. curled: a blade end which curls away from the original direction of the blade (Figure 16).
- iii. pointed: a blade tip that comes to a sharp point (Figure 1 & 18).
- iv. rounded: a narrow blunt tip; a blade tip that may have been rounded originally or was a pointed blade that had been worn down from use (Figures 2 & 4).
- vi. squared: when the blade does not taper as normal but ends in a tip flat(tish) tip (Figure 10 & 19).
- vii. triangular: exclusively a socketed spearhead tip type, the blade tapers and then cuts in directly to make a pointed tip (Figure 28).

SHOULDER TYPE

- A. sloping: when at top end of the tang, it slants up to create the blade (Figures 6 & 23).
- B. squared: when at the top of the tang, the shoulders are at a right angle to the tang (Figures 8 & 28).
- C. 'catch': typically only on single-edged blades, it is the one 'shoulder' on the edged side of the blade that usually forms a 90-135 degree angle to the handle (Figures 10, 20, & 22).
- D. rounded: shoulders that meet the tang at a right angle but curve up to create the blade (Figure 29).
- F. lugged: usually a blade with a relatively flat base with two small, protruding nibs at the base of the usually straight blade (Figures 15 & 16).

MIDRIB

- Subtle: when the blade is thickened into a slight 'rise' down the centre of the blade on one or both sides (Figures 4 & 5).
- Pronounced: when the blade has a thick ridge down its centre on one or both sides (Figures 28 & 29).

Type Families

The following Type Families include daggers, blades, knives, small blades, and spearheads, and they will be listed in that order. All objects are listed within each Type Family in numerical order by catalogue number using abbreviated versions of each object's full catalogue entry. The catalogue entry in its entirety can be found under the object's corresponding catalogue number in Appendix 2 as can be the explanation of the layout of each catalogue entry.

'Individuals' are listed after or among the Type Families of each 'Kind of Weapon' (i.e. dagger, blade, etc.) that they resemble the most. Individuals are labelled throughout as e.g. 'Individual 199'; meaning Catalogue # 199 is an Individual. Objects too fragmented to be classified and items which are not pictured in their respective publications, but have been categorized by those who published them, are listed at the end of the Type Families section but preceding the list of swords, scimitars, axes, and adzes not included in the typology proper.

When considering the distribution of the weaponry, one must remember the weaponry that was not pictured in their publications or has yet to be fully published. Therefore, the considerable amount of weaponry from Tomb 1 at Tell Dothan, a dagger(?) from Pella, and a blade and several spearheads from Megiddo could not be included in the Type Families. Where discernable, points of interest will be brought to the attention of the reader and will be further discussed in Chapter 5.

Daggers

Type Family 1: (Figure 1, Table 13)

This Type Family is largely defined by its flanged hilt. These daggers usually have leaf-shaped or tapering blades and can have pointed, blunt or rounded tips. The place of any shoulder to speak of is taken by the flanged hilt. They are double-edged and rarely, if ever, possess a midrib. They are generally between 25.5 and 36.5 cms in total length. Some examples have decoration at the base of the blade. One variation incorporated the use of rivets for securing the inlay in the hilt.

The objects belonging to this Type Family were found at the Akko Tombs, Beth Shean, Gezer, Irbid, Madaba, Megiddo, Pella, Sahem, Tell Beit Mirsim, Tell Dan, Tell Dothan, Tell ed-Duweir, Tell el-'Ajjul and Tell Farah (South) (Map 4). Most were found in graves with projectiles within a date range that incorporated the LBII period. At Beth Shean one example was found in an LBIIB temple, and from Megiddo, one of the

examples found was discovered in an MBIIB-LBIIA domestic building. It is thus a very consistent form, covering most of the LBA period.

As most were found in rich graves along with projectiles, it is possible these daggers carried some sort of significance along with the projectiles. Since the chariot, and therefore the composite bow and its arrows, seem to have been the height of battle technology in the LBA Southern Levant, these daggers would most likely be significant as a prestigious grave good of the period. It is possible that those buried with these objects were members of the LBA martial elite, i.e. the chariotry.

1 Akko Tombs, Tomb B3
Ben-Arieh and Edelstein 1977, p.33, pl. VII.1 & 1a, fig. 18.1
BL: 25, TL: 11.5, TtlL: 36.5, W: 3.5
II.6.iii.n LBII

6 Akko Tombs, Section find
Ben-Arieh and Edelstein 1977, p. 33, pl. XVIII.9, fig. 18.2
BL: 23, TL: 16, TtlL: 39, W: 4
II.9.i.n LBII

14 Beth Shean, Level VII temple, Locus 1068, upper altar room.
Rowe 1940, p. 76, pl. XXXII.3; James and McGovern 1993, pl. 51.h, fig. 159.5
BL: 23.5, TL: 10, TtlL: 33.5, W: 3
II.2.i.n LBIIB

39 Gezer, Field I, Cave 10A, grave on tell, Locus 10070.P
Seger 1988, p. 208, pl. 76A, fig. 19.10
BL: 20, TL: 11.5, TtlL: 31.5, W: 3.8
II.2.i.n LBI-LBIIA

62 Madaba, tomb to the east of Tell Madaba
Harding 1953, p. 32, pl. IV.162
BL: 17.5, TL: 10.5, TtlL: 28, W: 2.5
II.6.iii.n LBIIB-IA IA

63 Madaba, tomb to the east of Tell Madaba
Harding 1953, p. 32, pl. IV.163
BL: 17, TL: 8.5, TtlL: 25.5, W: 1.5
II.6.iii.n LBIIB-IA IA

77 Megiddo, Square W16, Tomb 1100D, east slope
Guy 1938, pl. 149.8, fig. 171.8
BL: 30, TL: 10.5, TtlL: 40.5, W: 4.5
II.8.iii.n LBI

81 Megiddo, Square R10, Stratum VIII, domestic building
Loud 1948, p. 148, pl. 180.36
BL: 16.5, TL: 9, TtlL: 25.5, W: 3.5

X.8.i.n MBIIB-LBIIA

164 Tell Dan, Area B, Tomb 387 (the 'Mycenaean Tomb')
Biran and Ben-Dov 2002, p. 120-121, figs. 2.88 and 2.90, #117
BL: 22.5, TL: 11.9, TtlL: 34.4, W: 3.5
II.6.iii.n LBII

165 Tell Dan, Area B, Tomb 387 (the 'Mycenaean Tomb')
Biran and Ben-Dov 2002, p. 120-121, figs. 2.88 and 2.90, #118
BL: 19.5, TL: 12, TtlL: 31.5, W: 3.3
II.8.iii.n LBII

212 Tell Farah (South), Tomb 914, cemetery
Macdonald, et al. 1932, p. 23, pl. XLVII & XLVIII.2
BL: 20, TL: 11.5, TtlL: 31.5, W: 3.5
II.6.iii.n LBA

Type Family 2: (Figure 2, Table 13)

This Family is defined by its stop-ridge, long slim tang type. These daggers usually have a double-edged, convex or leaf-shaped blade, and a pointed tip. Again, function of the shoulder on the blade is taken by the stop-ridge. Complete examples range from 19.5 to 37 cms in total length. Occasionally they are decorated at the base of the blade next to the stop-ridge. One variation, Cat. # 3, possessed a tang that was flattened and the edges folded inward to create the slim tang and, consequently, a 'socket'. On another dagger (Cat. # 166), the tip of the tang was bent similar to the hook-tang weapons of Type Family 5.

Type Family 2 is largely similar to Type Family 1 with the only significant difference being in the handle's hafting. Type Family 1 daggers have a handle cast as a piece with the blade while Type Family 2 daggers have a tang which would have been inserted into a handle of some length. Because of the similarities in these two Type Families, I am assuming that Type Family 2 weapons are indeed daggers.

These daggers were found in the Akko Tombs, Tell Beit Mirsim, Tell el-'Ajjul, Tell ed-Duweir, Tell Dan, Sahem, and Irbid (Map 5). All were either found in the LBII or within a date range that incorporated the LBII period. All were found in graves except one from Tell Beit Mirsim which was found in a domestic building without projectiles. Five out of the seven graves contained projectiles and most of these graves, as with Type Family 1, were very rich burials. These daggers may have also been associated with charioteers.

3 Akko Tombs, Tomb B3

Ben-Arieh and Edelstein 1977, p.33, pl. VII.3, fig. 19.1
BL: 19.5, TL: 13, TtlL: 32.5, W: 3
XV.6.iii.n LBII

4 Akko Tombs, Tomb A2
Ben-Arieh and Edelstein 1977, p.33, pl. XI.6, fig. 19.3
BL: 11.5, TL: 9, TtlL: 20.5, W: 2
XV.2.b.n LBII

55 Irbid, Tomb D
Dajani 1964, p. 100-101, pl. XL.24
No scale given in publication with which to measure artefact.
XV.8.i.n LBIIB-IA IA

145 Sahem, the tomb, southern part of the village
Fischer 1997a, p. 70, pl. 39.4, fig. 27.2
BL: 9.5, TL: 2.5, TtlL: 12, W: 1.5
XV?.2.i.n LBA

155 Tell Beit Mirsim, Area SE, Block 23, Stratum D, domestic building
Albright 1938b, p. 52, pl. 41.19
BL: 8, TL: 4.5, TtlL: 12.5, W: 3.5
XV#.8.b.n LBII

166 Tell Dan, Area B, Tomb 387 (the 'Mycenaean Tomb')
Biran and Ben-Dov 2002, p. 120, fig. 2.90, #119
BL: 19.3, TL: 11.2, TtlL: 30.5, W: 3
XV.6.iv.n LBII

182 Tell ed-Duweir, Tomb 555, cemetery southwest of tell
Tufnell, et al. 1958, p. 78-79, pl. 23.15
BL: 12, TL: 7.5, TtlL: 19.5, W: 3
XV.6.iii.n LBI-LBIIA

194 Tell el-'Ajjul, Lower Cemetery, Tomb 419 (the 'Governor's Tomb'), found in
top centre of tomb in phase 2
Petrie 1933, p. 6, pl. IX.21
BL: 23.5, TL: 13.5, TtlL: 37, W: 3.5
XV.2.iii.n LBIIB

Blades

Type Family 3: (Figure 3, Table 14)

This Type Family is defined by a short slim tang. Examples typically have a double-edged, tapering blade, a blunt tip and either sloping or squared shoulders. The presence or absence of a midrib is largely indeterminable from the plates. They are between 17 and 26.5 cms in total length.

This Type Family is found at Jatt, Hazor, Tell Beit Mirsim, and Tell el-'Ajjul (Map 6). Most of these blades were found in LBI settlement contexts in Palestine, and therefore very few were discovered in graves. None were found with projectiles, and none of them were found in Transjordan. This type is very similar to Philip's Dagger Type 10 (1989: 414). This similarity, and the fact that most of these blades are from the LBI, would indicate it is a style that continued in use from the Middle Bronze Age II. Being found in only one grave would indicate that blades of this Type Family were most likely not a symbol of status.

49 Hazor, Area F, Stratum 2, Locus 8164, room in a domestic building
Yadin, et al. 1961, pl. CCCXLII.4, fig. CCXLII.11
BL: 18.5, TL: 5.5, TtlL: 24, W: 4.5
XIV.2.iv.B LBI

58 Jatt, Tomb 7
Yannai 2000, p. 60, 75, fig. 12.134
BL: 21, TL: 5.5, TtlL: 26.5, W: 5
XIV.8.iv.B LBI

156 Tell Beit Mirsim, Area SE, Stratum D, domestic building
Albright 1938b, p. 37, pl. 41.11
BL: 15, TL: 3.5, TtlL: 18.5, W: 4
XIV.8.i.B LBII

190 Tell el-'Ajjul, GJE 959, outside a building
Mackay and Murray 1952, p. 14, pl. XI.11
BL: 13, TL: 4, TtlL: 17, W: 4
XIV.1.i.B MB/LBA

197 Tell el-'Ajjul, AN 720=1020 (Fort III), street
Petrie 1933, p. 8, pl. XVIII.3
BL: 16, TL: 5.5, TtlL: 21.5, W: 4
XIV.8.i.A LBI

Type Family 4: (Figure 4)

These blades have long slim tangs, and usually have double-edged, tapering blades, though they can occasionally have a convex blade type. Blade tips can be blunt, pointed, or rounded, and shoulders are usually sloped but can be squared. Examples are as likely to have midribs as not, though when present, more are subtle than pronounced. Their total length of complete examples ranges from 18 to 31.5 cms.

This Type Family is found in the Amman Airport Temple, Gezer, Hazor, Irbid, Madaba, Megiddo, Sahab, Sahem, Tell Abu al-Kharaz, Tell ed-Duweir, Tell el-'Ajjul,

and Tell Mevorakh (Map 7) within a wide range of contexts and dates though most are found in the LBII. This Type Family is by far the most prevalent weapon in use in the LBA and may be the 'general issue' blade given to archers (see Chapter 5).

This Type Family is only found in public buildings in northern Palestine and Transjordan. In southern Palestine they are only found in graves and rubbish. When found in graves, they are more likely to be found with projectiles than without in southern Palestine and Transjordan. In northern Palestine, most are found without projectiles. When found in domestic, rubbish, or uncertain contexts, they are not found with projectiles (Table 14).

9 Amman Airport Temple
Khalil 1980, p. 29, fig. 16.36
BL: 18, TL: 11.5, TtlL: 29.5, W: 2.5
VII.8.iii.A LBIIB

40 Gezer, Field I, Cave 10A, grave on tell, Locus 10070.P
Seger 1988, p. 214, pl. 76A, fig. 22.11
BL: 13.1, TL: 8, TtlL: 21.1, W: 3.1
VII.8.i.A LBI-LBIIA

50 Hazor, Area F, Square Q6, Stratum 2, tunnel/depression hewn in rock
Yadin, et al. 1961, pl. CCCXLII.7, fig. CCXLIV.24
BL: 18, TL: 11, TtlL: 29, W: 3
VII.8.i.B LBI-LBII

56 Irbid, Tomb D
Dajani 1964, p. 100-101, pl. XL.25
No scale given in publication with which to measure artefact.
VII.9.i.A LBIIB-IA IA

64 Madaba, tomb to the east of Tell Madaba
Harding 1953, p. 32, pl. IV.164
BL: 14.5, TL: 11.5, TtlL: 26, W: 3
VII.8.iv.A LBIIB-IA IA

67 Megiddo, Square U 17-18, Tomb 217A, east slope
Guy 1938, pl. 89.12
Rockefeller Museum (I. 3499)
BL: 16.5, TL: 7, TtlL: 23.5, W: 3
VII.2.iii.B LBII

68 Megiddo, Square W16, Tomb 877A1, east slope
Guy 1938, pl. 94.2
BL: 7.5, TL: 5, TtlL: 12.5, W: 2
VII.8.ind.A LBA

- 70 Megiddo, Square W16, Tomb 877B1, east slope
 Guy 1938, pl. 96.1
 BL: 11.5, TL: 8, TtL: 19.5, W: 2
 VII.2.iv.A LBII
- 71 Megiddo, Square W16, Tomb 877B1, east slope
 Guy 1938, pl. 96.2
 BL: 14.5, TL: 9.5, TtL: 24, W: 2.5
 VII.8.iv.ind LBII
- 74 Megiddo, Square V17, Tomb 912D, east slope
 Guy 1938, pl. 133.20
 BL: 14.5, TL: 11, TtL: 25.5, W: 2.5
 VII.8.iv.A LBII
- 85 Megiddo, Square J9, Stratum VIII, Locus 3178, public building pavement
 Loud 1948, p. 176, pl. 179.33
 BL: 14.5, TL: 11, TtL: 25.5, W: 3.5
 VII.8.i.A LBI-LBIIA
- 112 Megiddo, Square V17, Tomb 911B, east slope
 Guy 1938, pl. 119.18, fig. 172.1
 BL: 19, TL: 12.5, TtL: 31.5, W: 2.5
 VII.8.i.A LBII
- 116 Megiddo, Square V17, Tomb 912B, east slope
 Guy 1938, pl. 125.4
 BL: 16.5, TL: 11.5, TtL: 28, W: 3
 VII.8.iii.A LBII
- 117 Megiddo, Square V17, Tomb 912B, east slope
 Guy 1938, pl. 125.5
 BL: 12, TL: 9, TtL: 21, W: 2
 VII.8.iii.A LBII
- 124 Megiddo, Square S 9-10, Stratum VIIA, Locus N=1779, domestic building
 Loud 1948, p. 153, pl. 181.48
 BL: 13, TL: 8, TtL: 21, W: 3.5
 VII.8.i.A LBIIA-IA IA
- 127 Megiddo, Square R9, Stratum VII, Locus W=1793, domestic building
 Loud 1948, p. 153, pl. 180.47
 BL: 17, TL: 13, TtL: 30, W: 3.5
 VII.8.i.A LBIIA-IA IA
- 142 Sahab, Tomb C, centre of village
 Khalil 1980, p. 23, fig. 16.39; R.W. Dajani, 1970, pl. XVIII.SA202
 BL: 11, TL: 11, TtL: 22, W: 2
 VII.8.b.A LBIIA-IA IIB
- 143 Sahab, Tomb C, centre of village

Khalil 1980, p. 23, fig. 16.37; R.W. Dajani, 1970, pl. XVIII.SA166
BL: 13, TL: 5, TtL: 18, W: 2
VII.2.iii.A LBIIA-IA IIB

147 Sahem, the tomb, southern part of the village
Fischer 1997a, p. 70, pl. 39.6, fig. 27.3
BL: 9, TL: 5, TtL: 14, W: 1.5
VII.2.iv.A LBA

152 Tell Abu al-Kharaz, Area 1, Phase V, Locus 218, domestic building
Fischer 2003, in press, fig. 79.4
BL: 19, TL: 13, TtL: 31, W: 4
VII.8.i.B LBI

168 Tell ed-Duweir, Tomb 216, cemetery northwest of tell
Tufnell, et al. 1958, p. 78-79, pl. 23.3 & 54.41
BL: 19, TL: 11, TtL: 30, W: 5
VII.8.iv.B LBI-LBIIA

187 Tell ed-Duweir, Temple, found in the rubbish against the south wall of the west chamber, room B
Tufnell, et al. 1940, p. 67, pl. XXVII.34
BL: 14, TL: 6.5, TtL: 20.5, W: 2.5
VII.2.iv.A LBA

195 Tell el-'Ajjul, Lower Cemetery, Tomb 419 (the 'Governor's Tomb')
Petrie 1933, p. 6, pl. IX.22
BL: 21.5, TL: 10.5, TtL: 32, W: 4
VII.8.iii.B LBIIIB

216 Tell Mevorakh, Stratum X temple, Locus 184, on the platform of the temple
Stern 1984, p. 24, pl. 31.8, fig. 3.6
BL: 12.5, TL: 11, TtL: 23.5, W: 4
VII.8.i.B LBIIA

Type Family 5: (Figure 5, Table 14)

This Type Family is defined by its hooked tang. Most of these double-edged blades are tapering and have sloping shoulders. Though several of the blade tips are broken, the tips present can be blunt, pointed, or rounded. Total lengths vary between 15 and 32.5 cms. Midribs are usually not present but on one variation (Cat. # 57) the blade has squared shoulders, a very pronounced midrib and has a much narrower blade and shorter tang than the others. Another variation (Cat. # 2) has a subtle stop-ridge. This Type Family is very similar to Type Family 4 with the only difference lying in the hooked tang which Type Family 4 does not possess.

It is this Type Family's members that most resemble the hooked-tang weapons discussed by Philip (1991) and Weinstein-Balthazar (1990) as being the possible predecessors to the socketed spearhead in Early-Middle Bronze Age Cyprus. However, these weapons do differ slightly in form from the Cypriot examples and they occur later--after the socketed spearhead of the MBA Southern Levant. Their intended specific use remains a mystery.

This Type Family is found at the Amman Airport Temple, Sahem, Jatt, Akko Tombs, Megiddo, Sahab, and Tell es-Sa'idiyeh (Map 8). Most are found in grave contexts from a wide range of periods throughout the LBA. One was found in a public building, but none were found in domestic buildings. All come from northern Palestine and Transjordan; none were found in southern Palestine. All examples of this Type Family found in Transjordan were found in graves with projectiles. In northern Palestine, it is more likely to find this Type Family without projectiles. The only one found in northern Palestine with projectiles was a grave. The other three from northern Palestinian graves were all found without projectiles.

2 Akko Tombs, Tomb B3
Ben-Arieh and Edelstein 1977, p.33-34, pl.VII.2, fig. 19.4
BL: 17.5, TL: 11.5, TtL: 29, W: 3.5
III.2.iii.B LBII

10 Amman Airport Temple
Khalil 1980, p. 23, fig. 16.38
BL: 12, TL: 11, TtL: 23, W: 2.5
III.9#.b.A LBIB

57 Jatt, Tomb 7
Yannai 2000, p. 60, 75, fig. 12.133
BL: 25, TL: 7.5, TtL: 32.5, W: 3.5
III.8.i.A LBI

61 Jatt, Tomb 7
Yannai 2000, p. 60, 75, fig. 12.138
BL: 9, TL: 6, TtL: 15, W: 2
III.8.i.A LBI

72 Megiddo, Square W16, Tomb 877B1, east slope
Guy 1938, pl. 96.3
BL: 13.5, TL: 9.5, TtL: 23, W: 2.5
III.8.iii.A LBII

140 Sahab, Tomb C, centre of village
Khalil 1980, p. 23, fig. 16.35; R.W. Dajani, 1970, p. 62, pl. XVIII.SA153
BL: 18, TL: 10, TtL: 28, W: 2

III.8.iii.B LBIIA-IA IIB

146 Sahem, the tomb, southern part of the village

Fischer 1997a, p. 69-70, pl. 39.1, fig. 27.1

BL: 10, TL: 7, TtlL: 17, W: 2

III.8.iv.A LBA

148 Sahem, the tomb, southern part of the village

Fischer 1997a, p. 70, pl. 39.5, fig. 27.4

BL: 9, TL: 5.5, TtlL: 14.5, W: 2

III.8.iv.A LBA

150 Sahem, the tomb, southern part of the village

Fischer 1997a, p. 72, pl. 39.3, fig. 28.4

BL: 7.5, TL: 5, TtlL: 12.5, W: 1.5

III.8.b.A LBA

208 Tell es-Sa'idiyeh, 17-H-8, Tomb 102

Pritchard 1980, p. 16, pl. 52.9, fig. 5.12

BL: 16, TL: 11, TtlL: 27, W: 3

III.8.b.B LBIIB

Type Family 6: (Figure 6, Table 14)

This Type Family is defined by its long, blunt-tipped blade. They all have similar wear patterns which largely make their original blade type indeterminable due to its concavity from sharpening. This may indicate that they were purely utilitarian in nature. They have either hooked or short slim tangs and are double-edged. They can have either sloping or squared shoulders. Usually this Type Family does not have a midrib, but if one is present it is subtle. They can be anywhere from 17 to 31.5 cms in total length.

All of these blades are from LBII graves from Megiddo (Map 9) (except one dated broadly to the LBA). All were found with blades of Type Family 4, and all but one was found in association with projectiles. It is possible that this blade represents a local product at Megiddo or perhaps simply a locally favoured style.

This Type Family is very similar to Type Family 9, whose members all derive from Tell Beit Mirsim LBII domestic contexts. It is interesting that two types so similar in form developed (or have only been found thus far) at two sites in the opposite ends of Palestine during the same period of time. However, they seem to have respectively different meanings to the people using them given the contexts in which they were found. What would be even more interesting is if the similar styles could represent more than just a coincidence.

69 Megiddo, Block W16, Tomb 877B1, east slope
Guy 1938, pl. 94.18
BL: 13, TL: 4, TtL: 17, W: 2
XIV.9.i.A LBA

73 Megiddo, Square V17, Tomb 912B, east slope
Guy 1938, pl. 125.15
BL: 18, TL: 13.5, TtL: 31.5, W: 4
III.1.i.B LBII

113 Megiddo, Square V17, Tomb 911C, east slope
Guy 1938, p. 67, pl. 120.14
BL: 17, TL: 7.5, TtL: 24.5, W: 3
XIV.8.i.B LBII

114 Megiddo, Square V17, Tomb 912A, east slope
Guy 1938, pl. 123.21
BL: 17.5, TL: 12.5, TtL: 30, W: 3
VII.8.i.A LBII

118 Megiddo, Square V17, Tomb 912B, east slope
Guy 1938, pl. 125.13
BL: 15.5, TL: 12, TtL: 27.5, W: 3.5
III.1.i.A LBII

119 Megiddo, Square V17, Tomb 912B, east slope
Guy 1938, pl. 125.14
Rockefeller Museum (1934:1953)
BL: 16.5, TL: 11.5, TtL: 28, W: 3
III.8.i.B LBII

Type Family 7: (Figure 7)

This Type Family is defined by its riveted shoulders and lack of tang. Though most of the time the rivets were placed across the base, there is an instance (Cat. # 34) in which they were placed vertically in the centre of the base. Another variation (Cat. # 88) actually contained a broken slim tang, also uncommon in this Family. Most of these double-edged blades are tapering toward a blunt tip, typically without a midrib. The shoulders themselves are usually sloping or rounded. The total length varies between 15 and 26 cms.

This Type Family is found at Megiddo, Tell Beit Mirsim, Tell ed-Duweir, and Beth Shemesh (Map 10); therefore, they are all found at sites up and down the centre of Palestine. No members of this Type Family were found in Transjordan. Most are found in graves with two being found in domestic contexts. The one weapon from the north found with a projectile was the slim tanged example found in a domestic building, while

the blade from the south was found in a grave. This Type Family is similar to Philip's MBA Dagger Type 30 (1989: 460) which fits well with the majority of those found dating toward the beginning of the LBA. When found in Megiddo East Slope Tombs they are associated with socketed spearheads and, otherwise, with projectiles (Tables 10 & 14).

34 Beth Shemesh, Southwest, Second Cemetery, Tomb D
Grant 1929, p. 158, p. 153 #308 (fig.), p. 137 (pl.)
TtlL: 15, W: 3
XI.2.i.D LBA

75 Megiddo, Square W16, Tomb 1100B, east slope
Guy 1938, pl. 146.5, fig. 171.9
TtlL: 19, W: 4
XI.8.i.A LBI

76 Megiddo, Square W16, Tomb 1100B, east slope
Guy 1938, pl. 146.6, fig. 171.10
TtlL: 26, W: 5.5
XI.8.i.A LBI

88 Megiddo, Square O14, Stratum VIII, Room W, Tomb 3018 A-B, in domestic building southeast of temple
Loud 1948, p. 167, pl. 180.35
BL: 17, TL: 4, TtlL: 21, W: 4
XI.8.i.A MBIIB-LBI

163 Tell Beit Mirsim, Area SE, Block 33, Stratum D-4, domestic building
Albright 1938b, p. 52, pl. 41.6
TtlL: 15, W: 5
XI.8.b.B# MBIIB-LBI

184 Tell ed-Duweir, Tomb 555, cemetery southwest of tell
Tufnell, et al. 1958, p. 78-79, pl. 23.14
TtlL: 18, W: 4
XI.8.i.D? LBI-LBIIA

Type Family 8: (Figure 8, Table 14)

This Type Family is defined by its riveted tangs. Usually these tangs are thin with a single rivet placed in its centre, but in the case of those from Tell el-'Ajjul and from Akko, the tang is wide and may have up to three rivet holes in the tang. Most members of this Type Family have double-edged, tapering blades, blunt tips and squared shoulders. Examples range from 15.5 to 21 cms in total length. Midribs are nonexistent or indeterminable. Only the one variation from the Akko Tombs had a

pronounced midrib (Cat. # 5). The tangs of Cat. #s 188 and 189 from Tell el-'Ajjul had gold foil which would have encircled the top of the blade's handle.

This Type Family is found at Tell el-'Ajjul, Megiddo, Hazor, Akko Tombs and Jatt (Map 11). Most of these were found in the LBI period in a range of contexts in northern Palestine with only the blade from Akko being found with projectiles. None were found in Transjordan. This Family also resembles a Philip Type, Dagger Type 35 (1989: 482). Many of this Family are from the early LBA and are a possible continuation of style from the MBA.

5 Akko Tombs, Section find

Ben-Arieh and Edelstein 1977, p. 34, pl. XVIII.13, fig. 20.1

TtlL: 15.5, W: 2

XII.8.i.n LBII

54 Hazor, Area H, Stratum 2, Locus 2143, temple threshold/doorway

Yadin, et al. 1961, pl. CCCXLII.16, fig. CCLXX.25

BL: 10.5, TL: 6, TtlL: 16.5, W: 3

XII.8.b.B LBI

59 Jatt, Tomb 7

Yannai 2000, p. 60, 75, fig. 12.135

BL: 15, TL: 2.5, TtlL: 17.5, W: 3.5

XII.2.i.A LBI

78 Megiddo, Square M14, Stratum VIII, space empty of architecture well north of temple 2048

Loud 1948, p. 146, pl. 180.37

BL: 13, TL: 4, TtlL: 17, W: 4

XII.8.i.B LBI-LBIIA

82 Megiddo, Square L7, Stratum VIIA, Locus N=3061, room in west of Palace

Loud 1948, p. 170, pl. 180.46

BL: 16, TL: 3.5, TtlL: 19.5, W: 4.5

XII.8.i.B LBIIA-IA IA

188 Tell el-'Ajjul, GHA 855, Tomb 2093

Mackay and Murray 1952, p. 14, pl. XI.6

BL: 14, TL: 4.5, TtlL: 18.5, W: 3

XII.8.i.n LBI

189 Tell el-'Ajjul, GJD 948, building adjacent to courtyard

Mackay and Murray 1952, p. 14, pl. XI.10

BL: 17, TL: 4, TtlL: 21, W: 3

XII.2.iii.n MB/LBA

205 Tell el-'Ajjul, Lower Cemetery, Tomb 364

Petrie 1933, p. 9, pl. XIX.14

BL: 16, TL: 4.5, TtL: 20.5, W: 3.5
XII.8.iv.B LBI

Blade Individuals:

Most of the blade individuals are found in grave or temple contexts from the LBII period and are as likely to be found with projectiles as not (Table 18). The blade individuals from other contexts were not found with projectiles. As other LBA blades are discovered, many of these objects may become part of their own Type Families and may become more meaningful in the process. Perhaps some of these are actually Egyptian styles copied by the Palestinians of the LBA, or are indeed actually Egyptian blades; however, as no comprehensive typology of Egyptian weaponry exists to compare them to, this is difficult to determine.

17 Beth Shean, Level VII temple, Locus 1068, upper altar room.
Rowe 1940, p. 74, pl. XXXI.9; James and McGovern 1993, pl. 51.g, fig. 159.2
BL: 19, TL: 9, TtL: 28, W: 3
VII.9.i.A LBIIB

44 Hazor, Area E, cistern, Locus 7021, just outside a domestic building
Yadin, et al. 1958, pl. CLXVI.17, fig. CXLII.21
BL: 27, TL: 4, TtL: 31, W: 4.5
XIII.8.iv.B LBI

84 (Figure 9)
Megiddo, Square L6, Stratum VIIB, Tomb 3094, west of Palace
Loud 1948, p. 172, pl. 180.41
BL: 20.5, TL: 6, TtL: 26.5, W: 2.5
X.13.iv.C LBIIA-IA IA?

115 Megiddo, Square V17, Tomb 912B, east slope
Guy 1938, pl. 125.3
BL: 18.5, TL: 11.5, TtL: 30, W: 3
III.6.iii.A LBII

121 Megiddo, Square N-O, 13-14, Stratum VIII temple, Locus 2048, floor (VIIB-VIIA)
Loud 1948, p. 159, pl. 180.38
BL: 22, TL: 3.5, TtL: 25.5, W: indeterminable from plate
I.ind.ind.ind LBI-LBIIA

130 Megiddo, Square R 9, Stratum VIIA, Locus N=1813, domestic building
Loud 1948, p. 154, pl. 181.51
BL: 19, TL: 3.5, TtL: 22.5, W: 3
XIII.9&2.iii.C LBIIA-IA IA

131 (Figure 10)

Megiddo, Square R9, Stratum VIIB, Locus N=1829, domestic building
Loud 1948, p. 156, pl. 180.44
BL: 7.5, TL: 6.5, TtlL: 14, W: 1
I.14.vi.C LBIIA-IA IA

153 Tell Abu Hawam, Square C6, Stratum V temple, close to the sand.
Hamilton 1935, p. 59, pl. XXXIII.365
BL: 9, TL: 7.25, TtlL: 16.25, W: 2
VII.6.b.n LBII

179 (Figure 11)
Tell ed-Duweir, Tomb 538, cemetery southwest of tell
Tufnell, et al. 1958, p. 78-79, pl. 23.20
BL: 15, TL: 9, TtlL: 24, W: 3
VI.8.i.n LBII

180 (Figure 12)
Tell ed-Duweir, Tomb 538, cemetery southwest of tell
Tufnell, et al. 1958, p. 78-79, pl. 23.21
BL: 16, TL: 7, TtlL: 23, W: 2
XII.9.i.n LBII

196 (Figure 13) a possible Egyptian form
Tell el-'Ajjul, Lower Cemetery, Tomb 419 (the 'Governor's Tomb')
Petrie 1933, p. 6, pl. IX.26
BL: 18.9, TL: 10.2, TtlL: 29.1, W: 5
IV.6.iv.n LBIIB

Blade fragments

The following objects were of such condition that they could not, with any certainty, be placed appropriately within the typology. Other incomplete objects such as Cat. #s 68, 145, & 155 were placed with appropriate Type Families because even though certain characteristics were indeterminable, these objects were complete enough to be included in the typology proper. The following are blades that were so fragmentary they could not be assigned to a Type Family. They have instead simply been listed here and considered in the other portions of this study at large. The bulk of projectiles found in association with blade fragments are found within the LBII period in grave and temple contexts (Table 19).

13 Tell el-'Ajjul, Trench 8, Horizon 2, Locus 47, domestic building
Fischer and Sadeq 2002, p. 115, 119, Fig. 10.2
BL: 7, TL: 1, TtlL: 8, W: 1.5
b.8.i.A LBI-LBIIA

- 21 Beth Shean, Level VIII temple, Locus 1068, below floor, altar room
Rowe 1940, p. 76, pl. XXXII.11; James and McGovern, 1993, fig. 152.5
BL: 6, TL: 1, TtlL: 7, W: 2.5
b.9#.ind.A LBIIB
- 22 Beth Shean, Level VIII temple, Locus 1068, below floor, altar room
James and McGovern 1993, fig. 152.6
TtlL: 11, W: 2.5
ind.9#.i.ind LBIIB
- 23 Beth Shean, Level VIII temple, Locus 1091
James and McGovern 1993, fig. 159.4
BL: 6, TL: .5, TtlL: 6.5, W: 2.5
b.1#.ind.A LBIIB
- 25 Beth Shean, Level VII public building, Locus 1243
James and McGovern 1993, fig. 159.1
BL: 17, TL: 2, TtlL: 19, W: 4
b.8.i.A LBIIB
- 28 Beth Shean, Level VIII domestic building, Locus 1399
James and McGovern 1993, fig. 159.3
TtlL: 17.5, W: 4
b.8.i.B LBIIB
- 33 Beth Shemesh, Southwest area, Second Cemetery
Grant 1929, p. 148, p. 153 #83
TtlL: 16, W: 4
ind.8.iv.B LBA
- 43 Hazor, Sub-Area D2, Square R15, domestic building floor
Yadin, et al. 1958, pl. CLXX.10, fig. XCVIII.33
TtlL: 7, W: 3
ind.8#.i.ind MBII-LBA
- 45 Hazor, Area C, Stratum 2, Locus 6186
Yadin, et al. 1960, pl. CLXXIX.11, fig. CXXVI.29
TtlL: 5.5, W: 1.5
ind.8#.i.ind LBI
- 60 Jatt, Tomb 7, hewn into northern slope of a chalk hill southeast of Tell Jatt.
Yannai 2000, p. 60, 75, fig. 12.137
TtlL: 12, W: 3
ind.6#?.iii.ind LBI
- 80 Megiddo, Square O14, Stratum VII, public building
Loud 1948, p. 148, pl. 180.45
BL: 9.5, TL: 6.5, TtlL: 16, W: 3.5
VII.1#.ind.B LBIIA-IA IA
- 126 Megiddo, Square S 9-10, Stratum VIIA, Locus W=1779, domestic building

Loud 1948, p. 153, pl. 181. 49

TtlL: 19, W: 4

b.8.i.B LBIIA-IA IA

137 Sahab, Tomb C, centre of village

Dajani 1970, p. 34, pl. XVIII.SA290

TtlL: 10, W: 2

ind.9#?.iv.ind LBIIA-IA IIB

138 Sahab, Tomb C, centre of village

Dajani 1970, p. 34, pl. XVIII.SA298

TtlL: 11, W: 2.5

ind.9#?.ind.ind LBIIA-IA IIB

139 Sahab, Tomb C, centre of village

Dajani 1970, p. 34, pl. XVIII.SA292

BL: 10, TL: 2, TtlL: 12, W: 2

b.8.b.A LBIIA-IA IIB

141 Sahab, Tomb C, centre of village

Khalil 1980, p. 23, fig. 16.40; R.W. Dajani, 1970, pl. XVIII.SA288

BL: 11, TL: 1, TtlL: 12, W: 1.5

b.8.iii.A LBIIA-IA IIB

144 Sahab, Tomb C, centre of village

Khalil 1980, p. 23, fig. 16.41; R.W. Dajani, 1970, pl. XVIII.SA291

TtlL: 14.5, W: 1.5

ind.9#.iii.ind LBIIA-IA IIB

149 Sahem, the tomb, southern part of the village

Fischer 1997a, p. 70, pl. 39.7, fig. 27.5

TtlL: 8.5, W: 1.5

b.9.i.B LBA

176 Tell ed-Duweir, Tomb 216, cemetery northwest of tell

Tufnell, et al. 1958, p. 78-79, pl. 23.17

BL: 13.5, TL: 0.5, TtlL: 14, W: 3

b.2.iv.D LBI-LBIIA

178 Tell ed-Duweir, Tomb 538, cemetery southwest of tell

Tufnell, et al. 1958, p. 78-79, pl. 23.18

BL: 10.5, TL: 2, TtlL: 12.5, W: 2.5

b.8.i.B LBII

183 Tell ed-Duweir, Tomb 555, cemetery southwest of tell

Tufnell, et al. 1958, p. 78-79, pl. 23.13

TtlL: 17.5, W: 4

ind.6?.iii.ind LBI-LBIIA

201 Tell el-‘Ajjul, LK² 1035=1095, domestic building west of Fort V

Petrie 1933, p. 9, pl. XX.31

TtlL: 8.5, W: 2
ind.9#.i.ind LBA/EI

204 Tell el-'Ajjul, Trench 8, Horizon 2, Locus 47, domestic building
Fischer and Sadeq 2002, p. 115, 119, Fig. 10.2
BL: 7, TL: 1, TtlL: 8, W: 1.5
b.8.i.A LBI-LBIIA

206 Tell el-'Ajjul, Lower Cemetery, Tomb 364
Petrie 1933, p. 9, pl. XIX.15
TtlL: 6, W: 2
II#.ind.ind.ind LBI

Knives

Type Family 9: (Figure 14)

The blunt tip and what is usually a wide tang defines this Type Family. Typically, there are not so much shoulders as there is a merging between the tang and the base of the double-edged, usually tapering blade. These blades do not contain midribs and are typically 13 to 16 cms in total length.

All of the blades of this Family were found in LBII settlement contexts at Tell Beit Mirsim (Map 12). This Family is similar to Type Family 6, which in turn is exclusively from LBII Megiddo graves. Like Type Family 6, it is another blade that may have been locally produced. None were found with projectiles (Table 15).

159 Tell Beit Mirsim, Area SE, Block 33, Stratum C, found in debris
Albright 1938b, p. 73, pl. 41.12
BL: 11, TL: 5, TtlL: 16, W: 3
b.8.i.n LBII

160 Tell Beit Mirsim, Area SE, Block 13, Stratum C, domestic building
Albright 1938b, p. 73, pl. 41.23
BL: 12, TL: 1.5, TtlL: 13.5, W: 2.5
b.8.i.A LBII

161 Tell Beit Mirsim, Area SE, Block 3, Stratum C, domestic building
Albright 1938b, p. 73, pl. 41.22
BL: 10, TL: 3, TtlL: 13, W: 2.5
b.9.i.n LBII

Type Family 10: (Figure 15, Table 15)

This Type Family is defined by its 'dog leg' blade shape. Little else can be determined as 'typical' of this Type Family because only two examples were found, one of which is broken and therefore missing its tang and shoulder information. The whole

specimen possesses no tang, a pointed tip, and lugged shoulders. The number of edges on the blade is unknown. Found in domestic contexts at Megiddo and Pella (Map 13) without projectiles, these two objects date to the LBI-LBIIA and LBI respectively.

87 Megiddo, Square O14, Stratum VIII, Room W, Tomb 3018 A-B, in domestic building southeast of temple
Loud 1948, p. 167, pl. 180.34
TtlL: 10.5, W: 2
ind.12#.iv.ind LBI-LBIIA

135 Pella, Area IIIC, Phase VA, Locus 52134, domestic building
McNicoll, et al. 1992, p. 51, 58, pl. 46.1
TtlL: 14.1, W: 2.7
n.12.iii.F LBI

Type Family 11: (Figure 16, Table 15)

This Type Family is defined by its single edge having a 'cut-out' about three-quarters of the way up its straight blade. They have no tang or midrib but may have lugged shoulders. The tip may be curled and pointed or it may be squared. Total lengths range from 14 to 19.5 cms. Knife Individual 211 may actually be a variation of this Type Family but it does not contain the cut-out on the edge of the blade and is from a different context type. However, it is from Tell Farah (South) and therefore from the same general region as the Type Family: southern Palestine.

These blades are only found in graves from Deir el-Balah and Tell ed-Duweir (Map 14) throughout the LBA. The blades from Deir el-Balah were not accompanied by projectiles, whereas the one from Tell ed-Duweir was found with 22 projectiles.

36 Deir el-Balah, Cemetery, Tomb 114, by left shin
Dothan 1979, p. 18-19, fig. 34
TtlL: 14, W: 1.5
n.4.ii&iii.F LBA

38 Deir el-Balah, Cemetery, Tomb 118
Dothan 1979, p. 72, fig. 157
TtlL: 14.5, W: 2
n.4.ii&iii.F LBA

172 Tell ed-Duweir, Tomb 216, cemetery northwest of tell
Tufnell, et al. 1958, p. 78-79, pl. 23.7 & 54.46
TtlL: 19.5, W: 2
n.4.vi.F LBI-LBIIA

Knife Individual: (Table 18)

211 Tell Farah (South), Block T 376.7, Fort
Petrie 1930, pl. L.591
TtlL: 11.5, W: 1.5
n.14.ii&iv.F LBA

Type Family 12: (Figure 17, Table 15)

This Type Family is defined by its single-edged, half-tapering blade and 'catch' shoulder type. Having a range of tang types, these objects typically have rounded tips and no midrib. One variation has a curled tip (Cat. # 111). Examples may measure between 16 and 32.5 cms in total length.

These knives are found in Deir el-Balah, Megiddo and Tell ed-Duweir (Map 15). None were found in Transjordan. All were found in graves without projectiles. Those from Deir el-Balah were broadly dated to the LBA while the others belong to the LBII period.

37 Deir el-Balah, Cemetery, Tomb 114
Dothan 1979, p. 19, figs. 35
BL: 13, TL: 3, TtlL: 16, W: 1
IV.5.iv.C LBA

111 Megiddo, Square V17, Tomb 911B, east slope
Guy 1938, pl. 119.17, fig. 172.3
BL: 20, TL: 12.5, TtlL: 32.5, W: 2
VII.5.ii&iv.C LBII

177 Tell ed-Duweir, Tomb 537, cemetery southwest of tell
Tufnell, et al. 1958, p. 78-79, pl. 23.19
BL: 15.5, TL: 4.5, TtlL: 20, W: 2
XIV.5.b.C LBII

Type Family 13: (Figure 18, Table 15)

This Type Family is defined by its animal hoof handle type. These knives usually have a single-edged, recurved blade with no midrib, and if it has shoulders they are usually of the 'catch' type. The tip can be blunt, pointed or rounded and total lengths range from 16.5 -30 cms. One knife (Cat. # 35) from Deir el-Balah differed from the norm in that it had a half-tapering blade. A portion of Catalogue # 154's handle was manufactured for the use of an inlay. Catalogue # 24 is a fragmented, questionable member of this Type Family in that it is placed here solely on the speculation of James and McGovern (1993: fig. 152.4).

This Type Family is found in Beth Shean, Tell Abu Hawam, Tell el-'Ajjul, Deir el-Balah, Sahem, and Tell ed-Duweir (Map 16). This, the most prolific knife type, is mostly found in graves though two were found, each in settlement contexts, and one in a public context in Palestine. Those found in graves and the public building were accompanied by projectiles except the grave from Deir el-Balah with the different blade type. Those from settlement contexts were not found with projectiles.

24 Beth Shean, Level VIII temple, Locus 1091
Rowe 1940, pl. XXXII.5; James and McGovern 1993, p. 206, fig. 152.4
TtlL: 25, W: 2.5
I#?.9#.i.C LBIIB

35 Deir el-Balah, Cemetery, Tomb 114, by left shin
Dothan 1979, p. 18, figs. 32 & 33
BL: 19.5, TL: 9.5, TtlL: 29, W: 2.3
I.5.i.n LBA

151 Sahem, the tomb, southern part of the village
Fischer 1997a, p. 71-72, pl. 39.2, fig. 28.3
BL: 10.5, TL: 6, TtlL: 16.5, W: 1.5
I.7.iv.n LBA

154 Tell Abu Hawam, Square E4, Stratum V, domestic building
Hamilton 1935, p. 60-61, p. 60 #374A
BL: 18, TL: 12, TtlL: 30, W: 2
I.7.iii.n LBII

169 Tell ed-Duweir, Tomb 216, cemetery northwest of tell
Tufnell, et al. 1958, p. 78-79, pl. 23.4 & 54.43
BL: 13, TL: 14, TtlL: 27, W: 2.5
I.7.i.C LBI-LBIIA

170 Tell ed-Duweir, Tomb 216, cemetery northwest of tell
Tufnell, et al. 1958, p. 78-79, pl. 23.5 & 54.44
BL: 16, TL: 12.5, TtlL: 28.5, W: 2.5
I.7.iv.C LBI-LBIIA

171 Tell ed-Duweir, Tomb 216, cemetery northwest of tell
Tufnell, et al. 1958, p. 78-79, pl. 23.6 & 54.45
BL: 11, TL: 12, TtlL: 23, W: 2
I.7.iii.n LBI-LBIIA

191 Tell el-'Ajjul, GBW 924, building
Mackay and Murray 1952, p. 14, pl. XIII.49
BL: 10, TL: 13, TtlL: 23, W: 2
I?.7.iv.C LBI

Knife Individual: (Table 18)

122 (Figure 19)

Megiddo, Square M12, Stratum VIII, Locus S=5227, domestic building

Loud 1948, p. 187, pl. 179.32

BL: 12.5, TL: 10, TtL: 22.5, W: 2.5

V.7.vi.n

LBI-LBIIA

Type Family 14: (Figure 20, Table 15)

This Type Family is defined by its riveted and/or flanged handle, its recurved, single-edged blade and its lack of shoulders and midrib. Tips are either pointed or rounded. A 'catch' shoulder as in Catalogue # 20 may appear as a form of slight variation. Total lengths vary from 21 to 36 cms.

These knives are found in Beth Shean, Tell Mevorakh, Pella, Megiddo, and Tell el-'Ajjul (Map 17) in a range of contexts throughout the LBA. They are found with projectiles in the grave at Pella and the domestic building at Beth Shean. They are found without projectiles in public buildings, the domestic building at Megiddo, and the Tell el-'Ajjul grave. They resemble Philip's Curved-Knife Type 1 (1989: 505), the 'classic' curved knife style of the MBA. The fact that they seem to be a somewhat rare continuation from the MBA (most are from the LBI period) and that most are found within grave and temple contexts may suggest that they warrant more than a merely utilitarian interpretation within the LBA.

12 Beth Shean, Level IX temple

Rowe 1930, pl. 35.3

Rockefeller Museum (M1069)

TtL: 25, W: 1.8

X.7.iii.ind LBI

20 Beth Shean, Level VII domestic building courtyard, Locus 1381

James and McGovern 1993, p. 206, fig. 152.1

BL: 14, TL: 7, TtL: 21, W: 2.5

X.7.b.C LBIIB

136 Pella, Area XI, Tomb 62, northeast crest of Tell el-Husn

McNicoll, et al. 1992, p. 70, pl. 61.20

BL: 30, TL: 4, TtL: 34, W: 4

X.7.iii.n MBIIC-LBI

199 Tell el-'Ajjul, Lower Cemetery, Tomb 336

Petrie 1933, p. 9, pl. XIX.12

BL: 24, TL: 12, TtL: 36, W: 4

II.7.iii.n LBI

217 Tell Mevorakh, Stratum X temple, Locus 248
Stern 1984, p. 24, pl. 31.9, fig. 3.5
TtlL: 23.5, W: 2.5
XII.7.iv.n LBIIA

233 Megiddo, Square O14, Stratum IX, N=3011, room south of temple
Loud 1948, pl. 179.25
BL: 22, TL: 2, TtlL: 24, W: 2.5
XII?.7.iii.n LBI

Type Family 15: (Figure 21, Table 15)

This Type Family is defined by its crescent-shaped blade, a long, broad handle, a pointed or blunt tip, no midrib and either a 'catch' shoulder or no shoulder at all. This type is found at Gezer and Tell ed-Duweir (Map 18) in graves of the LBIIA and LBI-LBIIA periods respectively; in other words, both were found in central, southern Palestine. None were found in Transjordan or northern Palestine. The knife from Gezer was found alone with no projectiles or other weapons from the same context, though the burial cave itself contained numerous burials with goods from different time periods. The knife from Tell ed-Duweir was found with a number of examples from other Type Families as well as 22 projectiles.

41 Gezer, Field I, Cave 10A, grave on tell, Locus 10079.P
Seger 1988, p. 198, pl. 76A, fig. 14.8
BL: 6.5, TL: 11, TtlL: 17.5, W: 2
V.3.i.C LBIIA

173 Tell ed-Duweir, Tomb 216, cemetery northwest of tell
Tufnell, et al. 1958, p. 78-79, pl. 23.8 & 54.42
BL: 5, TL: 5.5, TtlL: 10.5, W: 1.5
V.3.iii.n LBI-LBIIA

Type Family 16: (Figure 22, Table 15)

This Type Family is defined by its 'chopping' blade type and therefore its blunt tip. As both are from the Petrie excavations at Tell el-'Ajjul (Map 19), they are only portrayed by the most basic of line drawings. Only one of the blades is anywhere approaching whole, the other is missing its tang completely. It can only be assumed that both most likely had a long broad handle and a 'catch' shoulder based on Catalogue # 203 and the depiction given of Cat. # 202. Both are from domestic buildings west of the 'Palace' area and were found without projectiles; one dating from the LBI, the other from the LBA/IA transition. These are apparently a local style to Tell el-'Ajjul.

202 Tell el-'Ajjul, LZ⁶ 990, domestic building west of Fort III
Petrie 1933, pl. XXI.36
TtlL: 10, W: 3.5
ind.10.i.ind LBI

203 Tell el-'Ajjul, QP 1071=1110, domestic building west of Fort V
Petrie 1933, pl. XXI.38
BL: 7, TL: 5.5, TtlL: 12.5, W: 2
V.10.i.C LBA/EI

Small Blades

The generic term 'small blade' has been ascribed to any complete blade that measures approximately 5-12 cm in total length. As these blades could be anything from pocket knives to any sort of projectile, the label 'small blade' is as specific as I care to be in labelling them.

Type Family 17: (Figure 23, Table 16)

This Type Family is normally defined by its double-edged, tapering blade, and where determinable its slim tang whether short or long. They usually have pointed or rounded tips and may have sloping or squared shoulders. The presence or absence of midribs is largely indeterminable from the plates. Their total lengths fall between 7.5 and 12 cms.

Members of this Family can be found in Beth Shean, Megiddo, Hazor, Tell Beit Mirsim, and Tell el-'Ajjul (Map 20). Only one of this Type Family found in the grave at Madaba and one in a public building at Megiddo were found with projectiles. These blades are found in a variety of contexts. However, given their size and the fact that a few of them were found in forts brings the question of whether any of these may actually be projectiles. Of course their presence within a number of domestic buildings may indicate they are simply a popular version of the early pocket knife.

29 Beth Shean, Northern Cemetery, Tomb 42
Oren 1973, p. 93, fig. 34.10
BL: 6, TL: 3.5, TtlL: 9.5, W: 2
VII.8.iii.B LBI

42 Hazor, Area C, Stratum 1A, Domestic building, Locus 6072
Yadin, et al. 1958, pl. CLX.17, fig. LXXXVIII.24
BL: 6.5, TL: 2.5, TtlL: 9, W: 2

XIV.8.b.A LBII

65 Madaba, tomb to the east of Tell Madaba

Harding 1953, p. 32, pl. V.179

BL: 8, TL: 4 TtlL: 12, W: 2

VII.9.iv.n LBIB-IA IA

66 Megiddo, Square V18, Tomb 26, east slope

Guy 1938, p. 103, pl. 154.23

TtlL: 9, W: 2

ind.8.iv.A LBA

120 Megiddo, Square N-O, 13-14, Stratum VIII temple, Locus 2048

Loud 1948, p. 159, pl. 180.39

BL: 7.5, TL: 3.5, TtlL: 11, W: 1.5

XIV.9&2.iii.B LBI-LBIIA

157 Tell Beit Mirsim, Area SE, Block 22, Stratum D-8, domestic building

Albright 1938b, p. 38, 52, pl. 41.24

BL: 6.5, TL: 1, TtlL: 7.5, W: 2

b.8.iv.B LBII

198 Tell el-'Ajjul, PM 1027=1077, Fort V

Petrie 1933, p. 8, pl. XVIII.5

BL: 5, TL: 2.5, TtlL: 7.5, W: 1

ind.8.iv.B LBA/EI

200 Tell el-'Ajjul, LH 946=1006, domestic building west of Fort III

Petrie 1933, p. 9, pl. XX.26*

BL: 8, TL: 2, TtlL: 10, W: 3

XIV?.8.i.A LBI

207 Tell el-'Ajjul, LA 940=1000, domestic building west of Fort III

Petrie 1933, p. 9, pl. XX.26

BL: 6, TL: 2, TtlL: 8, W: 2

XIV.8.i?.A LBI

230 Megiddo, Square N14, Stratum IX, uncertain location within the Square

Loud 1948, pl. 179.26

BL: 9, TL: 1.5, TtlL: 10.5, W: 1.5

XIII.8.iii.B LBI

231 Megiddo, Square O14, Stratum IX, uncertain location within Square

Loud 1948, pl. 179.27

BL: 9.5, TL: 1, TtlL: 10.5, W: 3.5

XIII?.8.b.A LBI

232 Megiddo, Square N15, Stratum IX, T. 2108, within a domestic building

Loud 1948, pl. 179.28

BL: 9, TL: 1.5, TtlL: 10.5, W: 2

XIV?.8&2.b.B LBI

Type Family 18: (Figure 24, Table 16)

This Type Family is defined by its blunt tip, straight blade, and short slim tang. Usually without shoulders, this type typically merges from the tang smoothly into the blade, though one instance does occur of sloping shoulders. A midrib is normally not present on these blades whose number of edges is difficult to determine from the plates. Total lengths vary from 5 to 8 cms.

Found in Megiddo and Tell Farah (South) only (Map 21), these blades are not found in graves. They were found in public buildings of Megiddo during the LBIIA-IA IA, one of which was found with two projectiles, and in an LBA domestic building at Tell Farah (South) found without projectiles.

86 Megiddo, Square K6, Stratum VIIB, Locus 3187, public building
Loud 1948, p. 176, pl. 180.43
BL: 6, TL: 2, TtlL: 8, W: 1.5
XIV.9.i.A LBIIA-IA IA

132 Megiddo, Square K11, Stratum VIII palace (?), Locus 5028, public building
Loud 1948, p. 182, pl. 180.42
BL: 3.5, TL: 1.5, TtlL: 5, W: 1
XIV.9.i.n LBIIA-IA IA

213 Tell Farah (South), XP 370, domestic building
Macdonald, et al. 1932, pl. LXII.13
BL: 5.5, TL: 2, TtlL: 7.5, W: 1.5
XIV.9.i.n LBA

Type Family 19: (Figure 25, Table 16)

This Type Family is defined as an hourglass tang that either merges into the blade or has sloping shoulders. This Family is typically characterized by a double-edged, straight blade, a blunt tip and no midrib. The only two examples come from Megiddo (Map 22) possibly indicating another local style. Neither was found with projectiles.

79 Megiddo, Square O14, Stratum VIII, public building
Loud 1948, p. 148, pl. 179.31
BL: 7, TL: 2, TtlL: 9, W: 1.5
IV.9.i.n LBI-LBIIA

129 Megiddo, Square S 10-11, Stratum VIIA, Locus N=1796, domestic building
Loud 1948, p. 154, pl. 181.50
BL: 7, TL: 3, TtlL: 10, W: 2.5
IV.9.i.A LBIIA-IA IA

Small Blade Individuals: (Table 18)

Most Small Blade Individuals date to the LBII period with the only example found with a projectile being Cat. #52 which was found in a pit.

51 Hazor, Area H, Stratum 1A temple, Locus 2113
Yadin, et al. 1961, pl. CCCXLII.8, fig. CCLXXXIII.36
BL: 6, TL: 5, TtlL: 11, W: 1.5
III.2.b.A LBII

52 Hazor, Area H, Stratum 1B, Locus 2156, large pit outside temple (favissa)
Yadin, et al. 1961, pl. CCCXLII.11, fig. CCLXXVIII.18
BL: 8, TL: 2, TtlL: 10, W: 1.5
XIV.6.iii.n LBII

53 Hazor, Area H, Stratum 2, Locus 2139, Temple room/hall
Yadin, et al. 1961, pl. CCCXLIII.26, fig. CCLXX.26
BL: 9, TL: 2.5, TtlL: 11.5, W: 2
XIV.8.i.C LBI

134 (Figure 26)
Megiddo, Square W 15-16, Tomb 989B1, east slope
Guy 1938, pl. 99.3
BL: 4, TL: 1.5, TtlL: 5.5, W: 1
XIII.14.i.B LBA

158 (Figure 27)
Tell Beit Mirsim, Area SE, Block 12, Stratum D or C, domestic building
Albright 1938b, p. 52, pl. 41.17
TtlL: 11.2, W: 4
XI.1.iv.ind LBII

Spearheads

Socketed spearheads in general become much less prevalent in the LBA as compared to the MBA. In fact, many of the socketed spearheads to be mentioned here may actually date to the MBA; in particular Type Families 20, 21, and 24. For instance, Philip's Socketed Spearhead Type 8 (1989: 365) holds a reasonable resemblance to my Type Families 20 and 21; his Socketed Spearhead Type 5 (1989: 359) resembles my Type Family 24; and though his Socketed Spearhead Type 10 (1989: 372) is similar to my Type Family 23, all of my examples date to the LBII period. Unlike Type Families 20, 21 and 24, spearheads belonging to Type Families 22 and 23 are most likely not an indication of a continuation of style from the MBA.

The main spearheads of questionable date are from Megiddo tombs 84 and 1100. Gonen dates tomb 1100 to the 16th-15th c. B.C. (1992: 41) based on the majority of the pottery found in the tombs but makes no mention of the date of tomb 84. Given that Philip (1989) discussed a few of the same spearheads I have mentioned, he believed these weapons and some others from tomb 912D to date to the MBA. Indeed, Gonen does state that tomb 1100 and 912D were MBI (i.e. EBIV) multi-chambered shaft tombs that were reused in the MBIIA (1992: 42). However, the 'exact' date of these spearheads remains enigmatic as the dates provided in the original publications were also problematic (see Chapter 3, Megiddo).

Type Family 20: (Figure 28, Table 17)

This Type Family is defined by its straight socketed 'tang', double-edged, convex blade, squared shoulders and pronounced midrib. The tip may be rounded or triangular. Examples range from 14 to 19 cms in total length. This Family of spearhead is found only at Megiddo and Beth Shean (Map 23). The one from Beth Shean was found in an LBIIB temple without projectiles and has a shorter tang than those from Megiddo. All of the ones from Megiddo were in three different LBI (possibly MBA) graves, all found with projectiles. This Type Family resembles Philip Socketed Spearhead Type 8 (1989: 365).

30 Beth Shean, Level VII temple, Locus 1105
Rowe 1940, p. 76, pl. XXXII.10; James and McGovern 1993, p. 211-212, fig. 158.2
BL: 10.5, TL: 3.5, TtlL: 14, W: 3
XVI.2.iv.B LBIIB

94 Megiddo, Square W16, Tomb 1100A, east slope
Guy 1938, pl. 145.11
BL: 7.5, TL: 7, TtlL: 14.5, W: 3
XVI.2.vii.B MBII or LBI

95 Megiddo, Square W16, Tomb 1100A, east slope
Guy 1938, not pictured
(Reference Catalogue #94).

96-97 Megiddo, Square W16, Tomb 1100A, east slope
Guy 1938, not pictured
(Reference Catalogue #94).

98 Megiddo, Square W16, Tomb 1100B, east slope
Guy 1938, pl. 146.3, fig. 170.8
BL: 9.5, TL: 8.5, TtlL: 14.5, W: 2.5
XVI.2.vii.B MBII or LBI



99 Megiddo, Square W16, Tomb 1100B, east slope
Guy 1938, pl. 146.4, fig. 170.9
BL: 9.5, TL: 9.5, TtL: 19, W: 3
XVI.2.iv.B MBII or LBI

100 Megiddo, Square W16, Tomb 1100D, east slope
Guy 1938, pl. 149.1, fig. 170.5
BL: 8, TL: 8.5, TtL: 16.5, W: 4
XVI.2.vii.B MBII or LBI

Type Family 21: (Figure 29, Table 17)

This Type Family is defined by its straight socketed 'tang', double-edged, tapering blade, round tip, rounded shoulders, and pronounced midrib. It is only found at Megiddo in Tomb 1100D (Map 24). The spearheads were in a context which did not contain projectiles. Arguably, all of the spearheads belonging to this Type Family could date to the late MBA.

101 Megiddo, Square W16, Tomb 1100D, east slope
Guy 1938, pl. 149.4, fig. 170.6
BL: 9.5, TL: 9, TtL: 18.5, W: 3.5
XVI.8.iv.D MBII or LBI

102-104 Megiddo, Square W16, Tomb 1100D, east slope
Guy 1938, not pictured
(Reference Catalogue #101).

109-110 Megiddo, Square W16, Tomb 1100D, east slope
Guy 1938, not pictured
(Reference Catalogue #101).

Type Family 22: (Figure 30)

This Type Family is characterized by its flared socketed 'tang', leaf-shaped blade, round tip and lack of shoulders and midrib. However, Catalogue #s 185 and 210 have a subtle and pronounced midrib respectively, so midribs can occur in members of this Family. These spearheads range from 15.5 to 23.5 cms in total length.

These spearheads are found at Beth Shean, Tell ed-Duweir, Tell es-Sa'idiyeh, and Tell Farah (South) (Map 25). All were found in graves from the LBA except for the two found at Beth Shean; one in a public and one in a domestic building. There is no pattern for the projectiles found with this Type Family. The few projectiles found were within grave and temple contexts (Table 17).

31 Beth Shean, Level VIII temple, Locus 1068, below east wall, altar room
James and McGovern 1993, p. 212, fig. 158.4
BL: 12.5, TL: 10.5, TtL: 23, W: 3
IX.6.iv.n LBIB

32 Beth Shean, Level VIII domestic building, Locus 1301
James and McGovern 1993, p. 212, pl. 51.f, fig. 158.3
BL: 8, TL: 7.5, TtL: 15.5, W: 2
IX.6.iv.n LBIB

174 Tell ed-Duweir, Tomb 216, cemetery northwest of tell
Tufnell, et al. 1958, p. 78-79, pl. 23.9 & 54.39
BL: 9.5, TL: 8, TtL: 17.5, W: 2.5
IX.6.i.n LBI-LBIIA

175 Tell ed-Duweir, Tomb 216, cemetery northwest of tell
Tufnell, et al. 1958, p. 78-79, pl. 23.9 & 54.40
BL: 10, TL: 8, TtL: 18, W: 2.5
IX.6.iv.n LBI-LBIIA

185 Tell ed-Duweir, Tomb 559, cemetery southwest of tell
Tufnell, et al. 1958, p. 78-79, pl. 23.12
BL: 13.5, TL: 10, TtL: 23.5, W: 3
IX.6.iv.n LBIB-IA IA

210 Tell es-Sa'idiyeh, 17-J-7, Tomb 129, cemetery
Pritchard 1980, pl. 63.3, fig. 31.5
BL: 12, TL: 9.5, TtL: 21.5, W: 2.5
IX.6.iv.n LBII

214 Tell Farah (South), Tomb 914, cemetery
Macdonald, et al. 1932, p. 23, pl. XLVII & XLVIII.1
BL: 16, TL: 13, TtL: 29, W: 3.5
IX.6.iv.n LBA

Type Family 23: (Figure 31, Table 17)

This Type Family is defined by its double-edged, tapering blade, flared socketed 'tang', and sloping shoulders. The blade tips can be blunt, pointed or rounded. Midribs are either nonexistent or pronounced. Their total lengths vary from 18 to 23.5 cms. These spearheads were found at Tell Dan, Tell Farah (South), Tell ed-Duweir, and the Akko Tombs; all in LBII graves (Map 26).

167 Tell Dan, Area B, Tomb 387 (the 'Mycenaean Tomb')
Biran and Ben-Dov 2002, p. 121, figs. 2.89 and 2.90, #120
BL: 11, TL: 8, TtL: 19, W: 3.2
IX.8.iv.n LBII

181 Tell ed-Duweir, Tomb 542, cemetery southwest of tell
Tufnell, et al. 1958, p. 78-79, pl. 23.16
BL: 10, TL: 10, TtlL: 20, W: 3
IX.8.i.A LBII

186 Tell ed-Duweir, Tomb 4004, cemetery north of tell
Tufnell, et al. 1958, p. 78-79, pl. 23.11
BL: 11.5, TL: 9, TtlL: 20.5, W: 3
IX.8.iii.n LBII

215 Tell Farah (South), Tomb 960, cemetery
Macdonald, et al. 1932, p. 26, pl. LV.293
BL: 11.5, TL: 12, TtlL: 23.5, W: 3
IXI.8.i.A LBII

218 Akko Tombs, Section find
Ben-Arieh and Edelstein 1977, pl. XVIII.12, fig. 20.2
BL: 11, TL: 7, TtlL: 18, W: 3
IX.8.i.A LBII

Type Family 24: (Figure 32, Table 17)

This Type Family is defined by its long, tapering blade, straight socketed 'tang', square shoulders, and pronounced midrib. Total lengths vary from 13 to 18 cms. They are only found at Megiddo in LBI graves without projectiles, possibly indicating a local style (Map 27). Megiddo Tomb 84 may actually date to the MBA.

90 Megiddo, Square U-V 19, Tomb 37A, east slope, disturbed
Guy 1938, pl. 137.8
BL: 8.5, TL: 4.5, TtlL: 13, W: 3
XVI.8.ind.B LBI

91 Megiddo, Square T 18, Tomb 84, east slope
Guy 1938, pl. 163.9
BL: 15.5, TL: 2.5, TtlL: 18, W: 3
XVI.8.iii.B MBII or LBI

92 Megiddo, Square T 18, Tomb 84, east slope
Guy 1938, not pictured
(Reference Catalogue # 91)

Spearhead Individuals: (Table 18)

The two Spearhead Individuals from tombs at Megiddo were found with projectiles while the Individual from the Tell Beit Mirsim domestic building was not.

89 Megiddo, Square U-V 19, Tomb 36B, east slope
Guy 1938, p. 106, pl. 156.4
BL: 8.5, TL: 3.5, TtlL: 12, W: 2
IX.6.iii.n LBII

93 Megiddo, Square W16, Tomb 1100A, east slope
Guy 1938, pl. 145.10, fig. 170.7
BL: 7, TL: 1.5, TtlL: 8.5, W: 3
ind.6.i.n MBII or LBI

162 Tell Beit Mirsim, Area SE, Block 23, Stratum E or D, domestic building
Albright 1938b, p. 52, pl. 41.18
BL: 5.5, TL: 4.5, TtlL: 10, W: 2
XVI.8.i.A MBIIB-LBI

Spearhead Fragments (Table 19)

107 Megiddo, Square W16, Tomb 1100D, east slope
Guy 1938, not pictured
MBII or LBI

Items Not Pictured

The majority of the not pictured items found with projectiles were found in graves (Table 20). However, the bulk of this material is from Tomb 1 at Tell Dothan, a tomb which has yet to be fully published; therefore, the above statement may at best be a gross generalisation as actual associated objects could not be determined.

Daggers

219 Dagger(?)
Pella, Settlement, IIP 104.50
Philip, et al. 2003, p. 74
LBIIB

221 Daggers (26)
Tell Dothan, Western Cemetery, Tomb 1
Cooley and Pratico 1994, p. 162-163
LBIIA

222 Daggers (18)
Tell Dothan, Western Cemetery, Tomb 1
Cooley and Pratico 1994, p. 162-163
LBIIB

223 Daggers (18)
Tell Dothan, Western Cemetery, Tomb 1
Cooley and Pratico 1994, p. 162-163
LBIIB/IA IA

Blades Not Pictured

123 Blade
Megiddo, Square O14, Stratum VII, Locus S=2056, room south of temple
Loud 1948, p. 160
LBI-LBIIA

Knives Not Pictured

224 Knife
Tell Dothan, Western Cemetery, Tomb 1
Cooley and Pratico 1994, p. 162-163
LBIIA

225 Knife
Tell Dothan, Western Cemetery, Tomb 1
Cooley and Pratico 1994, p. 162-163
LBIIIB

226 Knives (2)
Tell Dothan, Western Cemetery, Tomb 1
Cooley and Pratico 1994, p. 162-163
LBIIIB/IA IA

Spearheads Not Pictured

105 Spearhead
Megiddo, Square W16, Tomb 1100D, east slope
Guy 1938
BL: 7.2, TL: 6.5, TtlL: 13.7, W: 3.1
XVI.8.vii.B MBII or LBI

106 Spearhead
Megiddo, Square W16, Tomb 1100D, east slope
Guy 1938
BL: 8.5, TL: 6.2, TtlL: 14.7, W: 2.7
XVI.8.vii.A MBII or LBI

108 Spearhead
Megiddo, Square W16, Tomb 1100D, east slope
Guy 1938
BL: 8.5, TL: 3.7, TtlL: 12.2, W: 2.8
XVI.9.vii.A MBII or LBI

227 Spearheads (5)
Tell Dothan, Western Cemetery, Tomb 1
Cooley and Pratico 1994, p. 162-163
LBIIA

228 Spearheads (5)
Tell Dothan, Western Cemetery, Tomb 1
Cooley and Pratico 1994, p. 162-163

LBIB

229 Spearheads (7)

Tell Dothan, Western Cemetery, Tomb 1

Cooley and Pratico 1994, p. 162-163

LBIB/IA IA

Objects Not Included in the Typology Proper

Swords and the Scimitar

The swords were both found in LBIIB contexts at the Amman Airport Temple and Tell es-Sa'idiyeh, and projectiles were found with them. The scimitar, a weapon dating to the LBI, was found at the Beth Shean Level IX temple with no projectiles sharing the same context (Map 30, Table 21).

Swords:

7 'khepesh' Sword -- an Egyptian form (Figure 33)
Amman Airport Temple
Khalil 1980, p. 28, fig. 20. 61
BL: 43.5, TL: 12.5, TtlL: 56, W: 5
LBIIB

209 Sword (Figure 34)
Tell es-Sa'idiyeh, 17-H-8, Tomb 102, cemetery
Pritchard 1980, p. 16, pl. 52.10, fig. 5.13
BL: 34, TL: 16, TtlL: 50, W: 3.5
LBIIB

Scimitar: (Figure 35)

11 Beth Shean, Level IX temple
Rowe 1929, pl. XV.2
TtlL: 42, W: 4
LBI

Axes and Adzes

Axes and adzes are extremely rare in the LBA Southern Levant. The socketed or shaft-hole axe so prominent in the MBA all but disappears. In fact, only one example was found and that in an LBIIB temple at Beth Shean. The lugged and flat axes and pierced and plain adzes are all that carry over from the MBA. The axes and adzes that do survive from the LBA would most likely be classed more accurately as tools rather than weapons as most were found in domestic contexts and only one adze was found in a grave located outside a building. The shaft-hole axe and lugged axes are by far the largest of this group. Their total lengths range from 16 to 20.5 cms while the adzes and flat axes range from 6 to 13.5 cms. See Chapters 2 and 5 for a more lengthy discussion of axes and adzes of the LBA Southern Levant.

Axes (Map 28, Table 22)

The few axes that are found in the LBA Southern Levant are found in temple and domestic building contexts. Only in temple contexts at Beth Shean are they also found in association with projectiles. Possibly the lugged and flat axes are indeed the tools they are thought to be, but the Socketed axe from Beth Shean is almost certainly an artefact of cult practices of the LBA (see Chapters 1 & 5).

Socketed/Shaft-hole:

15 (Figure 36)

Beth Shean, Level VIII temple, Locus 1068, below floor, altar room

Rowe 1940, p.76, pl. XXXII.2; James and McGovern 1993, p. 208, pl. 51.e, fig. 155.6

TtlL: 20.5, W: 6.5 LBIIB

Lugged:

18 (Figure 37)

Beth Shean, Level VII temple, Locus 1262

James and McGovern 1993, pl. 51.c, fig. 155.2

TtlL: 16.5, W: 5 LBIIB

19 Beth Shean, Level VII domestic building, Locus 1275

James and McGovern 1993, fig. 155.1

TtlL: 16, W: 4.5 LBIIB

26 Beth Shean, Level VIII domestic building, Locus 1286

James and McGovern 1993, fig. 155.5

TtlL: 20, W: 7.5 LBIIB

46 Hazor, Area F, Stratum 1, Locus 8032, domestic building

Yadin, et al. 1960, pl. CXCVI.8, fig. CL.12

TtlL: 16.5, W: 5.5 LBII

47 Hazor, Area F, Square P7, Stratum 1, domestic building

Yadin, et al. 1960, pl. CXCVI.9, fig. CL.13

TtlL: 17, W: 6 LBII

Flat:

Flat axes such as those like Cat. # 8 are a classic Egyptian form with lugs used to connect the blade to the haft (Figure 38). This type of axe belongs to Type IX as defined by Kühnert-Eggebrecht (1969) (Miron 1992: 92). Axes of this type have been found in a Beth Shean temple and in a tomb and a pit at Tell el-'Ajjul (Miron 1992: 92); therefore, finding one at the Amman Airport Temple is not out of the ordinary for the Southern Levant. Catalogue # 128 is not of the Egyptian type. It seems to be a possibly broken

example of a local variety and which would normally be found in settlement contexts (Miron 1992).

8 Amman Airport Temple, an Egyptian form (Figure 38)
Khalil 1980, p. 29, fig. 21.66
TitL: 9.5, W: 6.5 LBIIB

128 Megiddo, Square R9, Stratum VII, Locus W=1793, domestic building
Loud 1948, p. 153, pl. 182.12
TitL: 6, W: 5 LBIIA-IA IA

Axes not pictured: (Table 20)

125 Axe?
Megiddo, Square S 9-10, Stratum VIIA, Locus N=1779, domestic building
Loud 1948, p. 153
LBIIA-IA IA

133 Megiddo, Square N14, Stratum VII, Locus E=2087
Loud 1948, p. 162
LBIIA-IA IA

220 Pella, Settlement, IIIQ 121.12
Philip, et al. 2003, p. 74
LBI

Adzes

Most adzes of the Southern Levant seem to have been found within settlement contexts (Miron 1992). That, and their rarity, is what make these six items so interesting. Only two out of the six seem to have been found in traditional locations. The others are from public buildings or a tomb (Map 29, Table 23).

Pierced: (Figure 39)

27 Beth Shean, Level VIII, Street between domestic buildings, Locus 1311
James and McGovern 1993, pl. 51.d, fig. 155.4
TitL: 15, W: 5.5 LBIIB

83 Megiddo, Square L7, Stratum VIIA, Locus N=3061, public building
Loud 1948, p. 170, pl. 182.13
TitL: 10, W: 3.5 LBIIA-IA IA

234 Megiddo, Square K8, Stratum IX, Locus 2134, Temple
Loud 1948, pl. 182.11
TitL: 10, W: 5.5 LBI

Plain: (Figure 40)

16 Beth Shean, Level VIII temple, Locus 1068, below floor, altar room
Rowe 1940, p.76, pl. XXXII.1; James and McGovern 1993, p. 208, fig. 155.3
TtlL: 13.5, W: 5.5 LBIB

48 Hazor, Area F, Stratum 1B, Tomb 8144, outside a building
Yadin, et al. 1960, fig. CXXXVI.22
TtlL: 10, W: 2 LBII

235 Megiddo, Square M13, Stratum IX, Locus 5029, wall north of temple
Loud 1948, pl. 182.10
TtlL: 14, W: 5 LBI

Chapter 5

Discussion and Conclusions

Now that I have reviewed the Late Bronze Age and the weapons used therein, I will now summarize the evidence and what it could mean. Throughout the LBA, the people of the Southern Levant remained under Egyptian rule. The relatively stable nature of this politico-economic situation may explain why we see so little in the way of distributional and temporal patterns in the weapon styles. The use of weaponry throughout the LBA indicates a continuity of weapon styles which saw little change within the period. This only supports the notion of large, governmentally controlled production (Moorey 1986; Hulit 2002; Pusch 1990 & 1994). Though the governing powers shifted between Mitanni, Hatti, and Egypt throughout the LBA, each was powerful enough to control metal distribution within their territories and to manipulate each other through the obligation of reciprocity in gift giving (Higginbotham 2000; Ilan 1992; Klengel 1992; Kuhrt 1995; Moran 1992).

The Late Bronze Age began with the Egyptians expelling the Hyksos from their territory (Bunimovitz 1995; Kuhrt 1995). The Egyptians took advantage of their newfound freedom and invaded the Southern Levant. In the meantime, Hatti was overcoming a period of chaos and began to expand south into Syria (Kuhrt 1995). In the mid-15th century, Egypt invaded the Southern Levant and was met by a Syro-Palestinian coalition (backed by Mitanni) intended to keep Egypt out of the region. However, Egypt was the victor, thus solidifying a period of Palestinian vassal princes ruling under an Egyptian overlord to whom they would pay tribute in goods and personnel throughout most of the LBA (Klengel 1992).

In the early 14th century BC, as Hatti became a threatening rival, Mitanni and Egypt joined forces against their common opponent (Kuhrt 1995). However, Mitanni was soon overpowered by the Hittites moving south into Syria and the Assyrians moving west. With Mitanni's fall and the Hittites steadily moving south, the Egyptians and the Hittites began a 'permanent' war lasting through most of the 14th century and into the 13th century; thus throughout the LBIIA period. This long-time hostility finally came to a head at the Battle of Kadesh, which was a draw militarily though it left the Hittites in control of Kadesh. However, the growing power of the Assyrians would again force Egypt to ally with a former enemy. In the second quarter of the 13th century, Hatti and Egypt became allies against Assyria (Ahlström 1993; Klengel 1992; Kuhrt

1995). The majority of the LBIB period was therefore a period of 'friendship' between the great kings of Egypt and Hatti and the culmination of a period of stability in the Southern Levant (Liverani 1990; Zaccagnini 1987).

After examining the evidence of LBA weaponry, a few patterns among the weaponry were discovered. Tables 13-23 in Appendix 1 summarize the Type Families and the other groups of weaponry by context and date and indicate the presence or absence of projectiles within those provenances thus summarizing the information in a concise and intelligible format. The presence or absence of projectiles found with the various Type Families has also been considered in this examination as their presence is meaningful. Overall, the evidence of weapons being found primarily with projectiles in graves (Table 24) may add to the suggestion that chariots were indeed a catalyst affecting the kinds of weaponry found in graves of the LBA as well as affecting which military personnel were ascribed the 'heroic' image of this period. First, the patterns arising within the Type Families will be discussed, followed by points of interest that arose within particular sites. Conclusions regarding weaponry of the LBA will then be addressed, and finally a comparison of the LBA and MBA assemblages in general.

The Type Families and Other Objects Discussed

Daggers

Type Family 1 daggers (Figure 1) are by far the most easily recognizable kind of dagger used in the LBA. Their distinctive flanged hilt makes it impossible for them not to stand out in a crowd. Found mostly in well-equipped LBII tombs with projectiles (Map 4, Table 13), this dagger was most likely a prestige item carried by those who held elite positions in the military or within society in general. Within the kingdom of Mitanni, the aristocracy were all chariot warriors (Dawson 2001: 121). Perhaps this was true elsewhere in the Southern Levant and these daggers were reserved solely for the charioteers or the highest ranking charioteers; a symbol of prestige, but also useful should their chariots be overturned or become otherwise useless in battle.

Type Family 2 daggers (Figure 2) are similar in size and form to the Type Family 1 daggers; their only real difference being the hafting method. Whereas Type Family 1 daggers are cast as a piece with the blade, Type Family 2 daggers possess a slim tang which was inserted into a haft. Type Family 2 daggers, like those of Type Family 1, are also found mostly in well-equipped LBII tombs with projectiles (Map 5, Table 13); another possible candidate for an object which expresses the status of its wearer: a valued, elite charioteer.

Blades

Most of the Type Family 3 blades (Figure 3) date from the LBI period. They are not found with projectiles and are usually found within settlement contexts in Palestine (Map 6, Table 14). Philip's MBA Dagger Type 10 (1989: 414) is very similar to members of this Type Family. Due to this similarity and many of the examples dating to the LBI period, these blades are most likely not an LBA style but simply a form that continued in use from the MBA. The fact that most were found in settlement contexts without projectiles may indicate that these blades provided a purely utilitarian function. However, possession of anything metal may suggest the owners enjoyed some wealth.

Type Family 4 is the most widely found and prolific blade of the LBA (Figure 4, Map 7). Objects belonging to this Family were found in a range of contexts and dates though most belonged to the LBII period. A direct correlation exists between context type and those of this Type Family found with projectiles. Most of those found in graves and temples were found with projectiles, while those found in domestic and other contexts were not (Table 14).

When found, Type Family 4 blades are often the only weapon found in graves apart from the projectiles. But many times they are found with several other blades, and in a few instances they are found with either a Type Family 1 or Type Family 2 dagger (Table 25). Maybe weaponry interred with one in death represented rank or the position in the military one held in life. Perhaps Type Family 4 was the 'general issue' blade for infantrymen. After all, it was not uncommon for the state to provide weapons for the more common, poorer soldiers, i.e. infantrymen (Hulit 2002: 191-192). The fact that they are so often found with projectiles may indicate they were popular among archers in particular. These blades would be useful to archers in battle when fighting became too close for their bows to be effective any longer to keep them from being completely overwhelmed by enemy foot carrying hand-to-hand weaponry.

As many of these blades are not found with Type Family 1 or 2 blades, but they are found in graves with projectiles, perhaps these graves were the archers who had not attained the elite rank of charioteer (if that was even possible) but were none the less buried with the prestigious items of their trade. Perhaps fancy daggers such as Type Families 1 and 2 were reserved for the chariotry only or for foot soldiers, namely self bow archers, who had been promoted through the ranks to composite bowman, and on to chariot archer, or perhaps the deceased was one of the elite charioteers and the different weaponry represented the people under his command. However, it is also

possible that these and other weapons were simply objects of prestige worn by elites to express their status.

Another interesting observation among the Type Family 4 blades is that the only two flat axes included in this study and one of the axes (not pictured) are all found with Type Family 4 blades; one example of this blade and axe combination was found at the Amman Airport Temple while the other two examples were discovered in domestic buildings at Megiddo, all dating to the last part of the LBA (Table 25). While this type of weapon set is vaguely reminiscent of the MBA 'Warrior Burials', it is doubtful they have the same meaning as the weapon sets of that era. For one, the axes are flat and not socketed. Even though this difference could be attributed to the Egyptian influence in the region--the flat axe being the Egyptian favourite--their context would suggest that these combinations are more coincidence than meaningful.

Objects belonging to Type Family 5 were found mostly in LBII graves and most were found in contexts that also contained projectiles (Figure 5, Map 8, Table 14). They are very similar to weapons belonging to Type Family 4 with the only real difference being the hooked tang of Type Family 5. All members of this Type Family come from northern Palestine and Transjordan. All Type Family 5 objects from Transjordan were found in graves with projectiles. In northern Palestine, three of the four found in grave contexts were found without projectiles.

Due to the similarity in form and the fact that they are a very popular, widespread Family found primarily in graves, this Family may also be another 'general issue' blade distributed among foot soldiers and/or archers of the time. It may be possible that the hooked-tang blades are actually another form of spearhead, as suggested by Weinstein-Balthazar (1990) and Philip (1991) in regard to similar Cypriot weaponry (see Chapter 2), which foot soldiers carried into battle. A number of Type Family 5 blades are found in association with Type Family 4 blades (Table 25). Perhaps the soldiers were not carrying redundant numbers of daggers but carried a 'dagger' (TF 4) and a 'spearhead' (TF 5) as is depicted among the Egyptian soldiers (Hulit 2002: fig. 86).

Type Family 6 blades were found only in Megiddo. All blades of this Family were also found with at least one Type Family 4 blade. Five of the total six members of this Family were discovered in LBII grave contexts which also contained projectiles. Only one dating from the LBA in general was found in a grave that did not also contain projectiles (Figure 6, Map 9, Table 14). Possibly, this blade was a locally produced

weapon utilized by the archers of Megiddo. Its distinct wear pattern suggests it was indeed a utilitarian object (see Chapter 4).

Blades of Type Family 7 are found in graves and domestic buildings up and down the centre of Palestine (Figure 7, Map 10). Members of this Family are from a range of dates, and there appears to be no pattern with these blades in association with projectiles. This Family resembles Philip's MBA Dagger Type 30 (1989: 460) and since a great many of them are dated to a range that includes the LBI, they may have continued in use from the MBA (Table 14).

Those belonging to Type Family 8 are from a range of LBI contexts except for the LBII Section Find at Akko which was the only context which also contained projectiles (Figure 8, Map 11, Table 14). However, as it is a disturbed context (see Chapter 3), this is hardly meaningful. This Family also resembles Philip's MBA Dagger Type 35 (1989: 482), and may be yet another style that was continued into the LBA.

Blade Individuals (Figures 9-13) occur mostly in the LBII period. Those found in grave and temple contexts are as likely to be found with projectiles as not. Those in other contexts are not found in contexts which also contain projectiles (Table 18). The LBIIA period was a time of warfare between Egypt and Hatti. By the LBII B period these two adversaries had allied in a mutual attempt to fight off the encroaching Assyrian threat. Perhaps the centralized powers of the period encouraged metalsmiths to experiment with weapon styles during this period of war or, perhaps, some of the individuals are actually Egyptian or Hittite weapon types copied by local artisans.

Blade fragments were those objects too fragmentary to be placed within a Type Family. Five out of six blade fragments found with projectiles in public buildings were all found in northern Palestine. One out of five in domestic contexts in northern and southern Palestine was found with projectiles. All blade fragments found in Transjordanian graves were associated with projectiles (Table 19). As within the Type Families, the bulk of projectiles is found within the LBII grave and temple contexts, again lending credibility to the suggestion that chariots and their associated equipment, in this case arrows, were attributed a great amount of prestige in the LBA.

Knives

Type Family 9 is found exclusively at Tell Beit Mirsim in LBII domestic and debris contexts (Figure 14, Map 17). None were found with projectiles (Table 15). This is another possible local style, as Type Family 6 was for Megiddo.

Only two Type Family 10 objects were discovered. Both are from the LBI-LBIIA period: one a domestic building context at Pella, the other, a tomb found in a domestic building context at Megiddo (Figure 15, Map 13, Table 15). The knife from the Megiddo tomb was associated with projectiles. The knife from Pella was not.

Type Family 11 knives were found exclusively in graves at Deir el-Balah and Tell ed-Duweir throughout the LBA (Figure 16, Map 14). Those from graves at Deir el-Balah were not found with projectiles, while the knife from Tell ed-Duweir was found with twenty-two projectiles (Table 15). Deir el-Balah does not fit the pattern of projectiles found in graves with weapons of the LBII period because of the heavy Egyptian influence at the site (see Chapter 5, Deir el-Balah) (Dothan 1979: 103-4).

Found only in graves with no projectiles (Table 15), Type Family 12 knives were discovered at Deir el-Balah in an LBA context, and at Tell ed-Duweir and Megiddo in LBII contexts (Figure 17, Map 15). While it may now be considered unusual to find graves which contain weapons without projectiles in the LBA, especially the LBII, one must consider the possibility that knives do not perform the same function or carry the same level of significance as 'proper' weapons in either a utilitarian or a symbolic capacity; therefore, perhaps knives found in graves without projectiles simply points to a direct correlation between 'proper' weapons such as Type Families 1, 2, 4, and 5 and projectiles.

Type Family 13 is the most prolific Family of knives. They belong to a range of dates and contexts, though most are from graves. They are only found in domestic and public contexts in northern Palestine, whereas they are found in graves in southern Palestine and Transjordan (Figure 18). When found in domestic contexts, Type Family 13 knives are not accompanied by projectiles, but in public buildings they are. When found in graves in southern Palestine and Transjordan, the only instance of them not being found with projectiles was at Deir el-Balah (Map 16, Table 15). Again, Deir el-Balah does not fit the emerging LBA grave profile of associated weapons/knives and projectiles. The distinctive animal hoof on the end of the handle, and the fact that as many of these knives were found in temples as in graves may indicate they held a ritual significance associated with cult practices.

Type Family 14 was found in a range of dates and contexts throughout the Southern Levant (Figure 20, Map 17). These knives are found with projectiles in domestic and grave contexts in Transjordan. They are not found with projectiles in public buildings and the grave at Deir el-Balah (Table 15). This Family is similar to

Philip's MBA Curved-Knife Type 1 (1989: 505), the 'classic' curved knife style of the MBA.

Only two knives belong to Type Family 15 (Figure 21). Both these short, crescent bladed knives were found in LBI-LBIIA graves in southern Palestine at Gezer and Tell ed-Duweir. None were found in Transjordan or northern Palestine (Map 18, Table 15). The knife from Gezer was found alone with no other weapons or projectiles from the same context, though the burial cave itself contained numerous burials with goods from different time periods. The knife found at Tell ed-Duweir was found with a number of examples from other Type Families as well as twenty-two projectiles. Though the knife appears to be utilitarian in nature, it is only found in grave contexts, but its rarity leaves one to speculate as to what sort of importance it may have had.

Both examples of Type Family 16 were found in domestic buildings from Tell el-'Ajjul in LBI & LBA/EI (Figure 22, Map 19). Neither was associated with projectiles (Table 15). Due to their contexts, their lack of association with projectiles and their extreme fragmentary nature, these knives appear to have been entirely utilitarian.

Knives and Projectiles in General

Knives are more often found in contexts that do not contain projectiles than in contexts that do include projectiles. Knives found in graves are equally as likely to contain projectiles as not; however, when the knives found in the graves at Deir el-Balah are excluded, LBA knives in general are found with projectiles twice as often as not. Of the possible strictly 'utilitarian' Type Families (TFs 9, 10, 11, 15, and 16), one quarter of the total were found with projectiles. This is in comparison to nearly half the 'non-utilitarian' (those possibly with symbolic or ritual significance) knives of Type Families 12, 13, and 14 being found in association with projectiles (Table 15). While many of the knives were obviously utilitarian items, some carried a greater significance in its use in cult practices and/or as a burial good interred at least some of time with soldiers of the LBA.

Small Blades

Type Family 17 were found in a variety of contexts throughout the Southern Levant in the LBA (Figure 23, Map 20). Of those found in graves, only the one from Madaba was found with projectiles, and of those found in public buildings, only the one from Megiddo was found with projectiles. The other seven Type Family 17 objects were

not found with projectiles (Table 16). This Family is, by far, the most prolific of the small blades.

Type Family 18 is found in LBIIA-IA IA public buildings at Megiddo and in an LBA domestic building at Tell Farah (South) only (Figure 24, Map 21). None of this Type Family was found in graves or in Transjordan. The only Type Family 18 small blade found in association with projectiles was one of the small blades found in a public building in Megiddo (Table 16).

Type Family 19 was found exclusively at Megiddo; one in an LBIIA-IA IA domestic building, and one in an LBI-LBIIA public building (Figure 25, Map 22, Table 16). It is possible that this small blade is a local style, indigenous to Megiddo.

Knives and Small Blades vs. Daggers, Blades, Spearheads

As a whole, knives and small blades appear less frequently in graves than do daggers, blades, and spearheads. In general, fancy knife types such as Type Families 11 through 15, tend to come from tombs. More knives are found in graves in southern Palestine than in northern Palestine and Transjordan combined. Perhaps knives are found fairly regularly in Egyptian graves and the Egyptians had a stronger impact on the people living the closest to them. However, as there is no easily accessible information regarding Egyptian grave assemblages, this is difficult to determine.

One is less than half as likely to find a knife in a public building as a settlement context in the Southern Levant, and small blades are more likely to be found in public and domestic contexts than in graves. With these conclusions in mind, one can see that knives and small blades in general carry much less prestige and importance than do daggers, blades, and spearheads. While some knives may have ritual significance, most were probably just used for everyday tasks that would also be performed in the afterlife, and therefore some were buried with the dead (Cooley and Pratico 1994: 166).

Spearheads

Many of the socketed spearheads to be mentioned here resemble MBA styles mentioned by Philip (1989) and may actually date to the MBA; in particular Type Families 20, 21, and 24. For instance, Philip's Socketed Spearhead Type 8 (1989: 365) holds a reasonable resemblance to my Type Families 20 and 21; his Socketed Spearhead Type 5 (1989: 359) resembles my Type Family 24; and though his Socketed Spearhead Type 10 (1989: 372) is similar to my Type Family 23, all of my examples date to the LBII period. Unlike Type Families 20, 21 and 24, socketed spearheads belonging to

Type Families 22 and 23 are most likely not an indication of a continuation of style from the MBA.

Type Family 20 spearheads are only found in MBII/LBI graves at Megiddo and in an LBIIB temple at Beth Shean (Figure 28, Map 23). Type Family 21 objects are only found in MBII/LBI tombs at Megiddo and may actually all belong to the MBA period (Figure 29, Map 24). Type Family 22 spearheads are found throughout the LBA in graves at Tell ed-Duweir, Tell es-Sa'idiyeh and Tell Farah (South). They are also found in LBIIB public and domestic buildings at Beth Shean (Figure 30, Map 25). Type Family 23 are all found in LBII graves yet they resemble an MBA style. (Figure 31, Map 26). Type Family 24 objects are only present in LBI graves at Megiddo (Figure 32, Map 27); none of which were associated with projectiles. Like Type Family 6, this Family may be another local style only produced at Megiddo.

All of the socketed spearheads found in contexts that also contained projectiles were found in graves or temples (Table 17). On the whole, lesser numbers of socketed spearheads are found in the LBA in comparison to the MBA. The spearheads found at Megiddo dating to the MB/LB transition may indicate a phasing out of socketed spearheads' use in warfare of the Southern Levant as it entered the LBA. But the question of whether the socketed spearheads were replaced in the LBA with the hooked tang 'spearheads' of Type Family 5 may remain purely speculation for some time.

Spearhead Individuals are found at graves at Megiddo and a domestic building at Tell Beit Mirsim. Those in the Megiddo grave contexts were found in association with projectiles while those discovered at Tell Beit Mirsim were not (Table 18). Spearheads not pictured are all from graves at Megiddo from the LBI or Tell Dothan grave from LBII-IA IA. All of the Tell Dothan spearheads were found with projectiles (Table 20). Spearhead fragments were found at Megiddo in an LBI grave but no projectiles were present in the same context (Table 19).

Swords and the Scimitar

All of the swords and scimitars were found in a grave at Tell es-Sa'idiyeh or in temples at the Amman Airport Temple and Beth Shean (Figures 33-35, Map 30). The two swords were found in Transjordan, dating to the LBA; both were found with projectiles in their contexts at Tell es-Sa'idiyeh and the Amman Airport Temple. The scimitar was found without any projectiles in a temple context at Beth Shean and dated to the LBI (Table 21). Judging from the rarity of these objects in the archaeological record and their contexts they were most likely not for everyday use. The two found in

temple contexts may have been part of cult practices (see Chapters 1 & 2 for further discussion).

Axes and Adzes

A mixture of axes and adzes from Palestine all come from LBII-IA IA or later (Figures 36-40, Maps 28 & 29). The only axe from the Amman Airport Temple (LBA) and the axe from Pella (LBI), both from Transjordan, are from different dates. Most likely these axes and adzes are not an evolution or continuation of the socketed axes of the MBA; not only is their form completely different but also because well-provenanced axes of any kind appear to be completely absent from the archaeological record of LBI Palestine and Transjordan (Table 22).

All of the axes and adzes in Palestine come from the northern sites of Megiddo, Hazor, and Beth Shean. Only two axes come from Transjordan at Pella and the Amman Airport Temple, but no adzes were found dating to the LBA in Transjordan. Seemingly, there are no absolute associations between axes or adzes of certain types being discovered in certain context types except that hardly any are found in graves. Only plain adzes, one lugged axe, and the socketed axe were found with projectiles while none of the not pictured axes, flat axes, or pierced adzes was found with projectiles (Tables 22 & 23).

The complete absence of socketed axes in the LBA, except for one found in a temple at Beth Shean, suggests that axes were no longer a significant part of the battle repertoire, but may have been used in temple rituals as evidenced in other parts of the Near East (see Chapter 1). Weapons are found in temple contexts only at Hazor, Tell Abu Hawam, Tell Mevorakh, Megiddo, Beth Shean and the Amman Airport Temple (Table 24). All of these sites (except the Amman Airport Temple) are located in the north of Palestine and in close geographical proximity to the Hittite Empire. Also, the dates attributed to the majority of these weapons correspond with the Hittite Empire's reach into the Southern Levant during its expansion in the LBII period. The discovery of the socketed axe, possibly Hittite (see Chapter 2 & Figure 36), found at Beth Shean and the fact that most of these weapons are dated to the LBIIB period when Egypt and Hatti were allies seems to suggest they are indeed a Hittite influence rather than a continuation of an MBA practice.

The few axes and adzes that are found were discovered at the sites with the most weapons. The complete absence of axes in the LBI Southern Levant and their reappearance in the LBII period as flat axes and adzes implies a shift in the use and

symbolism of these objects. No longer do these objects represent a level of military prestige. In the LBA, axes seem to be tools used in public and domestic buildings and not weapons of war utilized by the martial elite. This change is largely attributed to the introduction of the chariot into the forefront of warfare at the MB/LB transition and the increased reliance on the very powerful composite bow.

Chariots, already used by royalty (such as the Egyptian and Hittite overlords) as 'prestige vehicles for men of status', became the newest innovation in warfare and the most prestigious instrument of battle (Moorey 1986: 205). It is possible that around the MB/LB transition, the soldiers of the Southern Levant learned at battles such as the one at Megiddo, that the hand-to-hand combat weapons of the axe-and-dagger sets would not be effective against the chariot. Therefore, the prestige was given to the handlers of these powerful new pieces of military equipment and the elite status associated with the weapons of a foot soldier was destroyed. While foot soldiers were still valued, their status was no where near that of a charioteer (Dawson 2001).

It would not be until ca. 1200 BC that the chariots' weakness would be discerned. By overwhelming these vehicles with foot soldiers armed with javelins, a very cheap and easily used instrument of war, chariots could easily be disabled (Dawson 2001: 153, 156; Drews 1993: 181-182). If the javelin was indeed used in this way, and if the horse(s) pulling the chariot were injured, the whole 'tripartite' combination of chariot, horse and driver/archer would be rendered useless (Hulit 2002; Drews 1993). It is probable that the Iron Age would see yet another change in the kinds of weaponry found in the material culture of the Southern Levant.

Some Sites Discussed

Beth Shean

At Beth Shean, all daggers, blades, spearheads, and knives are found in public buildings or graves. An equal number of axes and adzes were found in LBIIB temple contexts as domestic contexts; the only two types of contexts in which they are found. Only lugged axes and the sole socketed axe of the LBA Southern Levant were discovered, possibly indicating that lugged axes were the favoured axe type at Beth Shean.

The amounts of weaponry and projectiles only found in temple or grave contexts combined with the socketed axe, which has been suggested to be Hittite (see Chapter 2),

may indicate that Beth Shean may have been influenced by the cult practices of Hatti (see Chapter 1), and performed their own rituals in the LBA.

Deir el-Balah

The anthropoid coffins at Deir el-Balah are interesting in their very Egyptian nature in that they contained many objects common in Egyptian material culture. They are thought to be the graves of 'Egyptian officials or garrisons stationed in Egyptian strongholds in Canaan' or, at the very least, the dead were thought to be 'members of a flourishing and prosperous community imbued with Egyptian culture' (Dothan 1979: 103-104). Perhaps this is why these graves do not follow LBII patterns of weapons and projectiles. In fact, the only 'weaponry' found at Deir el-Balah were knives: two of Type Family 11, and one each of Type Families 12 and 13. Tomb 114 contained three adults and a child while Tomb 118 contained two adults: one male and one female. The female of Tomb 118 was found with a Type Family 11 knife by her knee. Indeed these burials were most likely not those of warriors at all but the graves of a possible "artisans' centre connected with the cemetery" (Dothan 1979: 103). Perhaps there was too much Egyptian presence and not enough of the local Southern Levantine to have the Deir el-Balah graves 'match' the others in the Southern Levant.

Tell Dothan

It is difficult to speculate who was interred in the extremely rich Tomb 1 without the benefit of a complete publication. Genders for the 250-300 skeletons found in the tomb and information regarding the weapons has yet to be published (Cooley and Pratico 1994: 166). Only a list of which weapons were found in which levels of the tomb have been published thus far (Cooley and Pratico 1994: 162-3). However, due to the amount of weaponry found in the tomb and how rich it is in comparison to other tombs of the region, perhaps this tomb was reserved for warriors and their families and was therefore a prestigious tomb in which to be buried, especially since most of the levels date from some point in the LBII period or later. The results of the Dothan Publication Project (see Chapter 3) should be very interesting.

Tell el-'Ajjul

At Tell el-'Ajjul, a primarily Middle Bronze Age site, the majority of LBA projectiles were found in graves and forts, an uncommon occurrence during the MBA

(Philip 1989). Area G has considerably more weapons and projectiles than other settlement areas. This could possibly indicate that a temple, military housing, or maybe even a storage building was situated in this area. More weapons and projectiles are present in the Lower Cemetery than in the 18th Dynasty Cemetery, which only contained projectiles. The Lower Cemetery may have been the one that was most popular to use by the elite during the Late Bronze Age phase of the site.

Comparisons and Conclusions

Palestine and Transjordan in General

Weapons of the LBA Southern Levant are comprised of motley groups. Styles that have continued over from the MBA which incorporate rivets in the hafting such as Type Families 3, 7, 8, & 14 and styles that appear in the LBA that seem to have been resurrected from the MBA such as Type Family 23. A great number of 'Individuals' exist among all the sorts of weaponry, and most of them occur in the LBII period. Most of the Individuals are found in grave or temple contexts from the LBII period, and they are all from Palestine. Apparently local styles appear at Megiddo (Type Families 6, 19, and 24); Tell Beit Mirsim's Type Family 9 which closely resembles Megiddo's Type Family 6; and Tell el-'Ajjul's Type Family 16. Megiddo, Tell Beit Mirsim, Tell el-'Ajjul, and Hazor are the only sites with significant amounts of weaponry found in settlement and/or domestic contexts (Table 24). While Megiddo, Tell Beit Mirsim, and Tell el-'Ajjul produced local styles, Hazor produced several 'Individuals'. Maybe these sites had local production centres at their disposal and this accounts for the various styles.

Most weapons found in public buildings of the Southern Levant are in northern Palestine, throughout LBA. Hardly any weapons were found in public buildings in Transjordan and southern Palestine at all. All weapons found in graves in Transjordan were also found with projectiles except at Irbid and one tomb at Tell es-Sa'idiyeh (LBA) in which was found the only LBA spearhead in Transjordan; a Type Family 22 object. Type Family 4 is definitely the most prevalent blade in use in Transjordan and was found in public, domestic, and grave contexts. It was used throughout the Late Bronze Age and into the Iron Age and was found at all sites but Pella and Tell es-Sa'idiyeh. Type Family 5, another very popular blade, was only found in public buildings and graves.

All inland sites of Transjordan (those not in the Jordan valley) containing tombs with weapons were found in a date range that included LBII-IA IA. No LBI tombs with weapons were found in Transjordan except the grave at Sahem whose date range is LBI-IA IA. No weapons or knife Individuals were found in Transjordan. All of the weaponry and knives fit into some Type Family.

In the archaeological record of the LBA, projectiles are found in a range of contexts and dates both on their own and in association with weaponry. They are more likely to be found with weapons in contexts that coincide with the LBII, and are mostly found in the north of Palestine. Jatt is the only site in the north in which no weapons are found with projectiles but it is an isolated LBI tomb and thus still lies within the aforementioned generalization. Overall, more projectiles are found in the north than in the south of Palestine, and more are found in the archaeological record during the LBII than the LBI period, though this may be because the LBII period lasts about 50 years longer than the LBI period.

As more projectiles are found in graves of the LBII period this status change may have taken a century or so to manifest itself in burials in the number of weapons and projectiles found in tombs. Perhaps in the LBI period the chariot had not yet had its complete impact on the peoples, culture and grave goods. The shift of prestige from the axe-and-dagger foot soldier to charioteer took a while to take hold and show up in archaeological record as most of the weapons + projectiles pattern does not appear until the LBII when Egypt would indeed have a firm hold over much of if not all of Palestine and Transjordan.

The most common form of weapon found in the LBA graves were the long, slim-tanged blades of Type Family 4. The flange-hilted daggers of Type Family 1 and the hook-tanged blades of Type Family 5 were found equally frequently in graves of the Southern Levant and were the next most prevalent weapons found after the Type Family 4 group. The third most likely weapons to be found in graves of the Southern Levant were the Type Family 2 variety. Therefore, Philip's statement that flange-hilted daggers are the 'standard form in LBA tombs' is not entirely true (1989: 217). It is true that the Type Family 1 group is arguably the fanciest and most easily recognizable weapon of the LBA and therefore stands out in a crowd. However, it is also true that Type Family 1 daggers seem to be reserved for the richer tombs, while Type Families 4 and 5 enjoy a more universal existence as grave goods. Type Families 1 and 2 are surely the most

indicative of the high status bestowed upon those they were buried with, and in most cases, both Type Families are found with projectiles (Tables 13 & 14).

Universality of Weapon Styles and Governmental Control

The consistent usage of weaponry in the LBA is in clear contrast to the changing weapon styles of the MBA. Weapon styles of the MBA had distinct temporal and spatial patterns (Philip 1989: 211, 213). While some artisans of the MBA were 'affiliated with controlling institutions in the urban centres', the MBA was also a time of a 'more segmented system of procurement and production, and more local autonomy' (Ilan 1995: 306).

Throughout the LBA the people of the Southern Levant were under centralized governments which controlled production and distribution of products. The large government bodies of Egypt, Mitanni, and Hatti are surely the cause of such universal distribution and styling of weaponry. Egyptian involvement in the Southern Levant had a great impact on the region during the Late Bronze Age. Their hold over raw materials and metal production (Hulit 2002: 185, 215-216) may explain the continuity in the style of weapons and their universal usage throughout that period; however, the styles generated were Levantine, not Egyptian. The evidence seems to show a fairly universal usage of Levantine styles throughout the LBA with no drastic changes in style in any region of the Southern Levant during this period.

Does this universality of style support Higginbotham's view that the style of Egyptian rule in the Southern Levant during the 19th dynasty did not change from the way they ruled in the 18th dynasty? Those closely associated with the governing of the large governing bodies, the elites, included the warriors who helped the political elites maintain their positions of power. The inhabitants of lower status tried to emulate those in power through their material belongings and the status associated with the designs of those belongings (Higginbotham 2000). The 19th dynasty, contemporary with the LBIIB period, is marked, by among other things, the new alliance between Egypt and Hatti in response to the increasing Assyrian threat. However, Egypt had, by this point, a long history of overlordship of the Southern Levantine people. Their alliance only meant they were no longer fighting an enemy to the north but one to the east which is perhaps why Egypt has a large affect on Transjordan as well as the south of Palestine.

All the weaponry and knives of Transjordan fit into one of the Type Families. Possibly, this means that Egyptian state control of metals and their production in

Transjordan manifested itself in a very organised system of which objects communicated what level of status, but left the Transjordanians' grave culture untouched. Bunimovitz suggests that while the Egyptians altered the Palestinian political structure, the burial and cult practices of the region remained unchanged (1995: 315). For the most part, this seems to be true. While the Egyptians would no doubt have controlled a commodity as valued as metal, how the Southern Levantine peoples used it was largely up to them. This fits with the Egyptian method of rule where they did not interfere with the lives of those they ruled so long as it did not have a malevolent effect on them.

Presumably a greater Egyptian influence would have had some impact on the metalwork though there are relatively few easily recognisable Egyptian style blades whether through Egyptianisation or genuine production: one leaf-shaped blade (Figure 13), two flat axes (Figure 38), and one khepesh sword (Figure 33). With no comprehensive typology of Egyptian weaponry a true evaluation of Egyptian influence or local Egyptianisation is very difficult. Also, without an Egyptian typology it is impossible to tell if some of the really unique Individuals found in LBA contexts are actually Egyptian or of another 'foreign' origin.

If Egypt had a stronger grip in the 19th dynasty than in the 18th, surely the grave evidence in the LBIIB period would have changed. Southern sites such as Deir el-Balah, Tell Beit Mirsim and Tell Farah (South) are devoid of projectiles found with weapons. This strange occurrence, for this region and time period, may be due to the fact that these three sites are among the southernmost with LBA weapons/knives and Tell Beit Mirsim and Tell Farah (South), like Deir el-Balah, may have been very heavily influenced by the Egyptian culture to their immediate south. When Southern Levantine graves are found equipped with weapons in the LBA, it is uncommon to find them without projectiles as well. Because of the close proximity of Egypt to Deir el-Balah, Tell Beit Mirsim and Tell Farah (South), it is possible that the Egyptians had a greater influence on the burial culture of the extreme south of Palestine than they would on the other regions of the Southern Levant. If Egypt did have a greater hold over the Southern Levant during the 19th dynasty, it does not seem to show itself through the weaponry of the grave record.

The Weaponry of the LBA and MBA Compared

In the MBA, there were distinct style differences between the north and south of Palestine and between the different periods of the MBA itself (Philip 1989: 199-200). However, this is very different from the LBA when the most meaningful differences lie in the various styles of weapons and in the association of certain weapons with each other and their association or lack of association with projectiles.

Many of the weapons in the MBA were hafted by use of rivets (Philip 1989). This number seems to have declined drastically in the blade forms of the LBA when the most similarly shaped blades were tanged and not riveted into their handles. However, weapons which continued in use from the MBA tended to keep their riveted design. The Type Family 14 knife, similar to Philip's Curved-Knife Type 1 (1989: 505), the 'classic' curved knife style of the MBA, is one such example. Though it occurs throughout the LBA, its hafting method does not change. Other possible examples of continuity of weaponry styles from the MBA into the LBA include Type Families 3, 7, and 8 similar to Philip's Dagger Types 10, 30 and 35 respectively (1989: 414, 460, 482). Whereas Type Families 7, 8, and 14 all incorporate the use of rivets in hafting, Type Families originating in the LBA are almost always tanged and not riveted.

Another difference between the Middle and Late Bronze Ages is that much of the weaponry of the MBA was found in hoards, whereas in the LBA, the bulk of weaponry is found in graves (Table 24). This has been attributed to the rise of the charioteer as the warrior supreme which is materialized in the graves goods of the LBA.

The Chariot and LBA Material Culture

There is little evidence outside Egypt for chariots found in burials. Hulit suggests that few chariots were buried because of their large size and expensive cost to produce and maintain (2002: 211). Only the most elite of charioteers would have been buried with his chariot. While the charioteers were definitely the most prized of military personnel during the LBA, they were not the only soldiers on the field (Dawson 2001). The relief on the temple at Medinet Habu depicting Rameses III fighting a battle against the Sea Peoples depicts a number of foot soldiers on land as well as fighting on the boats at sea (Hulit 2002: fig. 86). A few of the soldiers on the boats had self bows but one carried a composite bow (Hulit 2002: fig. 14). The soldiers on land carried shields and a variety of hand weapons while another group on foot all carried composite bows and one hand weapon each: a sickle-bladed weapon (Hulit 2002: 86).

It is possible that another reason so few chariots are found in graves with weapons and archery tackle is because not all those buried with weapons and projectiles were charioteers. Some were probably foot soldiers, perhaps specifically archers. However, one question that remains is whether charioteers were strictly noblemen, or were archers trained in use of the self bow promoted to archers using composite bows who finally rose to the highest status of charioteer, or some similar hierarchy? Is it possible that only the Egyptian archers were also armed with the sickle-bladed weapons, while those from the Southern Levant were given the flange-hilted weapons? Did the weapons truly indicate a rank or position within the army or were they simply of a more utilitarian purpose?

It may be that the Type Family 1 and 2 daggers were only assigned to those of the highest position in the military while the plainer blades of Type Families 4 and 5 were possibly a 'general issue' variety given to the less prestigious foot soldiers. Perhaps graves with projectiles and plainer weapons simply indicate the graves of archers, graves with only weapons represent the regular foot soldiers, and graves with projectiles and a Type Family 1 or 2 dagger indicate a high ranking archer, or they may actually be the definitive mark of a charioteer's grave. Another view would be that Type Families 1 and 2 represent those persons of a very elite status in society and the plainer blades and projectiles are simply those belonging to 'lesser nobles' who want to be associated with the elite status the weapons convey. If these sorts of hierarchy were in place throughout the LBA, the weapons would be a very effective communicative tool because anyone could tell by the sort of weapons a soldier carried what position he held in the army and/or society even in death. Perhaps Philip's suggestion that the slow 'stylistic change' of the flange-hilted daggers somehow indicates a 'lesser communicative function' than that of MBA weapons (1989: 217) is incorrect.

The high status of charioteers would explain the frequency with which projectiles are found in LBA graves, especially in the LBII period, especially when compared to the lack of them in the archaeological record of MBA graves (Philip 1989: 146-147). The shift of prestige from the now ineffective, obsolete axe-and-dagger set warrior to the prestigious, much more powerful, composite-bow-wielding charioteer had a definite impact on the material culture of the LBA. It seems that projectiles (the only bit of the archery tackle probably interred with the deceased that was likely to survive) and the daggers of Type Families 1 and/or 2 were the new representatives of the

ultimate military elite. The most prized warriors were now the charioteers and not so much the foot soldiers.

As gifts and city-states were exchanged among the ruling powers and as trade routes were utilized, the continuity in styles of metalwork reflected the organisation and control of the large governing powers of the Late Bronze Age. Egypt, Hatti, and Mitanni influenced metal processing, its design, and its distribution, thus controlling the various social stations the metal work may have represented; this may have been especially conspicuous among the soldiers of the LBA. The chariot, the probable catalyst for the changes in burial culture, would leave in its wake a greater understanding of the styles and the possible meaning of the weaponry of the LBA Southern Levant.

Appendix 1
Figures, Maps and Tables

The Weapon Figures

All figures are at a 1:2 scale. The Type Family each object represents and the object's Catalogue number are given just beneath each figure. The publication from which each figure has been adapted is given at the bottom of each page as are the corresponding brief descriptions of each object. These serve as a means of relating which objects are examples of which characteristics in the Typology Key.



Figure 1

Type Family 1
Catalogue No. 1



Figure 2

Type Family 2
Catalogue No. 194

1) Figure adapted from Ben-Arieh and Edelstein 1977, fig. 18.1.
Flanged tang, leaf-shaped, double-edged blade, pointed tip, no shoulders or midrib.

2) Figure adapted from Petrie 1933, pl. IX.21
Stop-ridge, long slim tang, convex blade, pointed tip, no shoulders, indeterminable midrib.



Figure 3

Type Family 3
Catalogue No. 197



Figure 4

Type Family 4
Catalogue No. 70



Figure 5

Type Family 5
Catalogue No. 146

3) Figure adapted from Petrie 1933, pl. XVIII.3
Short slim tang, tapering, double-edged blade, blunt tip, sloping shoulders, indeterminable midrib.

4) Figure adapted from Guy 1938, pl. 96.1
Long slim tang, convex, double-edged blade, rounded tip, sloping shoulders, subtle midrib.

5) Figure adapted from Fischer 1997a, fig. 27.1
Hooked tang, tapering, double-edged blade, rounded tip, sloping shoulders, subtle midrib.



Figure 6

Type Family 6
Catalogue No. 114



Figure 7

Type Family 7
Catalogue No. 76



Figure 8

Type Family 8
Catalogue No. 205

6) Figure adapted from Guy 1938, pl. 123.21
Long slim tang, concave (from sharpening) blade, blunt tip, sloping shoulders, subtle midrib.

7) Figure adapted from Guy 1938, fig. 171.10
Riveted shoulders, tapering, double-edged blade, blunt tip, sloping shoulders, no midrib.

8) Figure adapted from Petrie 1933, pl. XIX.14
Riveted tang, tapering blade, rounded tip, squared shoulders, indeterminable midrib.



Figure 9

Individual
Catalogue No. 84



Figure 10

Individual
Catalogue No. 131



Figure 11

Individual
Catalogue 179

9) Figure adapted from Loud 1948, pl. 180.41
Riveted and flanged tang, sickle-shaped blade, rounded tip, 'catch' shoulder, no midrib.

10) Figure adapted from Loud 1948, pl. 180.44
Animal hoof tang, hourglass blade, squared tip, 'catch' shoulder, indeterminable midrib.

11) Figure adapted from Tufnell, et al. 1958, pl. 23.20
Long round, button-ended tang, tapering, double-edged blade, blunt tip, no shoulders, indeterminable midrib.



Figure 12

Individual
Catalogue No. 180

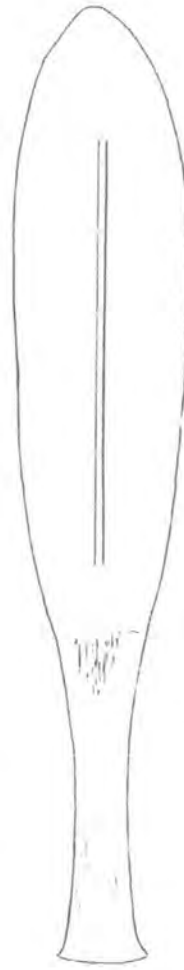


Figure 13

Individual
Catalogue No. 196

12) Figure adapted from Tufnell, et al., 1958, pl. 23.21
Riveted tang, straight, double-edged blade, blunt tip, no shoulders, indeterminable midrib.

13) Figure adapted from Petrie 1933, pl. IX 26
Hourglass tang, leaf-shaped blade, rounded tip, no shoulders, subtle midrib.



Figure 14

Type Family 9
Catalogue No. 161



Figure 15

Type Family 10
Catalogue No. 135



Figure 16

Type Family 11
Catalogue No. 38

14) Figure adapted from Albright 1938b, pl. 41.22
Broken tang, straight blade, blunt tip, no shoulders or midrib.

15) Figure adapted from McNicoll, et al., 1992, pl. 46.1
No tang, 'dog-leg' blade, pointed tip, lugged shoulders, no midrib.

16) Figure adapted from Dothan 1979, fig. 157
No tang, cut-out, single-edged blade, curled and pointed tip, lugged shoulders, no midrib.



Figure 17

Type Family 12
Catalogue No. 37



Figure 18

Type Family 13
Catalogue No. 171



Figure 19

Individual
Catalogue No. 122

17) Figure adapted from Dothan 1979, fig. 35
Hourglass tang, half-tapering, single-edged blade, rounded tip, 'catch' shoulder, no midrib.

18) Figure adapted from Tufnell, et al., 1958, pl. 23.6
Animal hoof tang, recurved, single-edged blade, pointed tip, no shoulders or midrib.

19) Figure adapted from Loud 1948, pl. 179.32
Long broad tang, recurved blade, squared tip, no shoulders or midrib.



Figure 20

Type Family 14
Catalogue No. 20



Figure 21

Type Family 15
Catalogue No. 173



Figure 22

Type Family 16
Catalogue No. 203

20) Figure adapted from James and McGovern 1993, fig. 152.1
Riveted and flanged tang, recurved, single-edged blade, broken tip, 'catch' shoulder, no midrib.

21) Figure adapted from Tufnell, et al., 1958
Long broad tang, crescent-shaped blade, pointed tip, no shoulders or midrib.

22) Figure adapted from Petrie 1933, pl. XXI.38
Long broad tang, 'chopping' blade, blunt tip, 'catch' shoulder, no midrib.



Figure 23

Type Family 17
Catalogue No. 42



Figure 24

Type Family 18
Catalogue No. 213



Figure 25

Type Family 19
Catalogue No. 79



Figure 26

Individual
Catalogue No. 134



Figure 27

Individual
Catalogue No. 158

23) Figure adapted from Yadin, et al., 1958, pl. CLX.17
Short slim tang, tapering, double-edged blade, broken tip, sloping shoulders, indeterminable midrib.

24) Figure adapted from Macdonald, et al., 1932, pl. LXII.13
Short slim tang, straight blade, blunt tip, no shoulders, indeterminable midrib.

25) Figure adapted from Loud 1948, pl. 179.31
Hourglass tang, straight blade, blunt tip, no shoulders or midrib.

26) Figure adapted from Guy 1938, pl. 99.3
Short broad tang, hourglass blade, blunt tip, squared shoulders, indeterminable midrib.

27) Figure adapted from Albright 1938b, pl. 41.17
Riveted shoulders, concave (from sharpening) blade, rounded tip, indeterminable shoulders and midrib.



Figure 28

Type Family 20
Catalogue No. 94



Figure 29

Type Family 21
Catalogue No. 101

28) Figure adapted from Guy 1938, pl. 145.11
Straight socketed tang, convex, double-edged blade, triangular tip, squared shoulders, pronounced midrib.

29) Figure adapted from Guy 1938, pl. 149.4
Straight socketed tang, tapering, double-edged blade, rounded tip, rounded shoulders, pronounced midrib.



Figure 30

Type Family 22
Catalogue No. 175



Figure 31

Type Family 23
Catalogue No. 167



Figure 32

Type Family 24
Catalogue No. 91

30) Figure adapted from Tufnell, et al., 1958, pl. 23.9

Flared socketed tang, leaf-shaped, double-edged blade, rounded tip, no shoulders, subtle midrib.

31) Figure adapted from Biran and Ben-Dov 2002, fig. 2.90 #120

Flared socketed tang, tapering, double-edged blade, rounded tip, no shoulders or midrib.

32) Figure adapted from Guy 1938, pl. 163.9

Straight socketed tang, tapering, double-edged blade, pointed tip, sloping shoulders, pronounced midrib.

Figure 33

'khephesh' sword
Catalogue No. 7

Figure adapted from Khalil 1980, fig. 20.61



Figure 34

Sword
Catalogue No. 209

Figure adapted from Pritchard 1980, fig 5.13

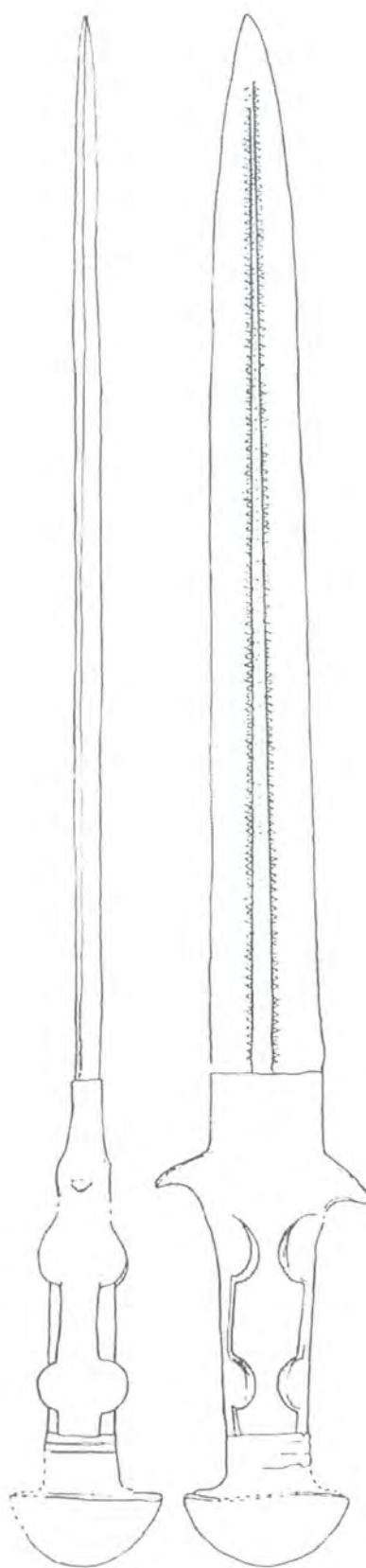


Figure 35

Scimitar
Catalogue No. 11

Figure adapted from Rowe 1929, pl. XV.2



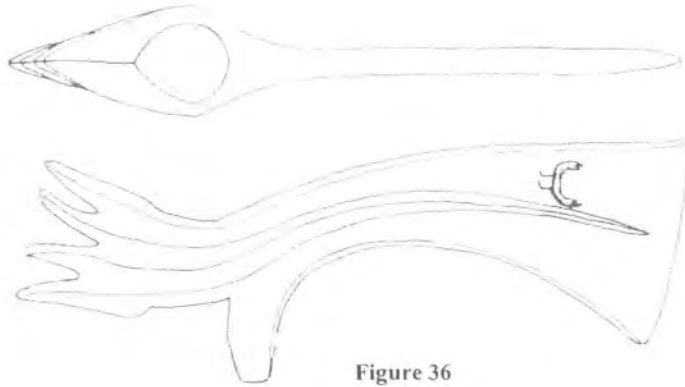


Figure 36

Socketed/Shaft-hole Axe
Catalogue No. 15

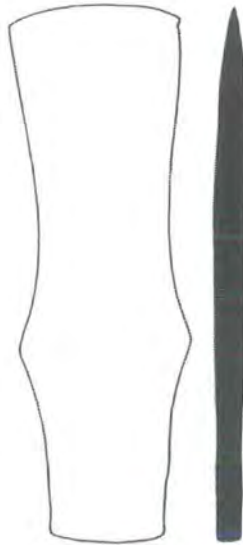


Figure 37

Lugged Axe
Catalogue No. 18



Figure 38

Flat Axe
Catalogue No. 8

36) Figure adapted from James and McGovern 1993, fig. 155.6

37) Figure adapted from James and McGovern 1993, fig. 155.2

38) Figure adapted from Khalil 1980, fig. 21.66

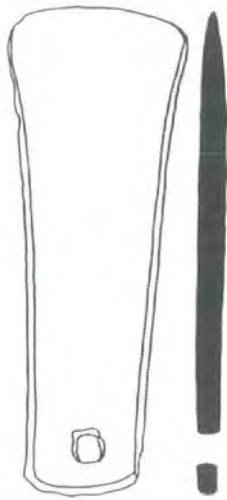


Figure 39

Pierced Adze
Catalogue No. 27



Figure 40

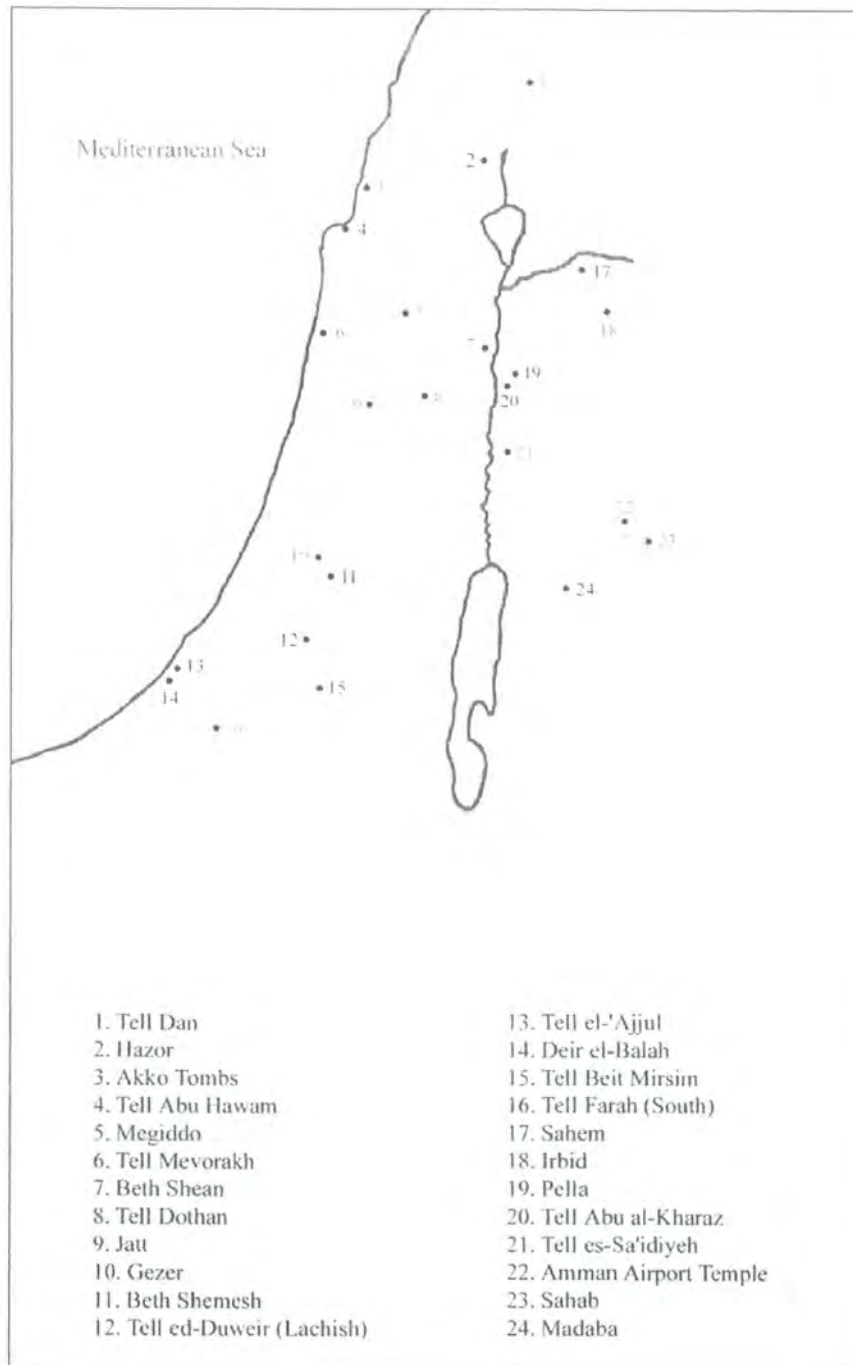
Plain Adze
Catalogue No. 16

39) Figure adapted from James and McGovern 1993, fig. 155.4

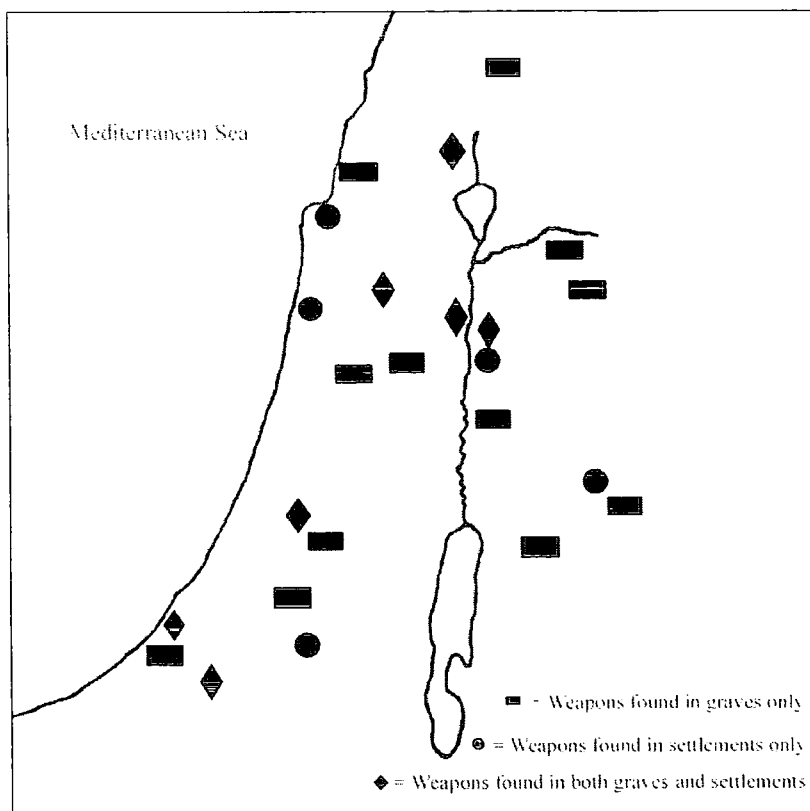
40) Figure adapted from James and McGovern 1993, fig. 155.3

The Maps

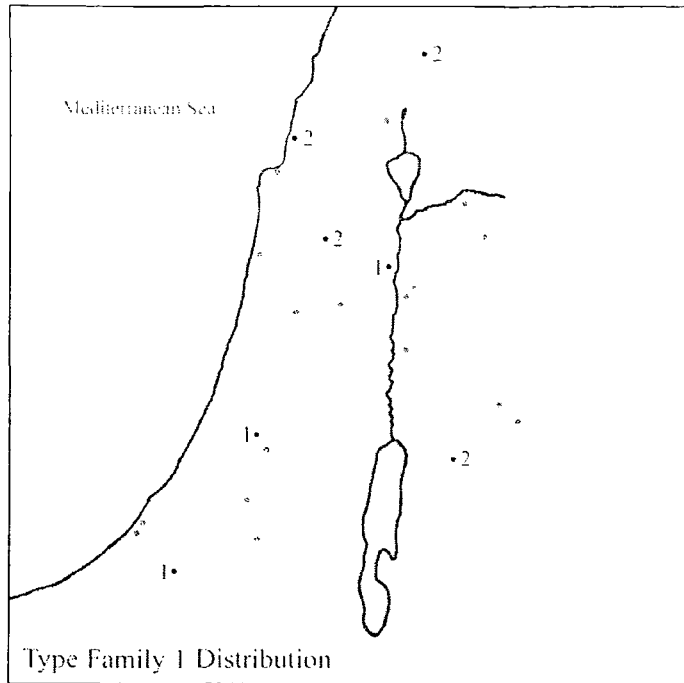
Most of these Figures show the distribution of the objects within each Type Family. If a number appears next to a site, that site contains the quantity given for that specific Type Family. If no number appears next to the site, then no weapons of that type family were found.



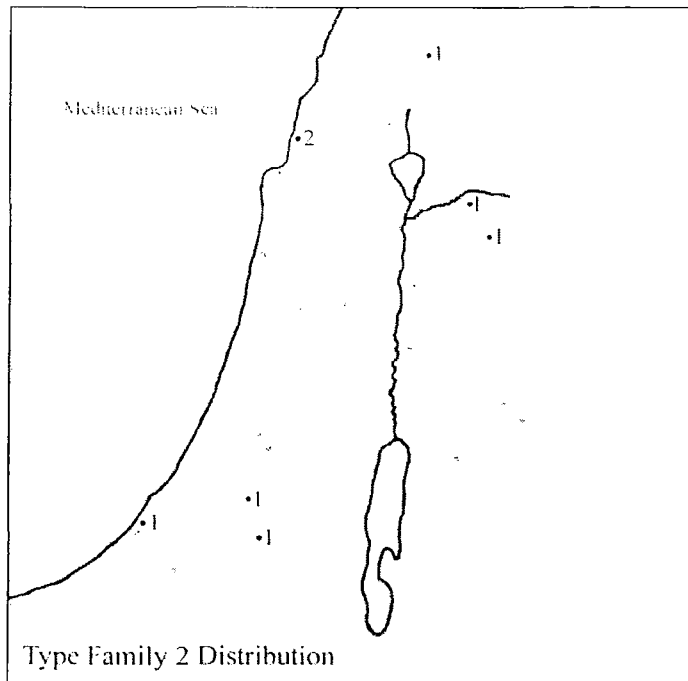
Map 2: Sites with edged weapons and knives.



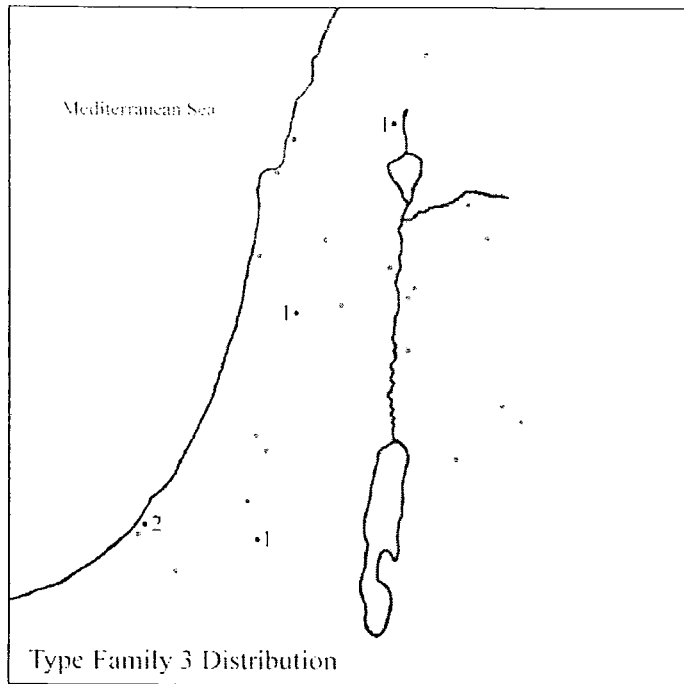
Map 3: Distribution of the general contexts in which LBA weapons and knives were found.



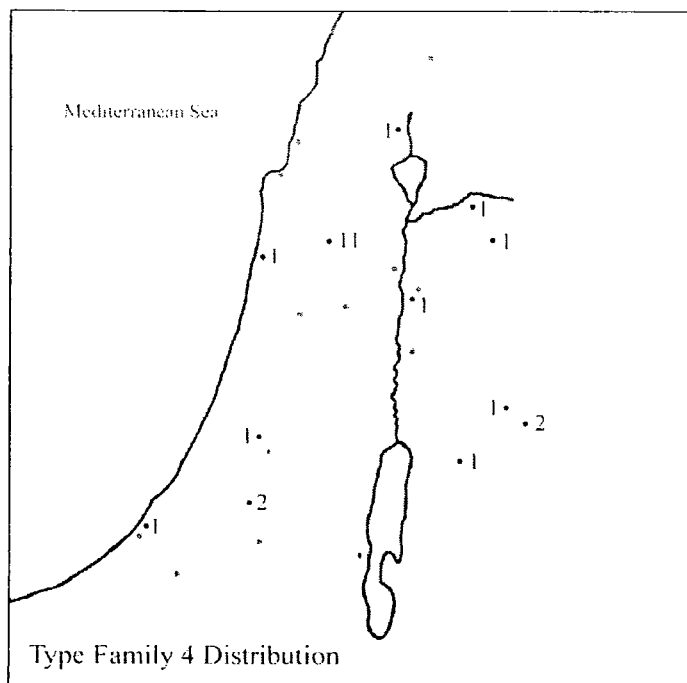
Map 4



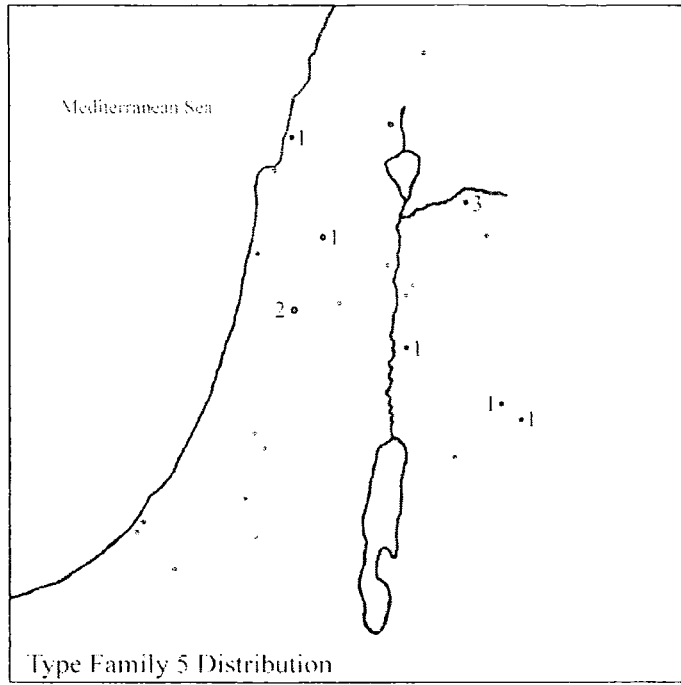
Map 5



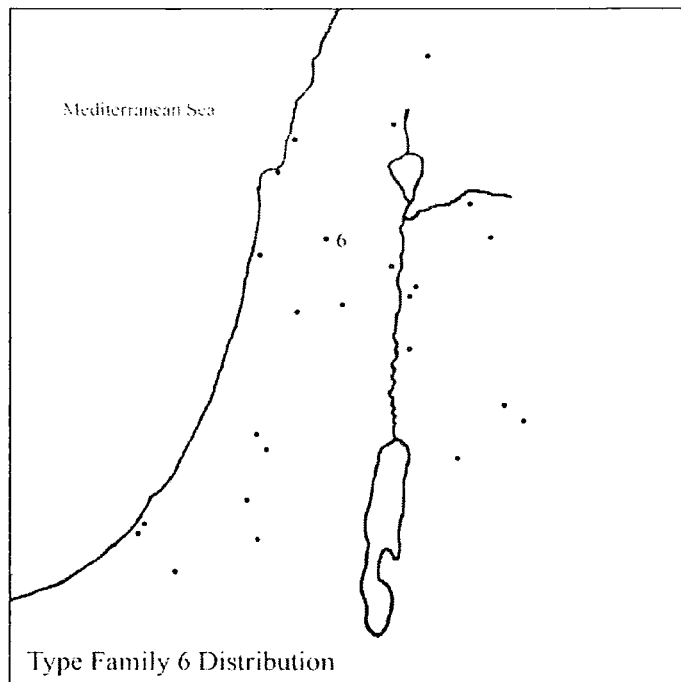
Map 6



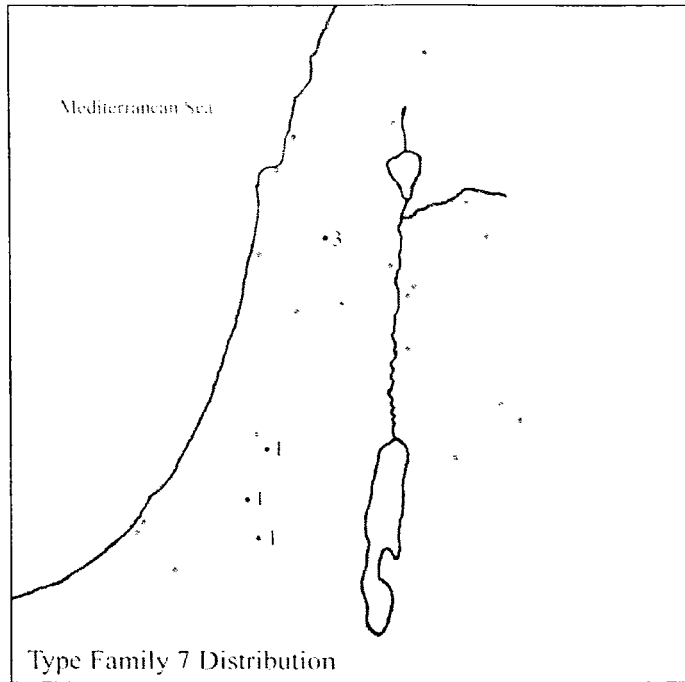
Map 7



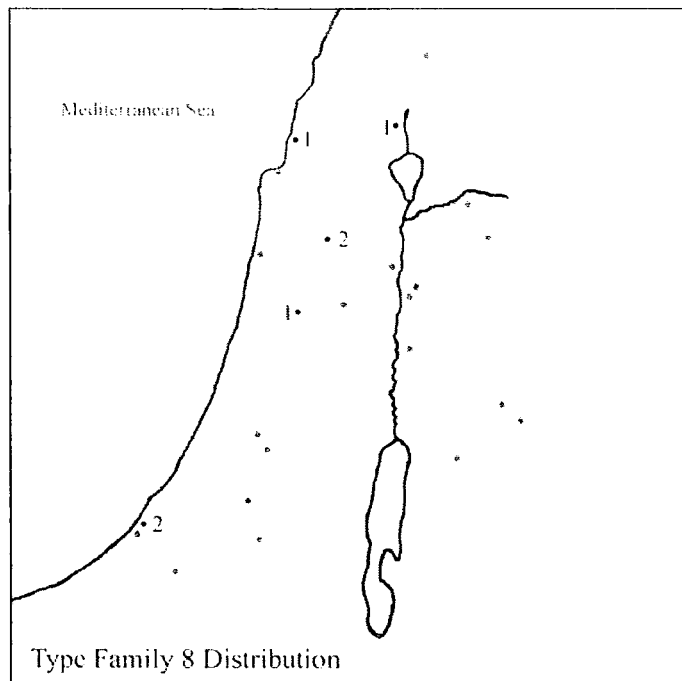
Map 8



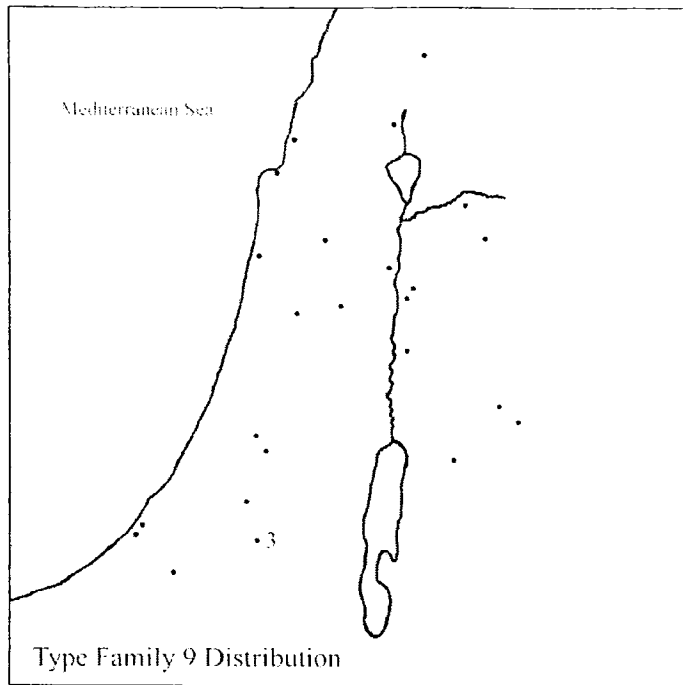
Map 9



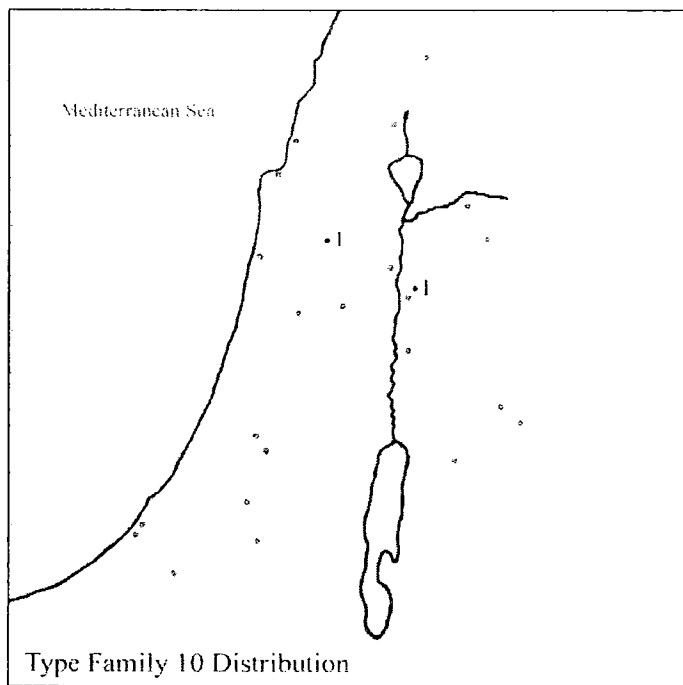
Map 10



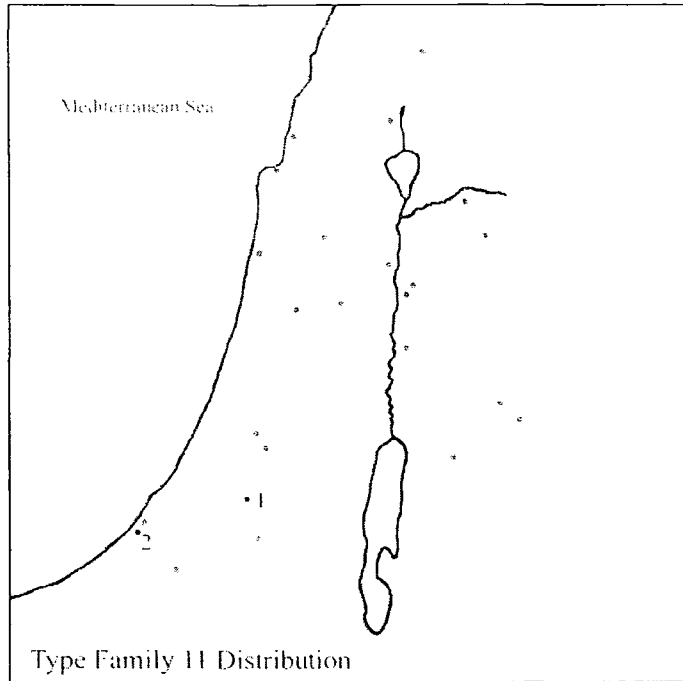
Map 11



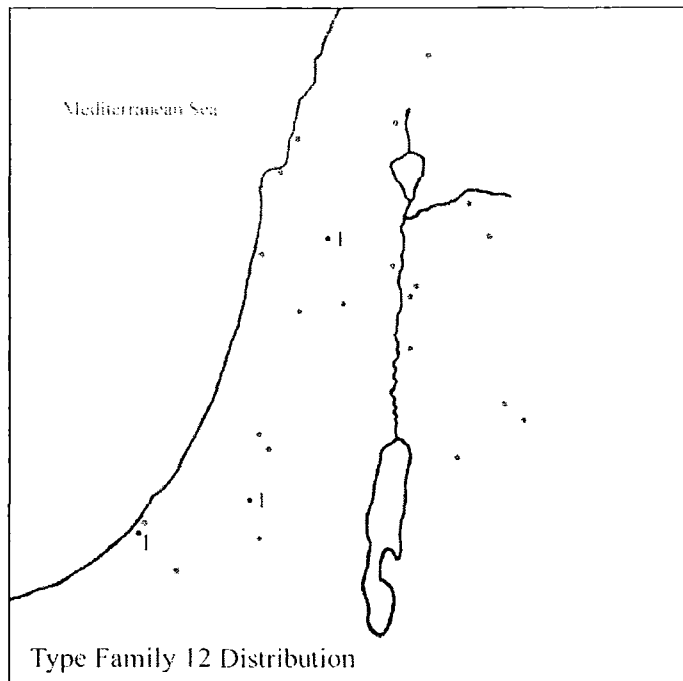
Map 12



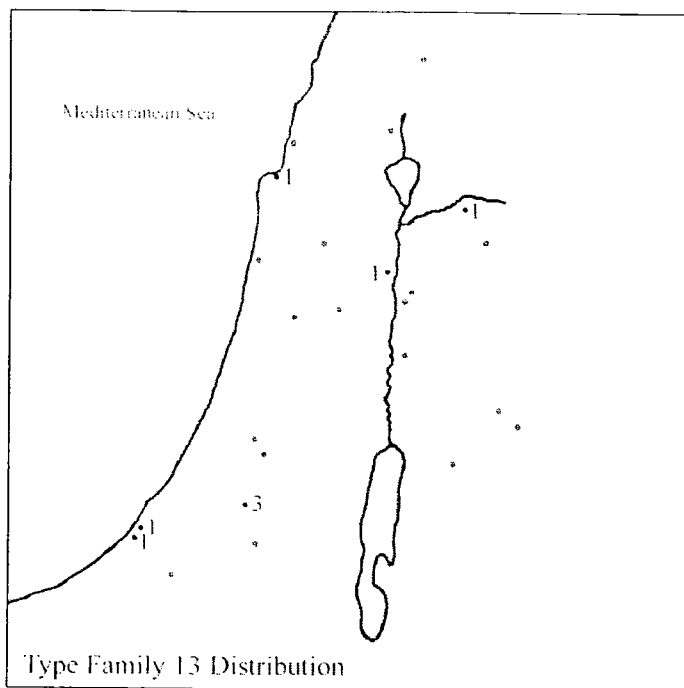
Map 13



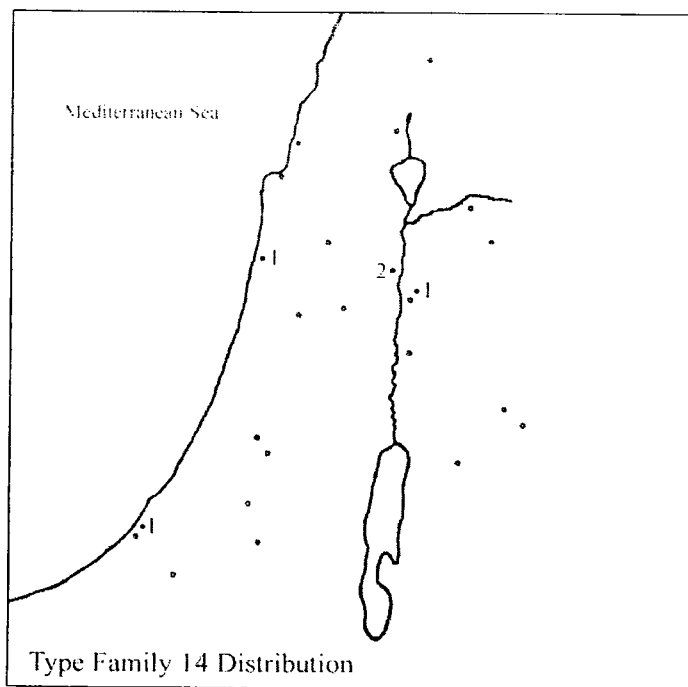
Map 14



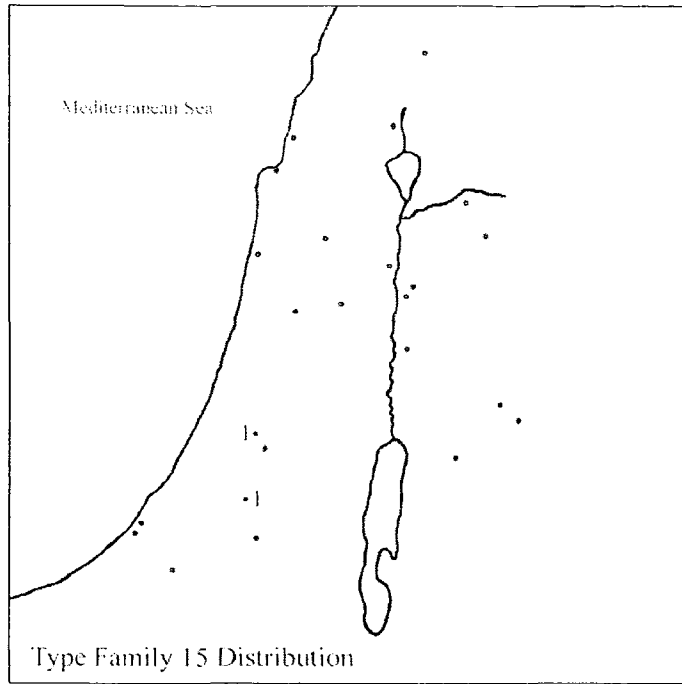
Map 15



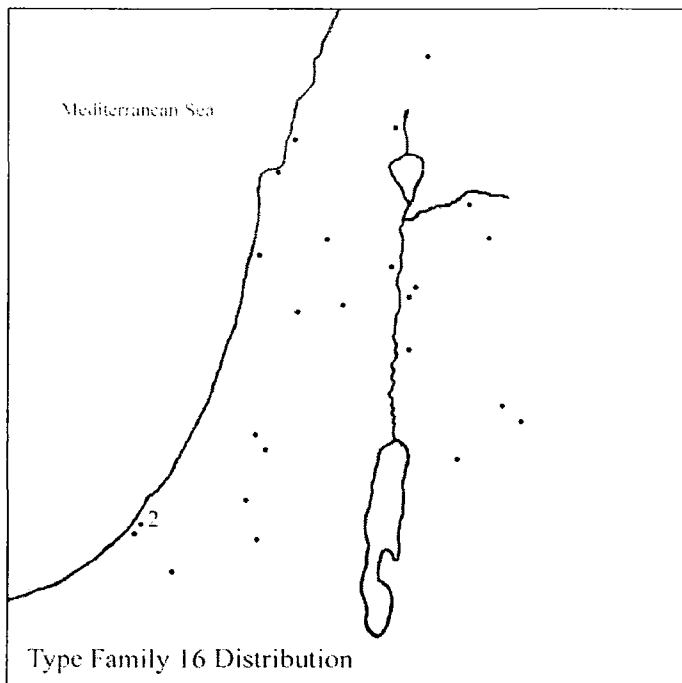
Map 16



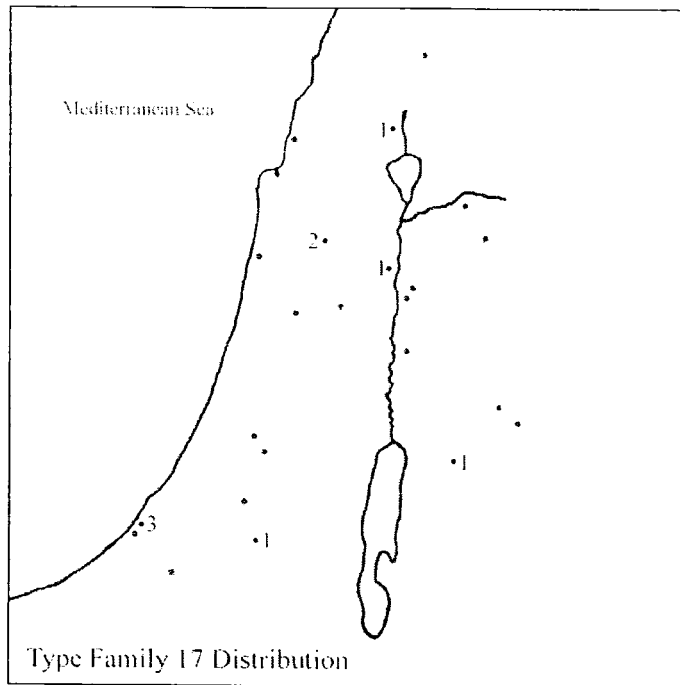
Map 17



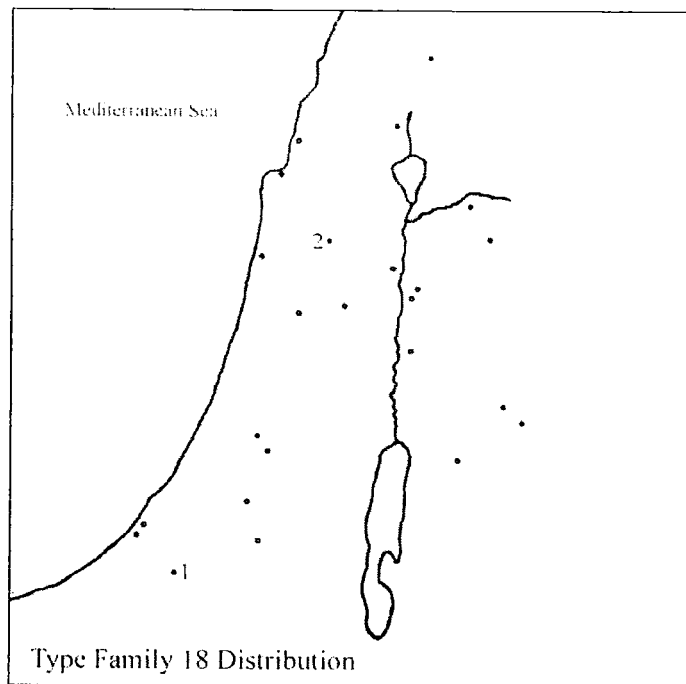
Map 18



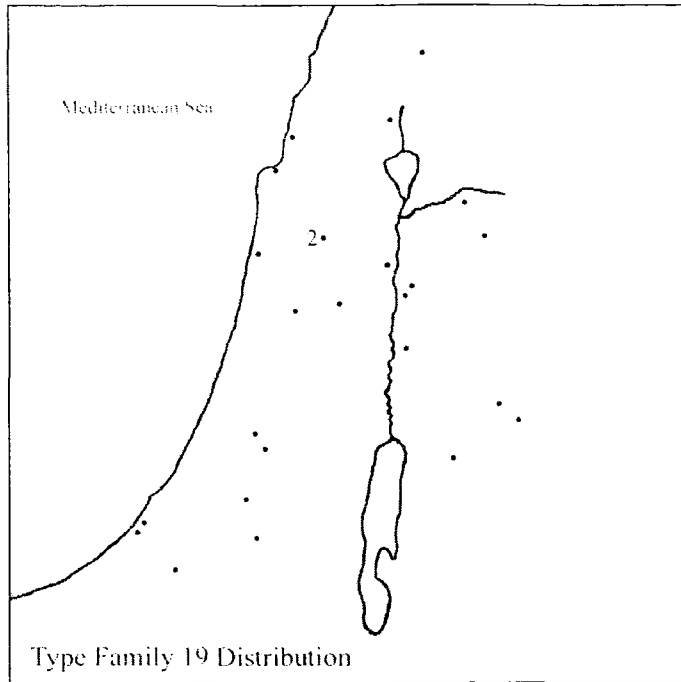
Map 19



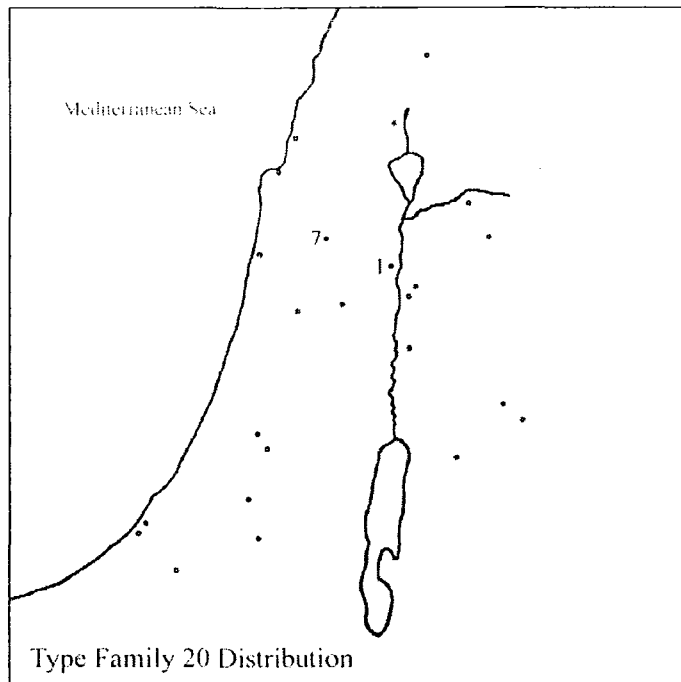
Map 20



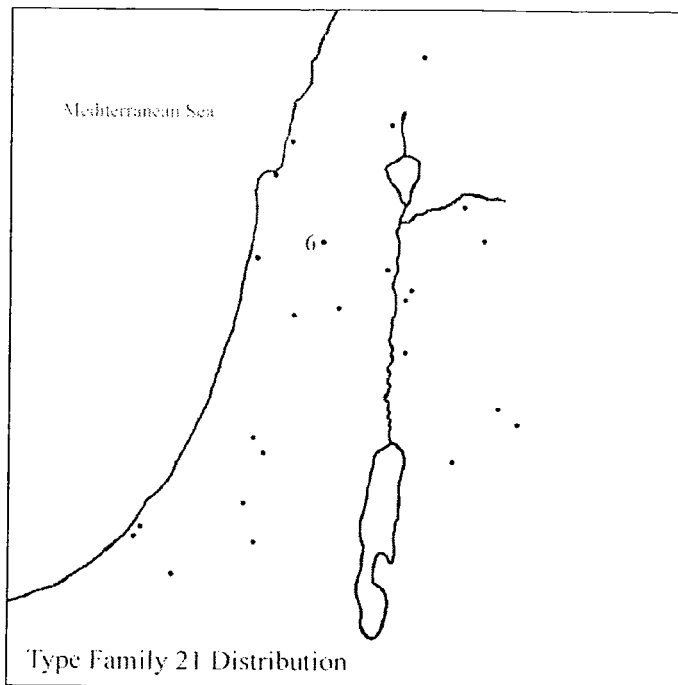
Map 21



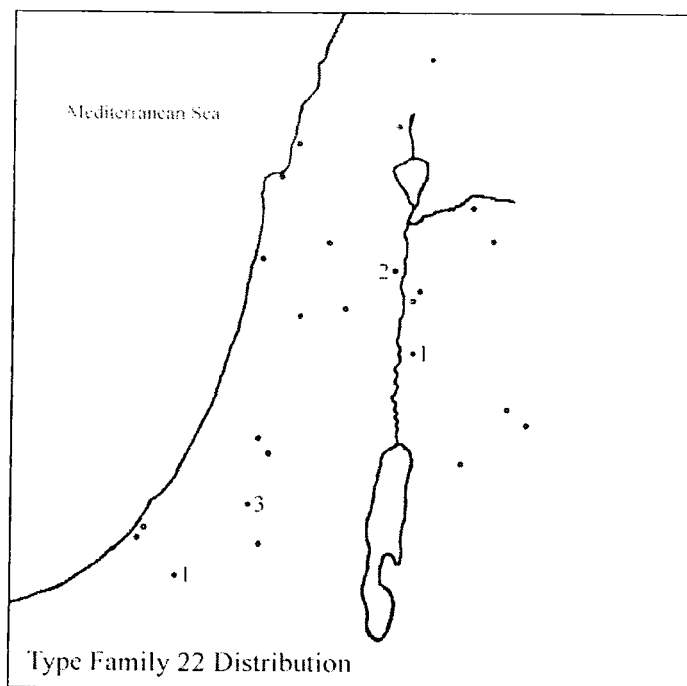
Map 22



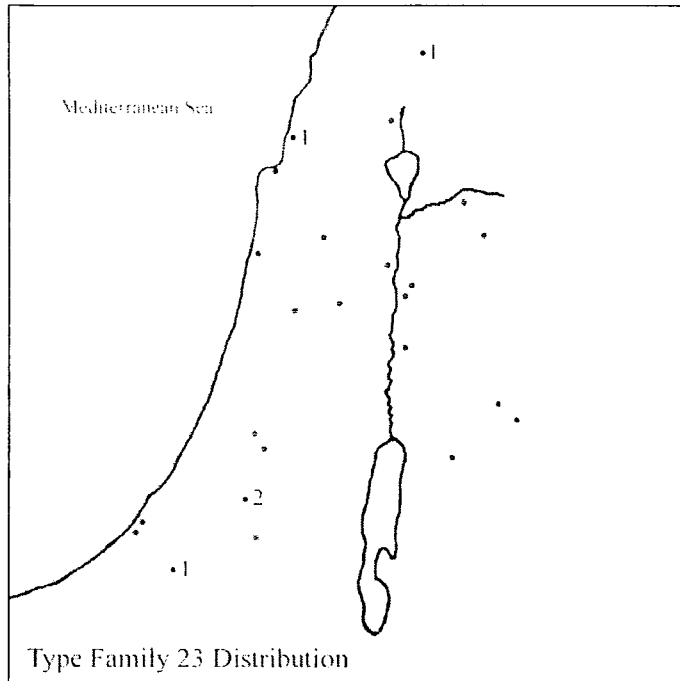
Map 23



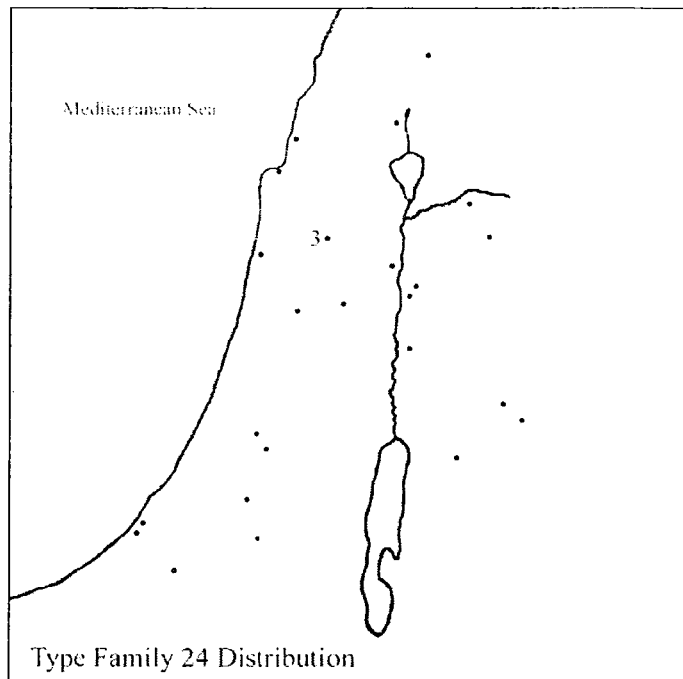
Map 24



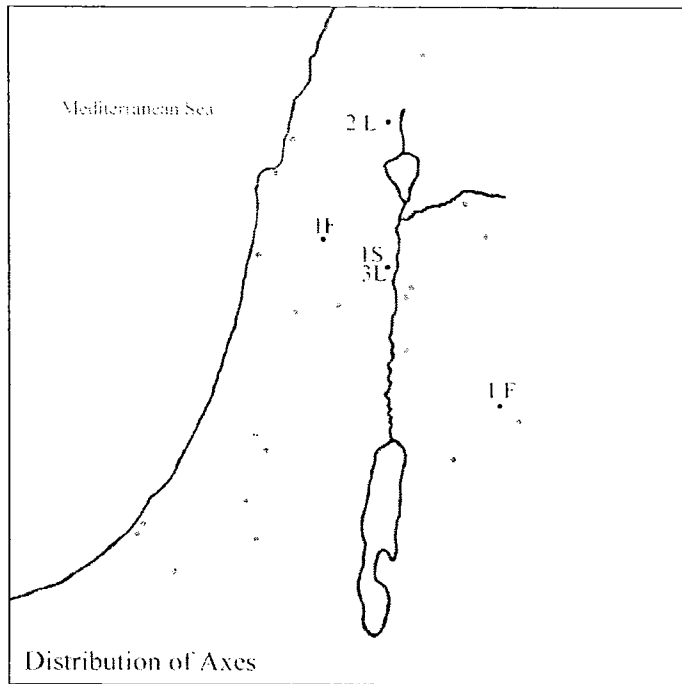
Map 25



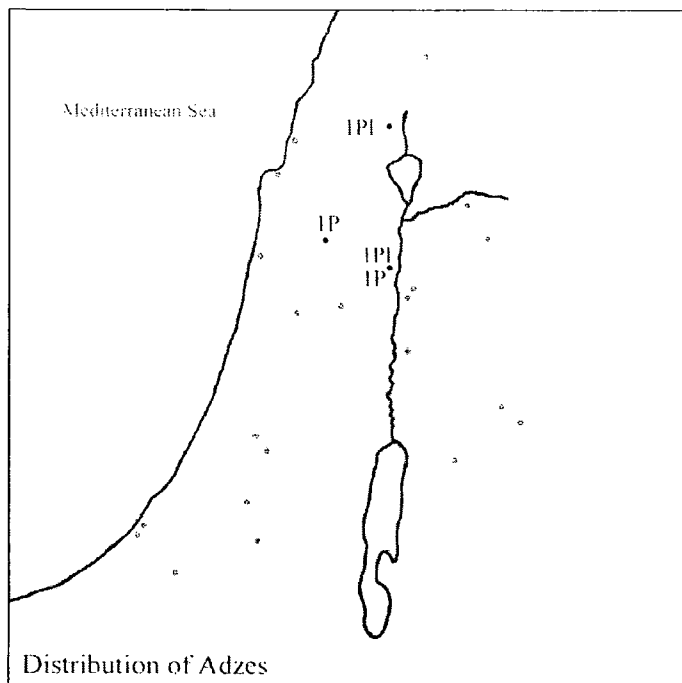
Map 26



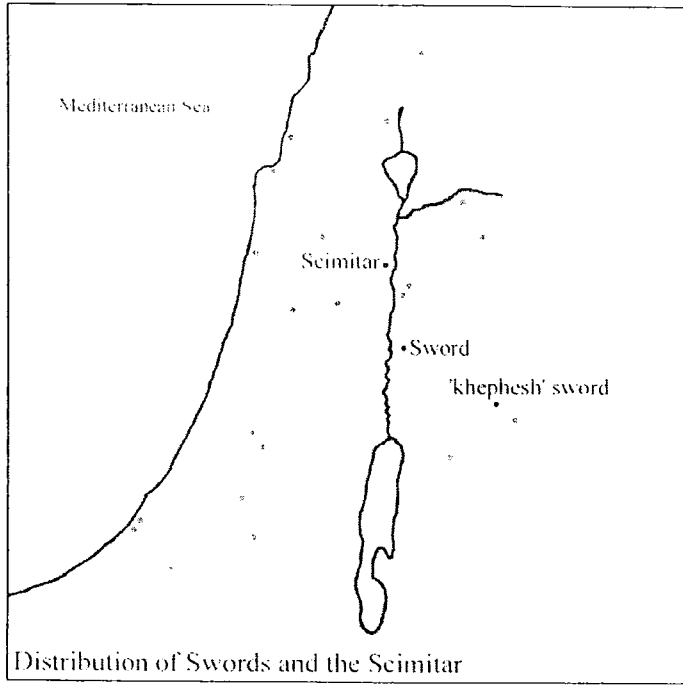
Map 27



Map 28



Map 29



Map 30

The Tables

Tables 8-12 are adaptations of tables which appear in the text previously. However, instead of providing merely the quantity of weapons found, they indicate in which Type Families each weapon is classified.

Tables 13-23 summarize the Type Families and other objects by context and date and show the presence or absence of projectiles in those contexts. The numbers within the tables indicate the quantity of a particular Type Family found within that general provenance. Numbers in bold italics indicate the number of weapons found with projectiles. When a number such as *4/7* appears, this indicates that 4 out of the 7 total weapons in that Type Family provenance were found with projectiles.

Stratum	Context	Dagger	Blades	Sm B	Knife	Axe	Adze
VIII	Public Areas Temple Palace Domestic Building Unspecified	TF 1	TF 4 Indiv 121 TF 8	TF 19 TF 17 TF 18	Indiv 122		
VII	Public Building Rooms Outside Temple		Bf slim tangs not pic'd			not pic'd	
VII B	Domestic Building		Indiv 131	TF 18			
VII A	Palace Domestic Building		TF 8 Indiv 130, (2) TF 4, Bf slim tangs	TF 19		Flat, not pic'd	Pierced

Table 8: Summary of Type Families at Beth Shean.

Area/Sub-Area	Context	B	Sm. B	Knife	Axe	Adze
C	Public Bldg Shrine Domestic Bldg Undefined	1 Bf	TF 17			
D2 D3	Domestic Bldg Cistern outside Domestic Bldg	1 Bf				
E	Cistern outside Domestic Bldg	Indiv 44				
F	Tomb 8144 Domestic Bldg Domestic Bldg Courtyard North Wall Tunnel/Depression Channel	TF 3 TF 4			Lugged Lugged	Plain
H	Temple Pit outside Temple Outside of Temple	Indiv 51, TF 8	Indiv 52	Indiv 53		

Table 9: Summary of Type Families at Hazor.

Date	Tomb #	Dagger	Blades	Sm B	K	Spearheads	Projs.
LBA	26			TF 17			
LBA	877A1		TF 4				
LBA	989B1			Indiv 134			
LBA & LBII	877B1		(2) TF 4(LBII), TF 5(LBII), TF 6(LBA)				
MBII or LBI	84					(2) TF 24	
MBII or LBI	1100A					Indiv 93, (4) TF 20	1
MBII or LBI	1100B		(2) TF 7			(2) TF 20	
MBII or LBI	1100D	TF 1				TF 20, (6) TF 21, (3) not pic'd, frags	
MBIIB-LBI	<i>3018 A-B</i>		TF 7		TF10		3
LBI	37A					TF 24	
LBI	2108			TF 17			
LBI	2127						1
LBII	36B					Indiv 89	1
LBII	217A		TF 4				1
LBII	911B		TF 4		TF 12		
LBII	911C		TF 6				1
LBII	912A		TF 6				1
LBII	912B		(3) TF 6, Indiv 115, (2) TF 4				5 FBs
LBII	912D		TF 4				
LBIIA-IA IA?	3094		Indiv 84				

Table 10: Summary of Type Families in the tombs at Megiddo.
The tombs in italics are the only five that were located on the tell that contained weapons.

Area	Stratum	Context	Dagger	Blade	Sm. B	Knife	Axe	Adze
AA	IX	Temple						Pierced
	VIII	Pavement		TF 4				
	VIIIB	Settlement			TF 18			
	VIIA	Palace		TF 8				Pierced
BB	IX	Domestic Bldg Uncertain			(2) TF 17	TF 14		Plain
	VIII	Temple Domestic Bldg Uncertain		Indiv 121	TF 17, TF 19		Indiv 122	
	VII	Public Bldg Settlement		TF 8				
CC	VIII	Domestic Bldg	TF 1					
	VIIIB	Domestic Bldg		Indiv 131				
	VIIA	Domestic Bldg		Indiv 130, (2) TF 4, Bf	TF 19		Flat, not pic'd	
DD	VIII	Palace			TF 18			

Table 11: Summary of Type Families at the tell of Megiddo.

		Dagger	Blade	Small Blade	Knife
Lower Cemetery	T. 336 T. 364 T. 419	TF 2	TF 8, Bf tip half TF 4, Indiv 196		TF 14
Fort V	PM			TF 17	
Settlements West of Forts	QP LA LH LK ² LZ ⁶		Bf tip half	TF 17 TF 17	TF 16 TF 16
Southern Settlements	street AN area G		TF 3 (2) TF 8s, TF 3		TF 13
Horizon 2	Trench 8, L 47		Bf slim tang		

Table 12: Summary of Type Families at Tell el-'Ajjul.

TF	Site	Context Type	MBII	LBI	LBIIA	LBIIIB	IA
TF 1	Akko Tombs	Grave			-----1-----		
	Gezer	Grave		-----1-----			
	Madaba	Grave			-----2-----		
	Megiddo	Grave		----1----			
	Tell Dan	Grave			-----2-----		
	Tell Farah (South)	Grave			-----1-----		
	Beth Shean	Temple				----1----	
	Megiddo	Domestic Bldg		-----1-----			
	Akko Tombs	Section Find			-----1-----		
TF 2	Akko Tombs	Grave			-----1/2-----		
	Irbid	Grave				-----1-----	
	Sahem	Grave		-----1-----			
	Tell Dan	Grave			-----1-----		
	Tell ed-Duweir	Grave		-----1-----			
	Tell el-'Ajjul	Grave				----1----	
	Tell Beit Mirsim	Domestic Bldg			-----1-----		

Table 13: Summary of Dagger Type Families by context and date.

TF	Site	Context Type	MBII	LBI	LBIIA	LBIIIB	IA
TF 3	Jatt	Grave		---1---			
	Hazor	Domestic Bldg		---1---			
	Tell Beit Mirsim	Domestic Bldg				-----1-----	
	Tell el-'Ajjul	Outside a Bldg				-----1-----	
	Tell el-'Ajjul	Street		---1---			
TF 4	Gezer	Grave				-----1-----	
	Irbid	Grave				-----1-----	
	Madaba	Grave				-----1-----	
	Megiddo	Grave				-----3/7-----	
	Megiddo	Grave				-----1-----	
	Sahab	Grave				-----2-----	
	Sahem	Grave				-----1-----	
	Tell ed-Duweir	Grave				-----1-----	
	Tell el-'Ajjul	Grave				---1---	
	Amman Airport Temple	Temple				---1---	
	Tell Mevorakh	Temple				---1---	
	Megiddo	Public Bldg Pavement				-----1-----	
	Megiddo	Domestic Bldg				-----2-----	
	Tell Abu al-Kharaz	Domestic Bldg				---1---	
	Hazor	Tunnel/Depression				-----1-----	
Tell ed-Duweir	Rubbish				-----1-----		
TF 5	Akko Tombs	Grave				-----1-----	
	Jatt	Grave				---2---	
	Megiddo	Grave				-----1-----	
	Sahab	Grave				-----1-----	
	Sahem	Grave				-----3-----	
	Tell es-Sa'idiyeh	Grave				---1---	
	Amman Airport Temple	Temple				---1---	
TF 6	Megiddo	Grave				-----1-----	
	Megiddo	Grave				-----5-----	
TF 7	Beth Shemesh	Grave				-----1-----	
	Megiddo	Grave				---2---	
	Tell ed-Duweir	Grave				-----1-----	
	Megiddo	Domestic Bldg				-----1-----	
	Tell Beit Mirsim	Domestic Bldg				-----1-----	
TF 8	Jatt	Grave				---1---	
	Tell el-'Ajjul	Grave				---2---	
	Hazor	Temple				---1---	
	Megiddo	Uncertain				-----1-----	
	Megiddo	Palace				-----1-----	
	Tell el-'Ajjul	Settlement				-----1-----	
	Akko Tombs	Section Find				-----1-----	

Table 14: Summary of Blade Type Families by context and date.

TF	Site	Context Type	MBII	LBI	LBIIA	LBIIIB	IA
TF 9	Tell Beit Mirsim	Domestic Bldg			-----2-----		
	Tell Beit Mirsim	Debris			-----1-----		
TF 10	Megiddo	Grave		-----1-----			
	Pella	Domestic Bldg		----1----			
TF 11	Deir el-Balah	Grave			-----2-----		
	Tell ed-Duweir	Grave		-----1-----			
TF 12	Deir el-Balah	Grave		-----1-----			
	Megiddo	Grave			-----1-----		
	Tell ed-Duweir	Grave			-----1-----		
TF 13	Deir el-Balah	Grave		-----1-----			
	Sahem	Grave		-----1-----			
	Tell ed-Duweir	Grave		-----3-----			
	Beth Shean	Temple				----1----	
	Tell Abu Hawam	Domestic Bldg				-----1-----	
	Tell el-'Ajjul	Settlement		----1----			
TF 14	Pella	Grave		-----1-----			
	Tell el-'Ajjul	Grave		----1----			
	Beth Shean	Temple		----1----			
	Tell Mevorakh	Temple			----1----		
	Beth Shean	Domestic Bldg				----1----	
	Megiddo	Domestic Bldg		----1----			
TF 15	Gezer	Grave			----1----		
	Tell ed-Duweir	Grave		-----1-----			
TF 16	Tell el-'Ajjul	Domestic Bldg		----1----			
	Tell el-'Ajjul	Domestic Bldg			-----1-----		

Table 15: Summary of Knife Type Families by context and date.

TF	Site	Context Type	MBII	LBI	LBIIA	LBIIIB	IA
TF 17	Beth Shean	Grave		---1---			
	Madaba	Grave					-----1-----
	Megiddo	Grave			-----1-----		
	Megiddo	Grave		---1---			
	Megiddo	Temple			-----1-----		
	Tell el-'Ajjul	Fort					-----1-----
	Hazor	Domestic Bldg				-----1-----	
	Tell Beit Mirsim	Domestic Bldg				-----1-----	
	Tell el-'Ajjul	Domestic Bldg		---2---			
Megiddo	Uncertain		---2---				
TF 18	Megiddo	Public Bldg					-----1/2-----
	Tell Farah (South)	Domestic Bldg					-----1-----
TF 19	Megiddo	Public Bldg		-----1-----			
	Megiddo	Domestic Bldg					-----1-----

Table 16: Summary of Small Blade Type Families by context and date.

TF	Site	Context Type	MBII	LBI	LBIIA	LBIIIB	IA
TF 20	Megiddo	Grave		-----4/7-----			
	Beth Shean	Temple					---1---
TF 21	Megiddo	Grave		-----6-----			
TF 22	Tell ed-Duweir	Grave					-----2-----
	Tell ed-Duweir	Grave					-----1-----
	Tell es-Sa'idiyeh	Grave					-----1-----
	Tell Farah (South)	Grave					-----1-----
	Beth Shean	Temple					---1---
	Beth Shean	Domestic Bldg					---1---
TF 23	Tell Dan	Grave					-----1-----
	Tell ed-Duweir	Grave					-----2-----
	Tell Farah (South)	Grave					-----1-----
	Akko Tombs	Section Find					-----1-----
TF 24	Megiddo	Grave		---1---			
	Megiddo	Grave		-----2-----			

Table 17: Summary of Spearhead Type Families by context and date.

Object	Site	Context Type	MBII	LBI	LBIIA	LBIIIB	IA
Blade Indivs.	Megiddo	Grave				-----1-----	
	Megiddo	Grave				-----1-----	
	Tell ed-Duweir	Grave				-----2-----	
	Tell el-'Ajjul	Grave				----1---	
	Beth Shean	Temple				----1---	
	Megiddo	Temple		-----1-----			
	Tell Abu Hawam	Temple				-----1-----	
	Megiddo	Domestic Bldg				-----2-----	
	Hazor	Cistern		----1---			
Knife Indivs.	Tell Farah (South)	Fort				-----1-----	
	Megiddo	Domestic Bldg				-----1-----	
Sm B Indivs.	Megiddo	Grave				-----1-----	
	Hazor	Temple				-----1-----	
	Hazor	Temple		----1---			
	Tell Beit Mirsim	Domestic Bldg				-----1-----	
	Hazor	Pit				-----1-----	
S-H Indivs.	Megiddo	Grave				-----1-----	
	Megiddo	Grave	-----1-----				
	Tell Beit Mirsim	Domestic Bldg	-----1-----				

Table 18: Summary of Individuals by context and date.

Object	Site	Context Type	MBII	LBI	LBIIA	LBIIIB	IA
Blade frags	Beth Shemesh	Grave				-----1-----	
	Jatt	Grave		----1---			
	Sahab	Grave				-----5-----	
	Sahem	Grave				-----1-----	
	Tell ed-Duweir	Grave				-----1/2-----	
	Tell ed-Duweir	Grave				-----1-----	
	Tell el-'Ajjul	Grave		----1---			
	Beth Shean	Public Bldg				----1---	
	Megiddo	Public Bldg				-----1-----	
	Beth Shean	Temple				----4---	
	Beth Shean	Domestic Bldg				----1---	
	Hazor	Domestic Bldg		-----1-----			
	Megiddo	Domestic Bldg				-----1-----	
	Tell el-'Ajjul	Domestic Bldg				-----1-----	
	Tell el-'Ajjul	Domestic Bldg				-----1-----	
	Hazor	Uncertain				----1---	
S-H frags	Megiddo	Grave	# of frags unknown-				

Table 19: Summary of Blade and Spearhead fragments by context and date.

Object	Site	Context Type	MBII	LBI	LBIIA	LBIIB	IA
Daggers	Tell Dothan	Grave			---26---		
	Tell Dothan	Grave				---18---	
	Tell Dothan	Grave				-----18-----	
	Pella	Settlement				---1---	
Blade	Megiddo	Settlement				-----1-----	
Knives	Tell Dothan	Grave			---1---		
	Tell Dothan	Grave				---1---	
	Tell Dothan	Grave				-----2-----	
Spearheads	Megiddo	Grave			-----3-----		
	Tell Dothan	Grave				---5---	
	Tell Dothan	Grave				---5---	
	Tell Dothan	Grave				-----7-----	
Axes	Megiddo	Temple				-----1-----	
	Megiddo	Domestic Bldg				-----1-----	
	Pella	Settlement			---1---		

Table 20: Summary of Objects Not Pictured by context and date.

The presence or absence of projectiles among the objects from Tell Dothan (all from Tomb 1) is uncertain due to the incomplete nature of the publication of the Tell Dothan material to date. The only certainty is that projectiles were found in the Tomb.

Object	Site	Context Type	MBII	LBI	LBIIA	LBIIB	IA
Sword	Tell es-Sa'idiyeh	Grave				-----1-----	
	Amman Airport Temple	Temple				-----1-----	
Scimitar	Beth Shean	Temple				-----1-----	

Table 21: Summary of Swords and the Scimitar by context and date.

Axe	Site	Context Type	LBI	LBIIA	LBIIB	IA
Socketed/Shaft-hole	Beth Shean	Temple				-----1-----
Lugged	Beth Shean	Temple				-----1-----
	Beth Shean	Domestic Bldg				-----2-----
	Hazor	Domestic Bldg				-----2-----
Flat	Amman Airport	Temple				----1----
	Megiddo	Domestic Bldg				-----1-----

Table 22: Summary of Axes by context and date.

Adze	Site	Context Type	MBII	LBI	LBIIA	LBIIB	IA
Pierced	Megiddo	Public Bldg					-----1-----
	Megiddo	Temple		---1---			
	Beth Shean	Street					-----1-----
Plain	Hazor	Grave					-----1-----
	Beth Shean	Temple					-----1-----
	Megiddo	Settlement		---1---			

Table 23: Summary of Adzes by context and date.

Site	Grave	Temple	Public Bldg	Domestic Bldg	Other
Akko Tombs	6/7				
Amman Airport Temple		4			
Beth Shean	1	11/14	1	1/5	1
Beth Shemesh	2				
Deir el-Balah	4				
Gezer	2/3				
Hazor	1	3		6	1/3
Irbid	2				
Jatt	5				
Madaba	4				
Megiddo	17/48	2/3	3/9	1/11	1/4
Pella	1			1	2
Sahab	8				
Sahem	7				
Tell Abu al'Kharaz				1	
Tell Abu Hawam		1		1	
Tell Beit Mirsim				8	1
Tell Dan	4				
Tell Dothan	83				
Tell ed-Duweir (Lachish)	14/19				1
Tell el-'Ajjul	3/6		1	1/6	5
Tell es-Sa'diyeh	2/3				
Tell Farah (South)	3		1	1	
Tell Mevorakh		2			
Total Weapons:	211	27	12	40	17
Total # of Weapons found with Projectiles:	152	17	3	3	2

Table 24: Summary of weapons and projectiles by general context type.

Site	Context Type	TFs	Date
Gezer	Grave	4, 1	LBI-LBIIA
Irbid	Grave	4, 2	LBII-B-IA
Madaba	Grave	4, (2)1, 17	LBII-B-IA
Sahem	Grave	4, 2, (3)5, 13, Bf	LBA
Megiddo	Grave	(2)4, 5, 6	LBA
Megiddo	Grave	4, 12	LBII
Megiddo	Grave	(2)4, (3)6, B Indiv 115	LBII
Sahab	Grave	(2)4, 5, (5)Bfs	LBIIA-IA
Tell ed-Duweir	Grave	4, 11, (3)13, 15, (2)22	LBI-LBIIA
Tell el-'Ajjul	Grave	4, B Indiv 196	LBII-B
Megiddo	Grave	4	LBII
Megiddo	Grave	4	LBA
Megiddo	Grave	4	LBII
Tell Mevorakh	Temple	4	LBIIA
Megiddo	Public Bldg Pavement	4	LBI-LBIIA
Tell Abu al-Kharaz	Domestic Bldg	4	LBI
Hazor	Tunnel/Depression	4	LBI-LBII
Tell ed-Duweir	Rubbish	4	LBA
Amman Airport Temple	Temple	4, 5, Sword, Flat Axe	LBII-B
Megiddo	Domestic Bldg	4, Flat Axe	LBIIA-IA
Megiddo	Domestic Bldg	4, Axe (not pic'd)	LBIIA-IA

Table 25: Type Family 4 associated weaponry.
Numbers in parentheses indicate the quantity of the Type Family number it precedes. Type Family numbers occurring alone appear singly within the context.

Appendix 2
The Catalogue

The Catalogue Explained

The layout for each catalogue entry used within the typology:

Catalog number, Kind of Weapon (Number of Individuals)

Site, Context, Placement of Artefact

Reference

Museum

Brief description

Further Description

Measurements

Type Date

Type Family

.....

A Guide to the Catalogue

Catalogue Number: The arbitrary number assigned each weapon to distinguish it from every other weapon.

Kind of Weapon: the label given each weapon so that at a glance one could have a vague idea about the kind of weapon being discussed in a particular entry.

Number of Individuals: occasionally when objects have not been photographed or published fully, they have simply been listed and classified by the writers of the preliminary reports, such as in the case of Tell Dothan. In this instance the number of a particular Kind of Weapon is given and the group of 'daggers' etc. from a particular time and place are grouped into a single catalogue entry since further classification is impossible.

Site: the site where the artefact was discovered.

Context: the locus, tomb number, temple, etc. where the artefact was found.

Placement of Artefact: sometimes the placement of an artefact in a tomb, for instance, is given. When available this information is also provided.

Reference: The publication where the artefact is discussed and recorded; sometimes there is more than one publication for an artefact as the artefact has been published more than once. The format followed in the catalogue will be thus: author, date of publication, page where artefact was discussed or described (p.), plate number (pl.), figure number (fig.). In the event the artefact has yet to be published, it will be duly noted in the catalogue and what information is available will be included as long as the proper permission has been given.

Museum: If I was able to view the artefact in person, the museum and appropriate accession number for the object will be given. All the descriptive information for that specific item will be gleaned from the artefact itself and not from a publication.

Brief Description: The first line of description is always that used in reference to the typology. It will list the tang type, blade type and edge number, the blade tip type, the shoulder type and the midrib type. (Only the tang, blade, blade tip, and shoulder types are involved in the actual typological classification. The edge number and midrib type are included only to give a clearer perception of the look of the artefact.) Axes are slightly different in that they are generally only described in terms of cutting edge, blade and butt shape.

Further Description: The second and following lines of description are used only to expand upon any characteristics that are not sufficiently covered by the 'Brief Description' or does not meet the description in the 'Typology Key' exactly. A stop-ridge, long slim tang type whose tang actually forms a socket (as in Catalogue #3) would be discussed in this portion of the description as that is not usual for that tang type. Due to time and budget constraints I was not able to view all the artefacts in this study in person. As the photographs in the publications are typically not clear enough to give precise descriptions, any detailed information the writer of a site report could offer that had been able to study the actual object would be included here.

Measurements: Measurements are given in centimetres to the nearest half centimetre except when the measurements were given in the artefact's publication or when the writer was able to examine the actual artefact in the museum. Blade length (BL), tang length (TL), total length (TtL), and width (W) are the only measurements given. The width is always taken at the widest point of the blade and the total length is always a product of the tang length added to the blade length. Where weapons are fragmentary, measurements were taken of the present state of the artefact and do not reflect the projected measurement of the artefact in its original state at the time of its manufacture. It should also be noted that, the bulk of the measurements were drawn largely from the scales given in plates and figures of the publications and were not gleaned from the original artefacts themselves.

Type: The type given using my classification system (see Chapter 4). For those artefacts not included in the typology such as axes, adzes, swords and scimitars, the 'type' is omitted.

Date: The approximate time period to which the artefact belongs (e.g. LBI, LBIIA, etc.)

Type Family: If an object belongs to a Type Family, its number will be given here. If the object is an Individual, it will be marked as such in this area of the Catalogue entry. If an object is not pictured, or is a sword, scimitar, axe, or adze, this category is omitted from the entry.

Note: Catalogue numbers 192 and 193 have been omitted due the only lately discovered irrelevance of these weapons to the current study in that they do not belong to the Late Bronze Age.

The Catalogue Entries

1 Dagger

Akko Tombs, Tomb B3, to the side of the right arm of the male bodies in the burial

Ben-Arieh and Edelstein 1977, p.33, pl. VII.1 & 1a, fig. 18.1

Flanged tang, leaf-shaped, double-edged blade, pointed tip, no shoulders or midrib.

'At the base of the blade... is an ornamental band with a zigzag line and dots. The raised edges on each side of the hilt originally framed an inlay, remains of which were found.

The pommels are crescent-shaped and the dagger widens at the juncture of blade and hilt to form a guard' (Ben-Arieh and Edelstein 1977: 33)

BL: 25, TL: 11.5, TtL: 36.5, W: 3.5

II.6.iii.n LBII

Type Family 1

2 Blade

Akko Tombs, Tomb B3

Ben-Arieh and Edelstein 1977, p.33-34, pl.VII.2, fig. 19.4

Hooked tang, convex, double-edged blade, pointed tip, squared shoulders, no midrib.

Blade has a subtle stop-ridge at the junction of the tang.

BL: 17.5, TL: 11.5, TtL: 29, W: 3.5

III.2.iii.B LBII

Type Family 5

3 Dagger

Akko Tombs, Tomb B3, to the side of the right arm of the male bodies in the burial

Ben-Arieh and Edelstein 1977, p.33, pl. VII.3, fig. 19.1

Stop-ridge, long slim tang, leaf-shaped, double-edged blade, pointed tip, no shoulders or midrib.

The tang was 'inserted into a handle of another material' and has a small "socket" 'formed by hammering and folding the ends of the tang' (Ben-Arieh and Edelstein 1977: 33). It is decorated at the base of the blade with two horizontal lines and a row of triangles.

BL: 19.5, TL: 13, TtL: 32.5, W: 3

XV.6.iii.n LBII

Type Family 2

4 Dagger

Akko Tombs, Tomb A2, to the side of the right arm of the fragmentary skeleton in the burial

Ben-Arieh and Edelstein 1977, p.33, pl. XI.6, fig. 19.3

Stop-ridge, long slim tang, convex, double-edged blade, broken tip, no shoulders or midrib.

The tang was 'inserted into a handle of another material' (Ben-Arieh and Edelstein 1977: 33). The base of the blade has a band of decoration.

BL: 11.5, TL: 9, TtL: 20.5, W: 2

XV.2.b.n LBII

Type Family 2

5 Blade

Akko Tombs, Section find

Ben-Arieh and Edelstein 1977, p. 34, pl. XVIII.13, fig. 20.1
Riveted tang, tapering, double-edged blade, blunt tip, no shoulders, pronounced midrib.
Three rivets (in 'V' formation) at the base of the blade were used to attach the handle
which is now missing.
TtL: 15.5, W: 2
XII.8.i.n LBII
Type Family 8

6 Dagger
Akko Tombs, Section find
Ben-Arieh and Edelstein 1977, p. 33, pl. XVIII.9, fig. 18.2
Flanged tang, straight, double-edged blade, blunt tip, no shoulders or midrib.
Three thin, central, parallel veins run the length of the blade.
BL: 23, TL: 16, TtL: 39, W: 4
II.9.i.n LBII
Type Family 1

7 'khepesh' Sword
Amman Airport Temple
Khalil 1980, p. 28, fig. 20. 61
Jordan Archaeological Museum (J. 5912)
Riveted and flanged tang, recurved(?), single-edged blade, rounded tip, no shoulders or
midrib.
The curved blade is sharpened on the outer edge...with a straight section of blade
between the edge and the handle. Three ribs run 'from the end of the handle through the
straight part of the sword, in parallel with the blade, joining at the sharp, pointed end of
the blade. The handle is modified from a bird's head and it was inlaid probably with
horn or ivory...held by the flanged hilts and fixed with two rivets. The two horns could
be considered as guards for the handle and for support in the sheath' (Khalil 1980: 28).
BL: 43.5, TL: 12.5, TtL: 56, W: 5
LBIIB

8 Axe, Flat
Amman Airport Temple
Khalil 1980, p. 29, fig. 21.66
Jordan Archaeological Museum (J. 5911)
A flat axe with two lugs at the butt end of the blade for hafting.
The blade narrows toward the rounded cutting edge.
TtL: 9.5, W: 6.5 LBIIIB

9 Blade
Amman Airport Temple
Khalil 1980, p. 29, fig. 16.36
Jordan Archaeological Museum (J. 5913)
Long slim tang, tapering, double-edged blade, pointed tip, sloping shoulders, subtle
midrib.
The blade is broken into two pieces.
BL: 18, TL: 11.5, TtL: 29.5, W: 2.5
VII.8.iii.A LBIIIB
Type Family 4

10 Blade

Amman Airport Temple

Khalil 1980, p. 23, fig. 16.38

Jordan Archaeological Museum (J. 5914)

Hooked tang, straight, double-edged blade, broken tip, sloping shoulders, subtle midrib.

The blade is broken into two pieces, and the tip is missing.

BL: 12, TL: 11, TtL: 23, W: 2.5

III.9#.b.A LBIIB

Type Family 5

11 Scimitar

Beth Shean, Level IX temple

Rowe 1929, pl. XV.2

Flanged tang, sickle-shaped blade, pointed tip, no shoulders or midrib.

The blade is broken into at least two pieces.

TtL: 42, W: 4

LBI

12 Knife(?)

Beth Shean, Level IX temple

Rowe 1930, pl. 35.3

Rockefeller Museum (M1069)

Riveted and flanged tang, recurved blade, pointed tip, indeterminable shoulders, no midrib.

The blade and tang are broken with only part of the tang missing.

TtL: 25, W: 1.8

X.7.iii.ind LBI

Type Family 14

13 Blade fragment

Beth Shean, Level VIII temple, Locus 1091, southern side of Locus 1091 corresponds with 1068 in Level VII

Rowe 1940, p. 76, pl. XXXII.4

Indeterminable tang, tapering(?), double-edged blade, rounded tip, indeterminable shoulders, subtle(?) midrib.

The blade is broken into two pieces toward the tip. The tang and bottom end of the blade are missing.

TtL: 8, W: 2

ind.8#.iv.ind LBIIB

Missing Tang

14 Dagger

Beth Shean, Level VII temple, Locus 1068, upper altar room.

Rowe 1940, p. 76, pl. XXXII.3; James and McGovern 1993, pl. 51.h, fig. 159.5

Flanged tang, convex, double-edged blade, blunt tip, no shoulders or midrib.

'Cast flanged hilt recessed for a wood-inlay on each side of the handle, slightly tapered blade' (James and McGovern 1993: fig. 159.5). A fracture occurs a third of the blade's length from the tip.

BL: 23.5, TL: 10, TtL: 33.5, W: 3

II.2.i.n LBIIB

Type Family 1

15 Axe, Socketed/Shaft-hole

Beth Shean, Level VIII temple, Locus 1068, below floor, altar room

Rowe 1940, p.76, pl. XXXII.2; James and McGovern 1993, p. 208, pl. 51.e, fig. 155.6

'Shaft-hole axe with engraved or chased sign' (James and McGovern 1993: fig. 155.6).

'The blade has the form of an open hand with out-stretched thumb and fingers. Four ridges run from the finger tips to the curved blade, on which is a crescent-shaped device with legs(?)' (Rowe 1940: 76).

TtlL: 20.5, W: 6.5 LBIIB

16 Adze, Plain

Beth Shean, Level VIII temple, Locus 1068, below floor, altar room

Rowe 1940, p.76, pl. XXXII.1; James and McGovern 1993, p. 208, fig. 155.3

Rounded cutting edge, blade narrows toward square butt.

TtlL: 13.5, W: 5.5 LBIIB

17 Blade

Beth Shean, Level VII temple, Locus 1068, upper altar room.

Rowe 1940, p. 74, pl. XXXI.9; James and McGovern 1993, pl. 51.g, fig. 159.2

Long slim tang, straight, double-edged blade, blunt tip, sloping shoulders, pronounced midrib.

BL: 19, TL: 9, TtlL: 28, W: 3

VII.9.i.A LBIIB

Individual

18 Axe, Lugged

Beth Shean, Level VII temple, Locus 1262, passageway outside the north-eastern corner of the temple

James and McGovern 1993, pl. 51.c, fig. 155.2

Rounded cutting edge, rounded butt.

TtlL: 16.5, W: 5 LBIIB

19 Axe, Lugged

Beth Shean, Level VII domestic building, Locus 1275, east of temple, across the street 1250

James and McGovern 1993, fig. 155.1

Rounded cutting edge, rounded butt.

TtlL: 16, W: 4.5 LBIIB

20 Knife

Beth Shean, Level VII domestic building courtyard, Locus 1381, between commandant's house and migdol

James and McGovern 1993, p. 206, fig. 152.1

Riveted and flanged tang, recurved, single-edged blade, broken tip, 'catch' shoulder, no midrib.

'Handle recessed for wooden inlay, remains of which still visible. Three rivets, best preserved 1.45 cm. long' (James and McGovern 1993: 206). Very end of tang missing(?).

BL: 14, TL: 7, TtlL: 21, W: 2.5

X.7.b.C LBIIB

Type Family 14

21 Blade fragment

Beth Shean, Level VIII temple, Locus 1068, below floor, altar room

Rowe 1940, p. 76, pl. XXXII.11; James and McGovern, 1993, fig. 152.5

Broken tang, straight(?), double-edged blade, indeterminable tip, sloping shoulders, indeterminable midrib.

Possibly a slightly tapering blade, with short/long(?) slim broken tang.

BL: 6, TL: 1, TtL: 7, W: 2.5

b.9#.ind.A LBIIB

Slim Tang

22 Blade fragment

Beth Shean, Level VIII temple, Locus 1068, below floor, altar room

James and McGovern 1993, fig. 152.6

Indeterminable tang, straight, double-edged blade, blunt tip, indeterminable shoulders, no midrib.

Tang and bottom portion of blade missing.

TtL: 11, W: 2.5

ind.9#.i.ind LBIIB

Missing Tang

23 Blade fragment

Beth Shean, Level VIII temple, Locus 1091

James and McGovern 1993, fig. 159.4

Broken slim tang, concave (from sharpening) blade, indeterminable tip, sloping shoulders, indeterminable midrib.

The tip end of the blade is broken off. Only a partial tang remains; possibly a short or long slim, or hooked tang.

BL: 6, TL: .5, TtL: 6.5, W: 2.5

b.1#.ind.A LBIIB

Slim Tang

24 Knife fragment

Beth Shean, Level VIII temple, Locus 1091

Rowe 1940, pl. XXXII.5; James and McGovern 1993, p. 206, fig. 152.4

Animal hoof(?) tang, straight(?) blade, blunt tip, 'catch' shoulder, indeterminable midrib.

The handle/tang is missing but is 'probably in form of animal hoof' (James and McGovern 1993: fig. 152.4). The blade, broken in two parts, is mostly straight but one edge expands outward and then continues straight to the blunt tip.

TtL: 25, W: 2.5

I#?.9#.i.C LBIIB

Type Family 13

25 Blade

Beth Shean, Level VII public building, Locus 1243, south-eastern-most room of the proposed Egyptian-style centre hall building. The floor is probably a level VIII surface. James and McGovern 1993, fig. 159.1

Broken tang, tapering, double-edged blade, blunt tip, sloping shoulders, subtle midrib.

Most of tang missing; most likely a long/short slim or hooked tang.

BL: 17, TL: 2, TtL: 19, W: 4

b.8.i.A LBIIB
Slim Tang

26 Axe, Lugged
Beth Shean, Level VIII domestic building, Locus 1286, north of the south-eastern sector, comprised of two perpendicular wall stubs
James and McGovern 1993, fig. 155.5
Rounded cutting edge, squared butt
TtlL: 20, W: 7.5 LBIIB

27 Adze, Pierced
Beth Shean, Level VIII, Street between domestic buildings, Locus 1311, main north-south street of the south-eastern sector
James and McGovern 1993, pl. 51.d, fig. 155.4
Rounded cutting edge that tapers toward the pierced, squared butt.
TtlL: 15, W: 5.5 LBIIB

28 Blade
Beth Shean, Level VIII domestic building, Locus 1399, one of three rooms that underlay the north-western corner of the commandant's house.
James and McGovern 1993, fig. 159.3
Broken tang, tapering, double-edged blade, blunt tip, squared shoulders, pronounced midrib.
TtlL: 17.5, W: 4
b.8.i.B LBIIB
Slim Tang

29 Small Blade
Beth Shean, Northern Cemetery, Tomb 42
Oren 1973, p. 93, fig. 34.10
Long slim tang, tapering, double-edged blade, pointed tip, squared shoulders, subtle midrib.
BL: 6, TL: 3.5, TtlL: 9.5, W: 2
VII.8.iii.B LBI
Type Family 17

30 Spearhead
Beth Shean, Level VII temple, Locus 1105, room outside temple, to north; northern outer courtyard
Rowe 1940, p. 76, pl. XXXII.10; James and McGovern 1993, p. 211-212, fig. 158.2
Straight socketed tang, convex, double-edged blade, rounded tip, squared shoulders, pronounced midrib.
Blade in two fragments.
BL: 10.5, TL: 3.5, TtlL: 14, W: 3
XVI.2.iv.B LBIIB
Type Family 20

31 Spearhead
Beth Shean, Level VIII temple, Locus 1068, below east wall, altar room
James and McGovern 1993, p. 212, fig. 158.4

Straight socketed tang, leaf-shaped, double-edged blade, rounded tip, no shoulders or midrib.

BL: 12.5, TL: 10.5, TtL: 23, W: 3

XVI.6.iv.n LBIIB

Type Family 22

32 Spearhead

Beth Shean, Level VIII domestic building, Locus 1301, north-eastern-most room of the proposed Egyptian-style centre hall building

James and McGovern 1993, p. 212, pl. 51.f, fig. 158.3

Straight socketed tang, leaf-shaped, double-edged blade, rounded tip, no shoulders or midrib.

BL: 8, TL: 7.5, TtL: 15.5, W: 2

XVI.6.iv.n LBIIB

Type Family 22

33 Blade

Beth Shemesh, Southwest area, Second Cemetery

Grant 1929, p. 148, p. 153 #83

Indeterminable tang, tapering blade, rounded tip, squared shoulders, indeterminable midrib.

Unclear as to whether tang is broken or was ever present at all.

TtL: 16, W: 4

ind.8.iv.B LBA

Missing Tang

34 Blade

Beth Shemesh, Southwest, Second Cemetery, Tomb D

Grant 1929, p. 158, p. 153 #308 (fig.), p. 137 (pl.)

Riveted shoulders, convex blade, blunt tip, rounded shoulders, indeterminable midrib.

Two rivets linearly placed in centre of the base of the blade.

TtL: 15, W: 3

XI.2.i.D LBA

Type Family 7

35 Knife

Deir el-Balah, Cemetery, Tomb 114, by left shin

Dothan 1979, p. 18, figs. 32 & 33

Animal hoof tang, half-tapering, single-edged blade, blunt tip, no shoulders or midrib.

BL: 19.5, TL: 9.5, TtL: 29, W: 2.3

I.5.i.n LBA

Type Family 13

36 Knife

Deir el-Balah, Cemetery, Tomb 114, by left shin

Dothan 1979, p. 18-19, fig. 34

No tang, cut-out, single-edged blade, curled and pointed tip, no shoulders or midrib.

The cut-out is located just short of 2/3 of the way up the blade; 'According to Petrie, the knife was used for cutting out linen, and in Egypt such knives are often found with burials of women' (Dothan 1979: 18).

TtL: 14, W: 1.5

n.4.ii&iii.F LBA
Type Family 11

37 Knife
Deir el-Balah, Cemetery, Tomb 114, by left knee or thigh
Dothan 1979, p. 19, figs. 35
Hourglass tang, half-tapering, single-edged blade, rounded tip, 'catch' shoulder, no midrib.
BL: 13, TL: 3, TtL: 16, W: 1
IV.5.iv.C LBA
Type Family 12

38 Knife
Deir el-Balah, Cemetery, Tomb 118, behind the female skeleton's knee
Dothan 1979, p. 72, fig. 157
No tang, cut-out, single-edged blade, curled and pointed tip, lugged shoulders, no midrib.
TtL: 14.5, W: 2
n.4.ii&iii.F LBA
Type Family 11

39 Dagger
Gezer, Field I, Cave 10A, grave on tell, Locus 10070.P
Segev 1988, p. 208, pl. 76A, fig. 19.10
Flanged tang, convex, double-edged blade, blunt tip, no shoulders or midrib.
Crescent-shaped pommel.
BL: 20, TL: 11.5, TtL: 31.5, W: 3.8
II.2.i.n LBI-LBIIA
Type Family 1

40 Blade
Gezer, Field I, Cave 10A, grave on tell, Locus 10070.P
Segev 1988, p. 214, pl. 76A, fig. 22.11
Long slim tang, tapering double-edged blade, blunt tip, sloping shoulder, no midrib.
Tip blunt from wear(?); slightly convex blade.
BL: 13.1, TL: 8, TtL: 21.1, W: 3.1
VII.8.i.A LBI-LBIIA
Type Family 4

41 Knife
Gezer, Field I, Cave 10A, grave on tell, Locus 10079.P
Segev 1988, p. 198, pl. 76A, fig. 14.8
Long broad tang, crescent-shaped, double-edged blade, blunt tip, 'catch' shoulder, no midrib.
Possible utility knife. Two cracks across handle.
BL: 6.5, TL: 11, TtL: 17.5, W: 2
V.3.i.C LBIIA
Type Family 15

42 Small Blade

Hazor, Area C, Stratum 1A, Domestic building, Locus 6072, floor that overlays Silo 6077

Yadin, et al. 1958, pl. CLX.17, fig. LXXXVIII.24

Short slim tang, tapering, double-edged blade, broken tip, sloping shoulders, indeterminable midrib.

BL: 6.5, TL: 2.5, TtL: 9, W: 2

XIV.8.b.A LBII

Type Family 17

43 Blade fragment

Hazor, Sub-Area D2, Square R15, domestic building floor

Yadin, et al. 1958, pl. CLXX.10, fig. XCVIII.33

Indeterminable tang, tapering, double-edged blade, blunt tip, indeterminable shoulders, pronounced midrib.

Part of the blade and any form of tang that may have existed is missing.

TtL: 7, W: 3

ind.8#.i.ind MBII-LBA

Missing Tang

44 Blade

Hazor, Area E, cistern, Locus 7021, just outside a domestic building

Yadin, et al. 1958, pl. CLXVI.17, fig. CXLII.21

Short broad tang, tapering, double-edged blade, rounded tip, squared shoulders, no midrib.

BL: 27, TL: 4, TtL: 31, W: 4.5

XIII.8.iv.B LBI

Individual

45 Blade fragment

Hazor, Area C, Stratum 2, Locus 6186

Yadin, et al. 1960, pl. CLXXIX.11, fig. CXXVI.29

Indeterminable tang, tapering, double-edged blade, blunt tip, indeterminable shoulders, no midrib.

Part of the blade and any form of tang that may have existed is missing.

TtL: 5.5, W: 1.5

ind.8#.i.ind LBI

Missing Tang

46 Axe, Lugged

Hazor, Area F, Stratum 1, Locus 8032, domestic building, southern part of courtyard 8068

Yadin, et al. 1960, pl. CXCVI.8, fig. CL.12

Rounded cutting edge, squared butt.

TtL: 16.5, W: 5.5 LBII

47 Axe, Lugged

Hazor, Area F, Square P7, Stratum 1, north wall, 8501

Yadin, et al. 1960, pl. CXCVI.9, fig. CL.13

Rounded cutting edge, squared butt.

TtL: 17, W: 6 LBII

48 Adze, Plain

Hazor, Area F, Stratum 1B, Tomb 8144, outside a building

Yadin, et al. 1960, fig. CXXXVI.22

Blade virtually straight; only an extremely slight taper from the butt toward the rounded edge of the blade.

TtL: 10, W: 2 LBII

49 Blade

Hazor, Area F, Stratum 2, Locus 8164, room in a domestic building

Yadin, et al. 1961, pl. CCCXLII.4, fig. CCXLII.11

Short slim tang, convex, double-edged blade, rounded tip, squared shoulders, subtle midrib.

BL: 18.5, TL: 5.5, TtL: 24, W: 4.5

XIV.2.iv.B LBI

Type Family 3

50 Blade

Hazor, Area F, Square Q6, Stratum 2, tunnel/depression hewn in rock

Yadin, et al. 1961, pl. CCCXLII.7, fig. CCXLIV.24

Long slim tang, tapering, double-edged blade, blunt tip, squared shoulders, pronounced midrib.

BL: 18, TL: 11, TtL: 29, W: 3

VII.8.i.B LBI-LBII

Type Family 4

51 Blade

Hazor, Area H, Stratum 1A temple, Locus 2113

Yadin, et al. 1961, pl. CCCXLII.8, fig. CCLXXXIII.36

Hooked tang, convex blade, broken tip, sloping shoulders, no midrib.

Possible subtle stop ridge at tang juncture.

BL: 6, TL: 5, TtL: 11, W: 1.5

III.2.b.A LBII

Individual

52 Small Blade/Possible Arrowhead?

Hazor, Area H, Stratum 1B, Locus 2156, large pit outside temple (favissa)

Yadin, et al. 1961, pl. CCCXLII.11, fig. CCLXXVIII.18

Short slim tang, leaf-shaped blade, pointed tip, no shoulders, indeterminable midrib.

BL: 8, TL: 2, TtL: 10, W: 1.5

XIV.6.iii.n LBII

Individual

53 Knife

Hazor, Area H, Stratum 2, Locus 2139, Temple room/hall

Yadin, et al. 1961, pl. CCCXLIII.26, fig. CCLXX.26

Short slim tang, tapering, double-edged blade, blunt tip, 'catch' shoulder, no midrib.

Tang has been reworked so that it is now off-centre instead of centred.

BL: 9, TL: 2.5, TtL: 11.5, W: 2

XIV.8.i.C LBI

Individual

54 Blade

Hazor, Area H, Stratum 2, Locus 2143, temple threshold/doorway

Yadin, et al. 1961, pl. CCCXLII.16, fig. CCLXX.25

Riveted tang, tapering, double-edged blade, broken tip, squared shoulders, no midrib.

End of blade broken off; single rivet in centre of tang.

BL: 10.5, TL: 6, TtL: 16.5, W: 3

XII.8.b.B LBI

Type Family 8

55 Dagger

Irbid, Tomb D

Dajani 1964, p. 100-101, pl. XL.24

Stop-ridge, long slim tang, tapering, double-edged blade, blunt tip, no shoulder or midrib.

No scale given in publication with which to measure artefact.

XV.8.i.n LBIIB-IA IA

Type Family 2

56 Blade

Irbid, Tomb D

Dajani 1964, p. 100-101, pl. XL.25

Long slim tang, straight blade, blunt tip, sloping shoulders, no midrib.

Subtle stop-ridge at tang juncture.

No scale given in publication with which to measure artefact.

VII.9.i.A LBIIB-IA IA

Type Family 4

57 Blade

Jatt, Tomb 7, hewn into northern slope of a chalk hill southeast of Tell Jatt.

Yannai 2000, p. 60, 75, fig. 12.133

Hooked tang, tapering, double-edged blade, blunt tip, sloping shoulders, pronounced midrib.

Tang is short in comparison to the proportion of blade length to tang length in other hooked tang blades.

BL: 25, TL: 7.5, TtL: 32.5, W: 3.5

III.8.i.A LBI

Type Family 5

58 Blade

Jatt, Tomb 7, hewn into northern slope of a chalk hill southeast of Tell Jatt.

Yannai 2000, p. 60, 75, fig. 12.134

Short slim tang, tapering, double-edged blade, rounded tip, squared shoulders, pronounced midrib.

BL: 21, TL: 5.5, TtL: 26.5, W: 5

XIV.8.iv.B LBI

Type Family 3

59 Blade

Jatt, Tomb 7, hewn into northern slope of a chalk hill southeast of Tell Jatt.

Yannai 2000, p. 60, 75, fig. 12.135

Riveted tang, convex, double-edged blade, blunt tip, sloping shoulders, no midrib.

Possibly blunted from use; tang broken at the single, central rivet.

BL: 15, TL: 2.5, TtL: 17.5, W: 3.5

XII.2.i.A LBI

Type Family 8

60 Blade fragment

Jatt, Tomb 7, hewn into northern slope of a chalk hill southeast of Tell Jatt.

Yannai 2000, p. 60, 75, fig. 12.137

Indeterminable tang, leaf-shaped(?), double-edged blade, pointed tip, indeterminable shoulders, no midrib.

Tang missing; badly corroded.

TtL: 12, W: 3

ind.6#?.iii.ind LBI

Missing Tang

61 Blade

Jatt, Tomb 7, hewn into northern slope of a chalk hill southeast of Tell Jatt.

Yannai 2000, p. 60, 75, fig. 12.138

Hooked tang, tapering, double-edged blade, blunt tip, sloping shoulders, no midrib.

BL: 9, TL: 6, TtL: 15, W: 2

III.8.i.A LBI

Type Family 5

62 Dagger

Madaba, tomb to the east of Tell Madaba

Harding 1953, p. 32, pl. IV.162

Flanged tang, leaf-shaped, double-edged blade, pointed tip, no shoulders or midrib.

'Handle inlaid with wood of which traces survive' (Harding 1953: 32).

BL: 17.5, TL: 10.5, TtL: 28, W: 2.5

II.6.iii.n LBIIB-IA IA

Type Family 1

63 Dagger

Madaba, tomb to the east of Tell Madaba

Harding 1953, p. 32, pl. IV.163

Flanged tang, leaf-shaped, double-edged blade, pointed tip, no shoulders or midrib.

'Handle inlaid with wood' (Harding 1953: 32).

BL: 17, TL: 8.5, TtL: 25.5, W: 1.5

II.6.iii.n LBIIB-IA IA

Type Family 1

64 Blade

Madaba, tomb to the east of Tell Madaba

Harding 1953, p. 32, pl. IV.164

Long slim tang, tapering, double-edged blade, rounded tip, sloping shoulders, no midrib.

End of tang possibly bent or hooked (difficult to determine from plate).

BL: 14.5, TL: 11.5, TtL: 26, W: 3

VII.8.iv.A LBIIB-IA IA

Type Family 4

65 Small Blade

Madaba, tomb to the east of Tell Madaba

Harding 1953, p. 32, pl. V.179

Long slim tang, straight blade, rounded tip, no shoulders or midrib.

'Flat section' (Harding 1953: 32). Arrowhead-like in shape.

BL: 8, TL: 4 TtlL: 12, W: 2

VII.9.iv.n LBIIB-IA IA

Type Family 17

66 Small Blade

Megiddo, Square V18, Tomb 26, east slope, disturbed

Guy 1938, p. 103, pl. 154.23

Indeterminable tang, tapering, double-edged blade, rounded tip, sloping shoulders, no midrib.

Possibly a broken tang.

TtlL: 9, W: 2

ind.8.iv.A LBA

Type Family 17

67 Blade

Megiddo, Square U 17-18, Tomb 217A, east slope, disturbed

Guy 1938, pl. 89.12

Rockefeller Museum (I. 3499)

Long slim tang, convex, double-edged blade, pointed tip, squared shoulders, no midrib.

Bent tang.

BL: 16.5, TL: 7, TtlL: 23.5, W: 3

VII.2.iii.B LBII

Type Family 4

68 Blade

Megiddo, Square W16, Tomb 877A1, east slope, disturbed

Guy 1938, pl. 94.2

Long slim tang, tapering, double-edged blade, indeterminable tip, sloping shoulders, no midrib.

End of blade broken off; blade is concave from sharpening.

BL: 7.5, TL: 5, TtlL: 12.5, W: 2

VII.8.ind.A LBA

Type Family 4

69 Blade

Megiddo, Block W16, Tomb 877B1, east slope, disturbed

Guy 1938, pl. 94.18

Short slim tang, straight blade, blunt tip, sloping shoulders, no midrib.

Tang slightly wider than usual short slims with a central groove running its length.

Blade edges are slightly concave due to sharpening(?).

BL: 13, TL: 4, TtlL: 17, W: 2

XIV.9.i.A LBA

Type Family 6

70 Blade

Megiddo, Square W16, Tomb 877B1, east slope, disturbed

Guy 1938, pl. 96.1

Long slim tang, convex, double-edged blade, rounded tip, sloping shoulders, subtle midrib.

BL: 11.5, TL: 8, TtlL: 19.5, W: 2

VII.2.iv.A LBII

Type Family 4

71 Blade

Megiddo, Square W16, Tomb 877B1, east slope, disturbed

Guy 1938, pl. 96.2

Long slim tang, tapering, double-edged blade, rounded tip, indeterminable shoulders, subtle midrib.

BL: 14.5, TL: 9.5, TtlL: 24, W: 2.5

VII.8.iv.ind LBII

Type Family 4

72 Blade

Megiddo, Square W16, Tomb 877B1, east slope, disturbed

Guy 1938, pl. 96.3

Hooked tang, tapering, double-edged blade, pointed tip, sloping shoulders, no midrib.

BL: 13.5, TL: 9.5, TtlL: 23, W: 2.5

III.8.iii.A LBII

Type Family 5

73 Blade

Megiddo, Square V17, Tomb 912B, east slope, disturbed

Guy 1938, pl. 125.15

Hooked tang, concave (from sharpening) blade, blunt tip, squared shoulders, no midrib. 'Wood fragments near handle end' (Guy 1938: pl. 125.15).

BL: 18, TL: 13.5, TtlL: 31.5, W: 4

III.1.i.B LBII

Type Family 6

74 Blade

Megiddo, Square V17, Tomb 912D, east slope, disturbed

Guy 1938, pl. 133.20

Long slim tang, tapering, double-edged blade, rounded tip, sloping shoulders, pronounced midrib.

BL: 14.5, TL: 11, TtlL: 25.5, W: 2.5

VII.8.iv.A LBII

Type Family 4

75 Blade

Megiddo, Square W16, Tomb 1100B, east slope, disturbed

Guy 1938, pl. 146.5, fig. 171.9

Riveted shoulders, tapering, double-edged blade, blunt tip, sloping shoulders, no midrib. Blade is only slightly concaved from sharpening(?) and is broken in three pieces. Three rivets at shoulders of blade (in 'V' formation) for attachment to haft.

TtlL: 19, W: 4

XI.8.i.A LBI

Type Family 7

76 Blade

Megiddo, Square W16, Tomb 1100B, east slope, disturbed

Guy 1938, pl. 146.6, fig. 171.10

Riveted shoulders, tapering, double-edged blade, blunt tip, sloping shoulders, no midrib.

Three rivets at shoulders of blade (in 'V' formation) for attachment to haft.

TtL: 26, W: 5.5

XI.8.i.A LBI

Type Family 7

77 Dagger

Megiddo, Square W16, Tomb 1100D, east slope, disturbed

Guy 1938, pl. 149.8, fig. 171.8

Flanged tang, tapering, double-edged blade, pointed tip, no shoulders or midrib.

'Traces of bone inlay in the handle' (Guy 1938: pl. 149.8).

BL: 30, TL: 10.5, TtL: 40.5, W: 4.5

II.8.iii.n LBI

Type Family 1

78 Blade

Megiddo, Square M14, Stratum VIII, space empty of architecture well north of temple 2048

Loud 1948, p. 146, pl. 180.37

Riveted tang, tapering, double-edged blade, blunt tip, squared shoulders, indeterminate midrib.

Single rivet hole in the broken(?) tang.

BL: 13, TL: 4, TtL: 17, W: 4

XII.8.i.B LBI-LBIIA

Type Family 8

79 Small Blade

Megiddo, Square O14, Stratum VIII, public building

Loud 1948, p. 148, pl. 179.31

Hourglass tang, straight blade, blunt tip, no shoulders or midrib.

BL: 7, TL: 2, TtL: 9, W: 1.5

IV.9.i.n LBI-LBIIA

Type Family 19

80 Blade

Megiddo, Square O14, Stratum VII, public building

Loud 1948, p. 148, pl. 180.45

Long slim tang, concave, double-edged blade, indeterminate tip, squared shoulders, pronounced midrib.

The end of the blade is broken off and possibly some of the tang.

BL: 9.5, TL: 6.5, TtL: 16, W: 3.5

VII.1#.ind.B LBIIA-IA IA

Slim Tang

81 Dagger

Megiddo, Square R10, Stratum VIII, domestic building

Loud 1948, p. 148, pl. 180.36

Riveted and flanged tang, tapering, double-edged blade, blunt tip, no shoulders or midrib.

BL: 16.5, TL: 9, TtL: 25.5, W: 3.5

X.8.i.n MBIIIB-LBIIA

Type Family 1

82 Blade

Megiddo, Square L7, Stratum VIIA, Locus N=3061, room in west of Palace

Loud 1948, p. 170, pl. 180.46

Riveted tang, tapering, double-edged blade, blunt tip, squared shoulders, no midrib.

The tang is a flat-tipped, inverted triangle. (Possibly the rest of the tang simply broke off at the triangle's tip). A single rivet hole lies in the centre of the tang toward the blade.

BL: 16, TL: 3.5, TtL: 19.5, W: 4.5

XII.8.i.B LBIIA-IA IA

Type Family 8

83 Adze, Pierced

Megiddo, Square L7, Stratum VIIA, Locus N=3061, room in west of Palace

Loud 1948, p. 170, pl. 182.13

Rounded cutting edge, squared butt.

TtL: 10, W: 3.5 LBIIA-IA IA

84 Blade

Megiddo, Square L6, Stratum VIIB, Tomb 3094, west of Palace

Loud 1948, p. 172, pl. 180.41

Riveted and flanged tang, sickle-shaped blade, rounded tip, 'catch' shoulder, no midrib.

'Remains of wooden handle held by rivets still intact' (Loud 1948: pl. 180.41).

BL: 20.5, TL: 6, TtL: 26.5, W: 2.5

X.13.iv.C LBIIA-IA IA?

Individual

85 Blade

Megiddo, Square J9, Stratum VIII, Locus 3178, public building pavement

Loud 1948, p. 176, pl. 179.33

Long slim tang, tapering, double-edged blade, blunt tip, sloping shoulders, indeterminable midrib.

BL: 14.5, TL: 11, TtL: 25.5, W: 3.5

VII.8.i.A LBI-LBIIA

Type Family 4

86 Small Blade

Megiddo, Square K6, Stratum VIIB, Locus 3187, room west of and outside of Palace

Loud 1948, p. 176, pl. 180.43

Short slim tang, straight blade, blunt tip, sloping shoulders, no midrib.

Decayed(?) blade with a notch chipped out on each side about one third of the blade's length up from the base of the blade.

BL: 6, TL: 2, TtL: 8, W: 1.5

XIV.9.i.A LBIIA-IA IA

Type Family 18

87 Knife fragment(?)

Megiddo, Square O14, Stratum VIII, Room W, Tomb 3018 A-B, in domestic building southeast of temple

Loud 1948, p. 167, pl. 180.34

Indeterminable tang, 'dog-leg' blade, rounded tip, indeterminable shoulders, no midrib. Tang and what could be part of the blade is missing.

TtL: 10.5, W: 2

ind.12#.iv.ind LBI-LBIIA

Type Family 10

88 Blade

Megiddo, Square O14, Stratum VIII, Room W, Tomb 3018 A-B, in domestic building southeast of temple

Loud 1948, p. 167, pl. 180.35

Riveted shoulders, tapering, double-edged blade, blunt tip, sloping shoulders, no midrib. Tip blunt from use(?); two rivet holes, one in each shoulder of the blade. Tang is slim and broken(?).

BL: 17, TL: 4, TtL: 21, W: 4

XI.8.i.A MBIIB-LBI

Type Family 7

89 Spearhead

Megiddo, Square U-V 19, Tomb 36B, east slope

Guy 1938, p. 106, pl. 156.4

Flared socketed tang, leaf-shaped, double-edged blade, pointed tip, no shoulders, pronounced midrib.

BL: 8.5, TL: 3.5, TtL: 12, W: 2

IX.6.iii.n LBII

Individual

90 Spearhead

Megiddo, Square U-V 19, Tomb 37A, east slope, disturbed

Guy 1938, pl. 137.8

Straight socketed tang, tapering, double-edged blade, indeterminable tip, squared shoulders, pronounced midrib.

Broken and fragmentary; length is approximate.

BL: 8.5, TL: 4.5, TtL: 13, W: 3

XVI.8.ind.B LBI

Type Family 24

91 Spearhead

Megiddo, Square T 18, Tomb 84, east slope

Guy 1938, pl. 163.9

Straight socketed tang, tapering, double-edged blade, pointed tip, squared shoulders, pronounced midrib.

BL: 15.5, TL: 2.5, TtL: 18, W: 3

XVI.8.iii.B MBII or LBI

Type Family 24

92 Spearhead

Megiddo, Square T 18, Tomb 84, east slope

Guy 1938, not pictured
(Description is recorded in the publication as the same as Catalogue #91)
MBII or LBI
Type Family 24

93 Spearhead
Megiddo, Square W16, Tomb 1100A, east slope, disturbed and looted in antiquity
Guy 1938, pl. 145.10, fig. 170.7
Indeterminable socketed tang, leaf-shaped, double-edged blade, blunt tip, no shoulders
and indeterminable midrib.
Most of tang is missing; as entire object is extremely corroded, it may affect how
characteristics are interpreted. The tip almost certainly only appears blunt because of the
corrosion.
BL: 7, TL: 1.5, TtL: 8.5, W: 3
ind.6.i.n MBII or LBI
Individual

94 Spearhead
Megiddo, Square W16, Tomb 1100A, east slope, disturbed and looted in antiquity
Guy 1938, pl. 145.11
Straight socketed tang, convex, double-edged blade, triangular tip, squared shoulders,
pronounced midrib.
BL: 7.5, TL: 7, TtL: 14.5, W: 3
XVI.2.vii.B MBII or LBI
Type Family 20

95 Spearhead
Megiddo, Square W16, Tomb 1100A, east slope, disturbed and looted in antiquity
Guy 1938, not pictured
(Description recorded in the publication as the same as Catalogue #94).
'Limestone core introduced when weapon was thrust into wall of chamber' (Guy 1938:
pl. 145).
MBII or LBI
Type Family 20

96-97 Spearheads
Megiddo, Square W16, Tomb 1100A, east slope, disturbed and looted in antiquity
Guy 1938, not pictured
(Description recorded in the publication as the same as Catalogue #94).
MBII or LBI
Type Family 20

98 Spearhead
Megiddo, Square W16, Tomb 1100B, east slope, disturbed and looted in antiquity
Guy 1938, pl. 146.3, fig. 170.8
Straight socketed tang, convex, double-edged blade, triangular tip, squared shoulders,
pronounced midrib.
'Traces of binding-cord and bronze clasp' (Guy 1938: pl. 146.3).
BL: 9.5, TL: 8.5, TtL: 14.5, W: 2.5
XVI.2.vii.B MBII or LBI
Type Family 20

99 Spearhead

Megiddo, Square W16, Tomb 1100B, east slope, disturbed and looted in antiquity

Guy 1938, pl. 146.4, fig. 170.9

Straight socketed tang, convex, double-edged blade, rounded tip, squared shoulders, pronounced midrib.

'Traces of binding-cord and bronze clasp' (Guy 1938 pl. 146.4).

BL: 9.5, TL: 9.5, TtL: 19, W: 3

XVI.2.iv.B MBII or LBI

Type Family 20

100 Spearhead

Megiddo, Square W16, Tomb 1100D, east slope, disturbed and looted in antiquity

Guy 1938, pl. 149.1, fig. 170.5

Straight socketed tang, convex, double-edged blade, triangular tip, squared shoulders, pronounced midrib.

'Clasp over outside of socket to hold shaft, probably binding-cord beneath clasp' (Guy 1938: pl. 149.1).

BL: 8, TL: 8.5, TtL: 16.5, W: 4

XVI.2.vii.B MBII or LBI

Type Family 20

101 Spearhead

Megiddo, Square W16, Tomb 1100D, east slope, disturbed and looted in antiquity

Guy 1938, pl. 149.4, fig. 170.6

Straight socketed tang, tapering, double-edged blade, rounded tip, rounded shoulders, pronounced midrib.

'No clasp, carbonized binding-cord over socket. A length of cord was laid along the socket, and the cord was then wound around over this length' (Guy 1938: pl. 149.4).

BL: 9.5, TL: 9, TtL: 18.5, W: 3.5

XVI.8.iv.D MBII or LBI

Type Family 21

102-104 Spearheads

Megiddo, Square W16, Tomb 1100D, east slope, disturbed and looted in antiquity

Guy 1938, not pictured

(Description recorded in the publication as the same as Catalogue #101).

MBII or LBI

Type Family 21

105 Spearhead

Megiddo, Square W16, Tomb 1100D, east slope, disturbed and looted in antiquity

Guy 1938, not pictured

Rockefeller Museum (1934:2241)

Straight socketed tang, tapering, double-edged blade, triangular tip, squared shoulders, pronounced midrib.

Bits worn away to nothing, eroded/corroded away(?).

BL: 7.2, TL: 6.5, TtL: 13.7, W: 3.1

XVI.8.vii.B MBII or LBI

106 Spearhead

Megiddo, Square W16, Tomb 1100D, east slope, disturbed and looted in antiquity
Guy 1938, not pictured
Rockefeller Museum (1934:2242)
Straight socketed tang, tapering, double-edged blade, triangular tip, sloping shoulders,
pronounced midrib.
Corner of one shoulder is missing.
BL: 8.5, TL: 6.2, TtL: 14.7, W: 2.7
XVI.8.vii.A MBII or LBI

107 Spearhead fragments
Megiddo, Square W16, Tomb 1100D, east slope, disturbed and looted in antiquity
Guy 1938, not pictured
Rockefeller Museum (1934:2243)
Two fragments; both indeterminable socketed tangs and little else.
MBII or LBI

108 Spearhead
Megiddo, Square W16, Tomb 1100D, east slope, disturbed and looted in antiquity
Guy 1938, not pictured
Rockefeller Museum (1934:2244)
Straight socketed tang, straight, double-edged blade, triangular tip, sloping shoulders,
pronounced midrib.
Fragmented; pieces chipped out on each side.
BL: 8.5, TL: 3.7, TtL: 12.2, W: 2.8
XVI.9.vii.A MBII or LBI

109-110 Spearheads
Megiddo, Square W16, Tomb 1100D, east slope, disturbed and looted in antiquity
Guy 1938, not pictured
(Description recorded in the publication as the same as Catalogue #101).
MBII or LBI
Type Family 21

111 Knife
Megiddo, Square V17, Tomb 911B, east slope
Guy 1938, pl. 119.17, fig. 172.3
Long slim tang, half-tapering, single-edged blade, curled and rounded tip, 'catch'
shoulder, no midrib.
BL: 20, TL: 12.5, TtL: 32.5, W: 2
VII.5.ii&iv.C LBII
Type Family 12

112 Blade
Megiddo, Square V17, Tomb 911B, east slope
Guy 1938, pl. 119.18, fig. 172.1
Long slim tang, tapering, double-edged blade, blunt tip, sloping shoulders, subtle
midrib.
BL: 19, TL: 12.5, TtL: 31.5, W: 2.5
VII.8.i.A LBII
Type Family 4

113 Blade

Megiddo, Square V17, Tomb 911C, east slope, in southwest corner near pile of bone fragments and fallen roof that had been swept over a 'bronze' bowl

Guy 1938, p. 67, pl. 120.14

Short slim tang, concave (from sharpening) blade, blunt tip, squared shoulders, subtle midrib on one side.

BL: 17, TL: 7.5, TtL: 24.5, W: 3

XIV.8.i.B LBII

Type Family 6

114 Blade

Megiddo, Square V17, Tomb 912A, east slope

Guy 1938, pl. 123.21

Long slim tang, concave (from sharpening) blade, blunt tip, sloping shoulders, subtle midrib.

BL: 17.5, TL: 12.5, TtL: 30, W: 3

VII.8.i.A LBII

Type Family 6

115 Blade

Megiddo, Square V17, Tomb 912B, east slope, disturbed

Guy 1938, pl. 125.3

Hooked tang, leaf-shaped, double-edged blade, pointed tip, sloping shoulders, pronounced midrib.

BL: 18.5, TL: 11.5, TtL: 30, W: 3

III.6.iii.A LBII

Individual

116 Blade

Megiddo, Square V17, Tomb 912B, east slope, disturbed

Guy 1938, pl. 125.4

Long slim tang, tapering, double-edged blade, pointed tip, sloping shoulders, subtle midrib.

Possible subtle stop-ridge at juncture of tang.

BL: 16.5, TL: 11.5, TtL: 28, W: 3

VII.8.iii.A LBII

Type Family 4

117 Blade

Megiddo, Square V17, Tomb 912B, east slope, disturbed

Guy 1938, pl. 125.5

Long slim tang, tapering, double-edged blade, pointed tip, sloping shoulders, subtle midrib.

Tang is bent.

BL: 12, TL: 9, TtL: 21, W: 2

VII.8.iii.A LBII

Type Family 4

118 Blade

Megiddo, Square V17, Tomb 912B, east slope, disturbed

Guy 1938, pl. 125.13

Hooked tang, concave, double-edged blade, blunt tip, sloping shoulders, subtle midrib.
Found 'wood fragments near handle end' (Guy 1938: pl. 125.13).

BL: 15.5, TL: 12, TtL: 27.5, W: 3.5

III.1.i.A LBII

Type Family 6

119 Blade

Megiddo, Square V17, Tomb 912B, east slope, disturbed

Guy 1938, pl. 125.14

Rockefeller Museum (1934:1953)

Hooked tang, tapering, double-edged blade, blunt tip, squared shoulders, no midrib.

Found 'wood fragments near handle' (Guy 1938: pl. 125.14).

BL: 16.5, TL: 11.5, TtL: 28, W: 3

III.8.i.B LBII

Type Family 6

120 Small Blade

Megiddo, Square N-O, 13-14, Stratum VIII temple, Locus 2048

Loud 1948, p. 159, pl. 180.39

Short slim tang, straight and convex, double-edged blade, pointed tip, squared shoulders, indeterminable midrib.

One blade edge is straight, the other convex.

BL: 7.5, TL: 3.5, TtL: 11, W: 1.5

XIV.9&2.iii.B LBI-LBIIA

Type Family 17

121 Blade

Megiddo, Square N-O, 13-14, Stratum VIII temple, Locus 2048, floor (VIIB-VIIA)

Loud 1948, p. 159, pl. 180.38

Animal hoof tang, indeterminable blade, tip, shoulders and midrib.

Blade ceremonially(?) bent into a circle. Possible knife.

BL: 22, TL: 3.5, TtL: 25.5, W: indeterminable from plate

I.ind.ind.ind LBI-LBIIA

Individual

122 Knife

Megiddo, Square M12, Stratum VIII, Locus S=5227, domestic building to the northwest of the temple

Loud 1948, p. 187, pl. 179.32

Long broad tang, recurved blade, squared tip, no shoulders or midrib.

Handle cast as apiece with the blade. Not so much a tang as the handle itself.

BL: 12.5, TL: 10, TtL: 22.5, W: 2.5

V.7.vi.n LBI-LBIIA

Individual

123 Blade

Megiddo, Square O14, Stratum VII, Locus S=2056, room south of temple

Loud 1948, p. 160, not pictured

LBI-LBIIA

124 Blade

Megiddo, Square S 9-10, Stratum VIIA, Locus N=1779, domestic building
Loud 1948, p. 153, pl.181.48
Long slim tang, slightly tapering, double-edged blade, blunt tip, sloping shoulders, no midrib.
BL: 13, TL: 8, TtL: 21, W: 3.5
VII.8.i.A LBIIA-IA IA
Type Family 4

125 Axe?
Megiddo, Square S 9-10, Stratum VIIA, Locus N=1779, domestic building
Loud 1948, p. 153, not pictured
LBIIA-IA IA

126 Blade
Megiddo, Square S 9-10, Stratum VIIA, Locus W=1779, domestic building
Loud 1948, p. 153, pl. 181. 49
Broken tang, tapering, double-edged blade, blunt tip, squared shoulders, no midrib.
TtL: 19, W: 4
b.8.i.B LBIIA-IA IA
Slim Tang

127 Blade
Megiddo, Square R9, Stratum VII, Locus W=1793, domestic building
Loud 1948, p. 153, pl. 180.47
Long slim tang, tapering, double-edged blade, blunt tip, sloping shoulders, indeterminate midrib.
BL: 17, TL: 13, TtL: 30, W: 3.5
VII.8.i.A LBIIA-IA IA
Type Family 4

128 Axe, Flat
Megiddo, Square R9, Stratum VII, Locus W=1793, domestic building
Loud 1948, p. 153, pl. 182.12
Blade width increasingly expands (flares outward) toward the rounded cutting edge, from the wide, square butt.
TtL: 6, W: 5 LBIIA-IA IA

129 Small Blade
Megiddo, Square S 10-11, Stratum VIIA, Locus N=1796, domestic building
Loud 1948, p. 154, pl. 181.50
Hourglass tang, straight, double-edged blade, blunt tip, sloping shoulders, indeterminate midrib.
BL: 7, TL: 3, TtL: 10, W: 2.5
IV.9.i.A LBIIA-IA IA
Type Family 19

130 Blade
Megiddo, Square R 9, Stratum VIIA, Locus N=1813, domestic building
Loud 1948, p. 154, pl. 181.51
Short broad tang, straight and convex blade, pointed tip, 'catch' shoulder, no midrib.

Blade has probably been reworked from its original form. Tang is to one side instead of centred. The sharp edge of the blade is straight, the back of the blade, curved.

BL: 19, TL: 3.5, TtL: 22.5, W: 3

XIII.9&2.iii.C LBIIA-IA IA

Individual

131 Blade

Megiddo, Square R9, Stratum VIIB, Locus N=1829, domestic building

Loud 1948, p. 156, pl. 180.44

Animal hoof tang, hourglass blade, squared tip, 'catch' shoulder, indeterminable midrib. 'S' curve in handle, possibly from symbolic destruction.

BL: 7.5, TL: 6.5, TtL: 14, W: 1

I.14.vi.C LBIIA-IA IA

Individual

132 Small Blade

Megiddo, Square K11, Stratum VIII palace (?), Locus 5028

Loud 1948, p. 182, pl. 180.42

Short slim tang, straight blade, blunt tip, no shoulders or midrib.

BL: 3.5, TL: 1.5, TtL: 5, W: 1

XIV.9.i.n LBIIA-IA IA

Type Family 18

133 Axe

Megiddo, Square N14, Stratum VII, Locus E=2087, room in building east of temple

Loud 1948, p. 162, not pictured

Fragmentary

LBIIA-IA IA

134 Small Blade

Megiddo, Square W 15-16, Tomb 989B1, east slope

Guy 1938, pl. 99.3

Short broad tang, hourglass blade, blunt tip, squared shoulders, indeterminable midrib.

BL: 4, TL: 1.5, TtL: 5.5, W: 1

XIII.14.i.B LBA

Individual

135 Knife

Pella, Area III C, Phase VA, Locus 52134, domestic building, recovered in north of the room near Wall 15

McNicoll, et al. 1992, p. 51, 58, pl. 46.1

No tang, 'dog-leg' blade, pointed tip, lugged shoulders, no midrib.

TtL: 14.1, W: 2.7

n.12.iii.F LBI

Type Family 10

136 Knife

Pella, Area XI, Tomb 62, northeast crest of Tell el-Husn

McNicoll, et al. 1992, p. 70, pl. 61.20

Riveted and flanged tang, recurved, single-edged blade, pointed tip, no shoulders or midrib.

A single rivet was used to attach inlay to the flanged handle.

BL: 30, TL: 4, TtL: 34, W: 4

X.7.iii.n MBIIC-LBI

Type Family 14

137 Blade fragment

Sahab, Tomb C, centre of village

Dajani 1970, p. 34, pl. XVIII.SA290

Indeterminable tang, straight(?), double-edged blade, rounded tip, indeterminable shoulders, subtle midrib.

Extremely corroded(?).

TtL: 10, W: 2

ind.9#?.iv.ind LBIIA-IA IIB

Missing Tang

138 Blade fragment

Sahab, Tomb C, centre of village

Dajani 1970, p. 34, pl. XVIII.SA298

Indeterminable tang, straight(?), double-edged blade, indeterminable tip, shoulders, and midrib.

No tang present. Corroded; middle portion of the blade only(?).

TtL: 11, W: 2.5

ind.9#?.ind.ind LBIIA-IA IIB

Missing Tang

139 Blade

Sahab, Tomb C, centre of village

Dajani 1970, p. 34, pl. XVIII.SA292

Broken tang, tapering, double-edged blade, broken tip, sloping shoulders, pronounced midrib.

BL: 10, TL: 2, TtL: 12, W: 2

b.8.b.A LBIIA-IA IIB

Slim Tang

140 Blade

Sahab, Tomb C, centre of village

Khalil 1980, p. 23, fig. 16.35; R.W. Dajani, 1970, p. 62, pl. XVIII.SA153

Hooked tang, tapering, double-edged blade, pointed tip, squared shoulders, indeterminable midrib.

BL: 18, TL: 10, TtL: 28, W: 2

III.8.iii.B LBIIA-IA IIB

Type Family 5

141 Blade

Sahab, Tomb C, centre of village

Khalil 1980, p. 23, fig. 16.40; R.W. Dajani, 1970, pl. XVIII.SA288

Broken tang, tapering, double-edged blade, pointed tip, sloping shoulders, subtle midrib. Slightly convex blade.

BL: 11, TL: 1, TtL: 12, W: 1.5

b.8.iii.A LBIIA-IA IIB

Slim Tang

- 142 Blade
 Sahab, Tomb C, centre of village
 Khalil 1980, p. 23, fig. 16.39; R.W. Dajani, 1970, pl. XVIII.SA202
 Long slim tang, tapering, double-edged blade, broken tip, sloping shoulders, no midrib.
 Blade is broken in two with tip missing.
 BL: 11, TL: 11, TtL: 22, W: 2
 VII.8.b.A LBIIA-IA IIB
 Type Family 4
- 143 Blade
 Sahab, Tomb C, centre of village
 Khalil 1980, p. 23, fig. 16.37; R.W. Dajani, 1970, pl. XVIII.SA166
 Long slim tang, slightly convex, double-edged blade, pointed tip, sloping shoulders, no midrib.
 BL: 13, TL: 5, TtL: 18, W: 2
 VII.2.iii.A LBIIA-IA IIB
 Type Family 4
- 144 Blade fragment
 Sahab, Tomb C, centre of village
 Khalil 1980, p. 23, fig. 16.41; R.W. Dajani, 1970, pl. XVIII.SA291
 Indeterminable tang, straight, double-edged blade, pointed tip, indeterminable shoulders, subtle midrib.
 TtL: 14.5, W: 1.5
 ind.9#.iii.ind LBIIA-IA IIB
 Missing Tang
- 145 Dagger
 Sahem, the tomb, southern part of the village
 Fischer 1997a, p. 70, pl. 39.4, fig. 27.2
 Stop-ridge, long(?) slim tang, convex, double-edged blade, blunt tip, no shoulders or midrib.
 'Gilded blade (gold partly preserved)' (Fischer 1997a: 70); blade tapers slightly toward broken tang.
 BL: 9.5, TL: 2.5, TtL: 12, W: 1.5
 XV?.2.i.n LBA
 Type Family 2
- 146 Blade
 Sahem, the tomb, southern part of the village
 Fischer 1997a, p. 69-70, pl. 39.1, fig. 27.1
 Hooked tang, tapering, double-edged blade, rounded tip, sloping shoulders, subtle midrib.
 Tip rounded from wear(?).
 BL: 10, TL: 7, TtL: 17, W: 2
 III.8.iv.A LBA
 Type Family 5
- 147 Blade
 Sahem, the tomb, southern part of the village

Fischer 1997a, p. 70, pl. 39.6, fig. 27.3

Long slim tang, convex, double-edged blade, rounded tip, sloping shoulders, subtle midrib.

A slight nick in the blade edge occurs on one side about 1 cm from the juncture of the tang.

BL: 9, TL: 5, TtL: 14, W: 1.5

VII.2.iv.A LBA

Type Family 4

148 Blade

Sahem, the tomb, southern part of the village

Fischer 1997a, p. 70, pl. 39.5, fig. 27.4

Hooked tang, tapering, double-edged blade, rounded tip, sloping shoulders, subtle midrib.

BL: 9, TL: 5.5, TtL: 14.5, W: 2

III.8.iv.A LBA

Type Family 5

149 Blade

Sahem, the tomb, southern part of the village

Fischer 1997a, p. 70, pl. 39.7, fig. 27.5

Broken tang, straight, double-edged blade, blunt tip, squared shoulders, subtle midrib. Tip is either broken or worn from use, and the blade is slightly bent at, or slightly above, the tang.

TtL: 8.5, W: 1.5

b.9.i.B LBA

Slim Tang

150 Blade

Sahem, the tomb, southern part of the village

Fischer 1997a, p. 72, pl. 39.3, fig. 28.4

Hooked tang, tapering, single-edged blade, broken tip, sloping shoulders, no midrib.

BL: 7.5, TL: 5, TtL: 12.5, W: 1.5

III.8.b.A LBA

Type Family 5

151 Knife

Sahem, the tomb, southern part of the village

Fischer 1997a, p. 71-72, pl. 39.2, fig. 28.3

Animal hoof tang, recurved, single-edged blade, rounded tip, no shoulders or midrib. Blade is curved sideways.

BL: 10.5, TL: 6, TtL: 16.5, W: 1.5

I.7.iv.n LBA

Type Family 13

152 Blade

Tell Abu al-Kharaz, Area 1, Phase V, Locus 218, 'part of an oblong casemate room (built against the city wall)', 'found just above the floor' (Fischer, in press).

Fischer 2003, in press, fig. 79.4

Long slim tang, tapering double-edged blade, blunt tip, squared shoulders, subtle midrib.

Tang is slightly curved at tip.
BL: 19, TL: 13, TtL: 31, W: 4
VII.8.i.B LBI
Type Family 4

153 Blade
Tell Abu Hawam, Square C6, Stratum V temple, close to the sand.
Hamilton 1935, p. 59, pl. XXXIII.365
Rockefeller Museum (1934:187)
Long slim tang, leaf-shaped, double-edged blade, broken tip, no shoulders or midrib.
Tip and edges chipped; 'long flat tang bent double. A leaf or feather is roughly incised
on one side of the blade near the tang' (Hamilton 1935: 59).
BL: 9, TL: 7.25, TtL: 16.25, W: 2
VII.6.b.n LBII
Individual

154 Knife
Tell Abu Hawam, Square E4, Stratum V, domestic building, east corner of 62
Hamilton 1935, p. 60-61, p. 60 #374A
Animal hoof tang, recurved blade, pointed tip, no shoulders or midrib.
'Found in fragments. Blade was bent to an acute angle in two places' (Hamilton 1935:
60) A portion of the handle is flanged indicating the use of an inlay. The tip of the
blade curves upward.
BL: 18, TL: 12, TtL: 30, W: 2
I.7.iii.n LBII
Type Family 13

155 Dagger fragment
Tell Beit Mirsim, Area SE, Block 23, Stratum D, domestic building
Albright 1938b, p. 52, pl. 41.19
Stop-ridge, long(?) slim tang, tapering, double-edged blade, broken tip, no shoulders or
midrib.
Blade and tang are both incomplete due to breakage.
BL: 8, TL: 4.5, TtL: 12.5, W: 3.5
XV#?.8.b.n LBII
Type Family 2

156 Blade
Tell Beit Mirsim, Area SE, Stratum D, domestic building
Albright 1938b, p. 37, pl. 41.11
Short slim tang, tapering, double-edged blade, blunt tip, squared shoulders,
indeterminable midrib.
Slightly concave blade.
BL: 15, TL: 3.5, TtL: 18.5, W: 4
XIV.8.i.B LBII
Type Family 3

157 Small Blade
Tell Beit Mirsim, Area SE, Block 22, Stratum D-8, domestic building
Albright 1938b, p. 38, 52, pl. 41.24
Broken tang, tapering blade, rounded tip, squared shoulders, indeterminable midrib.

Slightly convex blade with one edge concave from sharpening(?).

BL: 6.5, TL: 1, TtL: 7.5, W: 2

b.8.iv.B LBII

Type Family 17

158 Small Blade

Tell Beit Mirsim, Area SE, Block 12, Stratum D or C, domestic building

Albright 1938b, p. 52, pl. 41.17

Riveted shoulders, concave (from sharpening) blade, rounded tip, indeterminate shoulders and midrib.

'Two rivets' (Albright 1938: 52); tapering blade with severely concave edges due to sharpening and rounded tip from wear(?); corner of one of the shoulders is missing. The blade was most likely reworked from its original shape.

TtL: 11.2, W: 4

XI.1.iv.ind LBII

Individual

159 Knife

Tell Beit Mirsim, Area SE, Block 33, Stratum C, found in debris

Albright 1938b, p. 73, pl. 41.12

Broken tang, tapering blade, blunt tip, no shoulders or midrib.

Tang broken, slightly concave edges due to sharpening(?).

BL: 11, TL: 5, TtL: 16, W: 3

b.8.i.n LBII

Type Family 9

160 Knife

Tell Beit Mirsim, Area SE, Block 13, Stratum C, domestic building

Albright 1938b, p. 73, pl. 41.23

Broken tang, tapering blade, blunt tip, sloping shoulders, no midrib.

Blade is concave from sharpening.

BL: 12, TL: 1.5, TtL: 13.5, W: 2.5

b.8.i.A LBII

Type Family 9

161 Knife

Tell Beit Mirsim, Area SE, Block 3, Stratum C, domestic building

Albright 1938b, p. 73, pl. 41.22

Broken tang, straight blade, blunt tip, no shoulders or midrib.

Blade has slightly tapering and concave(?) edges.

BL: 10, TL: 3, TtL: 13, W: 2.5

b.9.i.n LBII

Type Family 9

162 Spearhead

Tell Beit Mirsim, Area SE, Block 23, Stratum E or D, domestic building

Albright 1938b, p. 52, pl. 41.18

Straight socketed tang, tapering, double-edged blade, blunt tip, sloping shoulders, indeterminate midrib.

BL: 5.5, TL: 4.5, TtL: 10, W: 2

XVI.8.i.A MBIIB-LBI

Individual

163 Blade

Tell Beit Mirsim, Area SE, Block 33, Stratum D-4, domestic building

Albright 1938b, p. 52, pl. 41.6

Riveted shoulders, tapering blade, broken tip, squared shoulders, no midrib.

'Four rivets' (Albright 1938: 52); blade is slightly concave from sharpening(?).

TtL: 15, W: 5

XI.8.b.B# MBIIB-LBI

Type Family 7

164 Dagger

Tell Dan, Area B, Tomb 387 (the 'Mycenaean Tomb), disturbed, edge of tell, on pavement in tomb centre

Biran and Ben-Dov 2002, p. 120-121, figs. 2.88 and 2.90, #117

Flanged tang, leaf-shaped, double-edged blade, pointed tip, no shoulders or midrib.

'A pair of lines is incised at the base of the blade and the hilt terminates in an arch' (Biran and Ben-Dov 2002: 121).

BL: 22.5, TL: 11.9, TtL: 34.4, W: 3.5

II.6.iii.n LBII

Type Family 1

165 Dagger

Tell Dan, Area B, Tomb 387 (the 'Mycenaean Tomb), disturbed, edge of tell, on floor of tomb near northern wall alongside spine of a male skeleton

Biran and Ben-Dov 2002, p. 120-121, figs. 2.88 and 2.90, #118

Flanged tang, tapering, double-edged blade, pointed tip, no shoulders or midrib.

The slightly convex blade 'is poorly preserved. The hilt terminates in a flat arch' (Biran and Ben-Dov 2002: 121).

BL: 19.5, TL: 12, TtL: 31.5, W: 3.3

II.8.iii.n LBII

Type Family 1

166 Dagger

Tell Dan, Area B, Tomb 387 (the 'Mycenaean Tomb), disturbed, edge of tell, in southwest of tomb next to a skull

Biran and Ben-Dov 2002, p. 120, fig. 2.90, #119

Stop-ridge, long slim tang, leaf-shaped, double-edged blade, rounded tip, no shoulders or midrib.

'The entire object was cast in one piece...A pair of lines is incised at its base. A ring-shaped blade guard separates the blade from the tang' (Biran and Ben-Dov 2002: 120).

BL: 19.3, TL: 11.2, TtL: 30.5, W: 3

XV.6.iv.n LBII

167 Spearhead

Tell Dan, Area B, Tomb 387 (the 'Mycenaean Tomb), disturbed, edge of tell

Artefact found on pavement in south of tomb

Biran and Ben-Dov 2002, p. 121, figs. 2.89 and 2.90, #120

Flared socketed tang, tapering, double-edged blade, rounded tip, no shoulders or midrib.

The spearhead was 'cast in a mold as one piece, with the lower part cast as a spread-out sheet, at a later stage, the edges were folded inward by hammering to create the socket. A wooden shaft was inserted into the socket and held in place by means of a rivet through a hole in the lower part of the socket...The surface of the socket is decorated with a shallow pointillé technique decoration, which perhaps depicts an animal head and geometric shapes beneath it' (Biran and Ben-Dov 2002: 121).

BL: 11, TL: 8, TtL: 19, W: 3.2

IX.8.iv.n LBII

Type Family 23

168 Blade

Tell ed-Duweir, Tomb 216, cemetery northwest of tell

Tufnell, et al. 1958, p. 78-79, pl. 23.3 & 54.41

Long slim tang, tapering, double-edged blade, rounded tip, squared shoulders, pronounced midrib.

Slight stop-ridge; very slightly convex blade.

BL: 19, TL: 11, TtL: 30, W: 5

VII.8.iv.B LBI-LBIIA

Type Family 4

169 Knife

Tell ed-Duweir, Tomb 216, cemetery northwest of tell

Tufnell, et al. 1958, p. 78-79, pl. 23.4 & 54.43

Animal hoof tang, recurved, single-edged blade, blunt tip, 'catch' shoulder, no midrib.

BL: 13, TL: 14, TtL: 27, W: 2.5

I.7.i.C LBI-LBIIA

Type Family 13

170 Knife

Tell ed-Duweir, Tomb 216, cemetery northwest of tell

Tufnell, et al. 1958, p. 78-79, pl. 23.5 & 54.44

Animal hoof tang, recurved, single-edged blade, rounded tip, 'catch' shoulder, no midrib.

Broken in four pieces.

BL: 16, TL: 12.5, TtL: 28.5, W: 2.5

I.7.iv.C LBI-LBIIA

Type Family 13

171 Knife

Tell ed-Duweir, Tomb 216, cemetery northwest of tell

Tufnell, et al. 1958, p. 78-79, pl. 23.6 & 54.45

Animal hoof tang, recurved, single-edged blade, pointed tip, no shoulders or midrib.

BL: 11, TL: 12, TtL: 23, W: 2

I.7.iii.n LBI-LBIIA

Type Family 13

172 Knife

Tell ed-Duweir, Tomb 216, cemetery northwest of tell

Tufnell, et al. 1958, p. 78-79, pl. 23.7 & 54.46

No tang, cut-out blade, squared tip, lugged shoulders, no midrib.

The cut-out lies a quarter of the length from tip of blade.

TtlL: 19.5, W: 2
n.4.vi.F LBI-LBIIA
Type Family 11

173 Knife

Tell ed-Duweir, Tomb 216, cemetery northwest of tell
Tufnell, et al. 1958, p. 78-79, pl. 23.8 & 54.42
Long broad tang, crescent-shaped blade, pointed tip, no shoulders or midrib.
Handle cast as one piece with blade.
BL: 5, TL: 5.5, TtlL: 10.5, W: 1.5
V.3.iii.n LBI-LBIIA
Type Family 15

174 Spearhead

Tell ed-Duweir, Tomb 216, cemetery northwest of tell
Tufnell, et al. 1958, p. 78-79, pl. 23.9 & 54.39
Flared socketed tang, leaf-shaped, double-edged blade, blunt tip, no shoulders, subtle
midrib.
BL: 9.5, TL: 8, TtlL: 17.5, W: 2.5
IX.6.i.n LBI-LBIIA
Type Family 22

175 Spearhead

Tell ed-Duweir, Tomb 216, cemetery northwest of tell
Tufnell, et al. 1958, p. 78-79, pl. 23.9 & 54.40
Flared socketed tang, leaf-shaped, double-edged blade, rounded tip, no shoulders, subtle
midrib.
BL: 10, TL: 8, TtlL: 18, W: 2.5
IX.6.iv.n LBI-LBIIA
Type Family 22

176 Blade

Tell ed-Duweir, Tomb 216, cemetery northwest of tell
Tufnell, et al. 1958, p. 78-79, pl. 23.17
Broken tang, convex, double-edged blade, rounded tip, rounded shoulders,
indeterminable midrib.
BL: 13.5, TL: 0.5, TtlL: 14, W: 3
b.2.iv.D LBI-LBIIA
Slim Tang

177 Knife

Tell ed-Duweir, Tomb 537, cemetery southwest of tell
Tufnell, et al. 1958, p. 78-79, pl. 23.19
Short slim tang, half-tapering, single-edged blade, broken tip, 'catch' shoulder, no
midrib.
BL: 15.5, TL: 4.5, TtlL: 20, W: 2
XIV.5.b.C LBII
Type Family 12

178 Blade

Tell ed-Duweir, Tomb 538, cemetery southwest of tell

Tufnell, et al. 1958, p. 78-79, pl. 23.18

Broken tang, tapering, double-edged blade, blunt tip, squared shoulders, indeterminable midrib.

Blade is slightly concave from sharpening.

BL: 10.5, TL: 2, TtlL: 12.5, W: 2.5

b.8.i.B LBII

Slim Tang

179 Blade

Tell ed-Duweir, Tomb 538, cemetery southwest of tell

Tufnell, et al. 1958, p. 78-79, pl. 23.20

Long round, button-ended tang, tapering, double-edged blade, blunt tip, no shoulders, indeterminable midrib.

BL: 15, TL: 9, TtlL: 24, W: 3

VI.8.i.n LBII

Individual

180 Blade

Tell ed-Duweir, Tomb 538, cemetery southwest of tell

Tufnell, et al. 1958, p. 78-79, pl. 23.21

Riveted tang, straight, double-edged blade, blunt tip, no shoulders, indeterminable midrib.

Wide tang with three centrally placed rivet holes that form a line down the centre to the tang's forked end. The blade tapers down slightly to meet the tang.

BL: 16, TL: 7, TtlL: 23, W: 2

XII.9.i.n LBII

Individual

181 Spearhead

Tell ed-Duweir, Tomb 542, cemetery southwest of tell

Tufnell, et al. 1958, p. 78-79, pl. 23.16

Flared socketed tang, tapering, double-edged blade, blunt tip, sloping shoulders, no midrib.

BL: 10, TL: 10, TtlL: 20, W: 3

IX.8.i.A LBII

Type Family 23

182 Dagger

Tell ed-Duweir, Tomb 555, cemetery southwest of tell

Tufnell, et al. 1958, p. 78-79, pl. 23.15

Stop-ridge, long slim tang, leaf-shaped, double-edged blade, pointed tip, no shoulders, indeterminable midrib.

Very end of tang broken off.

BL: 12, TL: 7.5, TtlL: 19.5, W: 3

XV.6.iii.n LBI-LBIIA

Type Family 2

183 Blade fragment

Tell ed-Duweir, Tomb 555, cemetery southwest of tell

Tufnell, et al. 1958, p. 78-79, pl. 23.13

Indeterminable tang, leaf-shaped(?), double-edged blade, pointed tip, indeterminable shoulders, pronounced midrib.

Tang and half of blade missing.

TtlL: 17.5, W: 4

ind.6?.iii.ind LBI-LBIIA

Missing Tang

184 Blade

Tell ed-Duweir, Tomb 555, cemetery southwest of tell

Tufnell, et al. 1958, p. 78-79, pl. 23.14

Riveted shoulders, tapering, double-edged blade, blunt tip, rounded(?) shoulders, indeterminable midrib.

Two rivet holes, side by side at the blade's base.

TtlL: 18, W: 4

XI.8.i.D? LBI-LBIIA

Type Family 7

185 Spearhead

Tell ed-Duweir, Tomb 559, cemetery southwest of tell

Tufnell, et al. 1958, p. 78-79, pl. 23.12

Flared socketed tang, leaf-shaped, double-edged blade, rounded tip, no shoulders, subtle midrib.

BL: 13.5, TL: 10, TtlL: 23.5, W: 3

IX.6.iv.n LBIIA-IA IA

Type Family 22

186 Spearhead

Tell ed-Duweir, Tomb 4004, cemetery north of tell

Tufnell, et al. 1958, p. 78-79, pl. 23.11

Flared socketed tang, tapering, double-edged blade, pointed tip, no shoulders, pronounced midrib on one side of the blade.

BL: 11.5, TL: 9, TtlL: 20.5, W: 3

IX.8.iii.n LBII

Type Family 23

187 Blade

Tell ed-Duweir, Temple, found in the rubbish against the south wall of the west chamber, room B

Tufnell, et al. 1940, p. 67, pl. XXVII.34

Long slim tang, convex blade, rounded tip, sloping shoulders, no midrib.

BL: 14, TL: 6.5, TtlL: 20.5, W: 2.5

VII.2.iv.A LBA

Type Family 4

188 Blade

Tell el-'Ajjul, GHA 855, Tomb 2093

Mackay and Murray 1952, p. 14, pl. XI.6

Riveted tang, tapering blade, blunt tip, no shoulders, indeterminable midrib.

Two rivets in tang; 'a sheet metal collar wrapped round the socket, to prevent the wooden shaft from splitting' (Mackay and Murray 1952: 14).

BL: 14, TL: 4.5, TtlL: 18.5, W: 3

XII.8.i.n LBI

Type Family 8

189 Blade

Tell el-'Ajjul, GJD 948, building adjacent to courtyard

Mackay and Murray 1952, p. 14, pl. XI.10

Riveted tang, convex blade, pointed tip, no shoulders, indeterminable midrib.

'One rivet hole in 'tang', a sheet metal collar wrapped round the socket, to prevent the wooden shaft from splitting' (Mackay and Murray 1952: 14).

BL: 17, TL: 4, TtL: 21, W: 3

XII.2.iii.n MB/LBA

Type Family 8

190 Blade

Tell el-'Ajjul, GJE 959, outside a building

Mackay and Murray 1952, p. 14, pl. XI.11

Short slim tang, concave (from sharpening) blade, blunt tip, squared shoulders, indeterminable midrib.

BL: 13, TL: 4, TtL: 17, W: 4

XIV.1.i.B MB/LBA

Type Family 3

191 Knife

Tell el-'Ajjul, GBW 924, building

Mackay and Murray 1952, p. 14, pl. XIII.49

Animal hoof(?) tang, recurved blade, rounded tip, 'catch' shoulder, no midrib.

BL: 10, TL: 13, TtL: 23, W: 2

I?.7.iv.C LBI

Type Family 13

194 Dagger

Tell el-'Ajjul, Lower Cemetery, Tomb 419 (the 'Governor's Tomb'), found in top centre of tomb in phase 2

Petrie 1933, p. 6, pl. IX.21

Stop-ridge, long slim tang, convex blade, pointed tip, no shoulders, indeterminable midrib.

BL: 23.5, TL: 13.5, TtL: 37, W: 3.5

XV.2.iii.n LBIIB

Type Family 2

195 Blade

Tell el-'Ajjul, Lower Cemetery, Tomb 419 (the 'Governor's Tomb'), found in top centre of tomb in phase 2

Petrie 1933, p. 6, pl. IX.22

Long slim tang, tapering blade, pointed tip, squared shoulders, no midrib.

BL: 21.5, TL: 10.5, TtL: 32, W: 4

VII.8.iii.B LBIIB

Type Family 4

196 Blade

Tell el-'Ajjul, Lower Cemetery, Tomb 419 (the 'Governor's Tomb'), found in top centre of tomb in phase 1
Petrie 1933, p. 6, pl. IX.26
Hourglass tang, leaf-shaped blade, rounded tip, no shoulders, subtle midrib.
Wide leaf-shaped blade with central vein; 'tang' is handle. A possible Egyptian form.
BL: 18.9, TL: 10.2, TtL: 29.1, W: 5
IV.6.iv.n LBIIB
Individual

197 Blade
Tell el-'Ajjul, AN 720=1020 (Fort III), street
Petrie 1933, p. 8, pl. XVIII.3
Short slim tang, tapering, double-edged blade, blunt tip, sloping shoulders, indeterminable midrib.
BL: 16, TL: 5.5, TtL: 21.5, W: 4
XIV.8.i.A LBI
Type Family 3

198 Small Blade
Tell el-'Ajjul, PM 1027=1077, Fort V
Petrie 1933, p. 8, pl. XVIII.5
Indeterminable tang, tapering blade, rounded tip, squared shoulders, indeterminable midrib.
'Model "dagger" with face of gold foil on handle' (Petrie 1933: 8). Tip possibly rounded from wear.
BL: 5, TL: 2.5, TtL: 7.5, W: 1
ind.8.iv.B LBA/EI
Type Family 17

199 Knife
Tell el-'Ajjul, Lower Cemetery, Tomb 336
Petrie 1933, p. 9, pl. XIX.12
Flanged tang, recurved blade, pointed tip, no shoulders or midrib.
BL: 24, TL: 12, TtL: 36, W: 4
II.7.iii.n LBI
Type Family 14

200 Small Blade
Tell el-'Ajjul, LH 946=1006, domestic building west of Fort III
Petrie 1933, p. 9, pl. XX.26*
Short slim(?) tang, tapering blade, blunt tip, sloping shoulders, indeterminable midrib.
Tip possibly worn down from original shape; tang may be broken.
BL: 8, TL: 2, TtL: 10, W: 3
XIV?.8.i.A LBI
Type Family 17

201 Blade fragment
Tell el-'Ajjul, LK² 1035=1095, domestic building west of Fort V
Petrie 1933, p. 9, pl. XX.31
Indeterminable tang, straight blade, blunt tip, indeterminable shoulders and midrib.

Tang missing, possibly leaf-shaped but impossible to tell as base of blade is fragmented and parts of it are missing.

TtL: 8.5, W: 2

ind.9#.i.ind LBA/EI

Missing Tang

202 Knife

Tell el-'Ajjul, LZ⁶ 990, domestic building west of Fort III

Petrie 1933, pl. XXI.36

Indeterminable tang, 'chopping' blade, blunt tip, indeterminable shoulders and midrib.

Tang missing.

TtL: 10, W: 3.5

ind.10.i.ind LBI

Type Family 16

203 Knife

Tell el-'Ajjul, QP 1071=1110, domestic building west of Fort V

Petrie 1933, pl. XXI.38

Long broad tang, 'chopping' blade, blunt tip, 'catch' shoulder, no midrib.

Edge chipped and handle broken in at least three pieces.

BL: 7, TL: 5.5, TtL: 12.5, W: 2

V.10.i.C LBA/EI

Type Family 16

204 Blade

Tell el-'Ajjul, Trench 8, Horizon 2, Locus 47, 25.58m above mean sea level, domestic building

Fischer and Sadeq 2002, p. 115, 119, Fig. 10.2

Broken tang, tapering blade, blunt tip, sloping shoulders, no midrib.

BL: 7, TL: 1, TtL: 8, W: 1.5

b.8.i.A LBI-LBIIA

Slim Tang

205 Blade

Tell el-'Ajjul, Lower Cemetery, Tomb 364

Petrie 1933, p. 9, pl. XIX.14

Riveted tang, tapering blade, rounded tip, squared shoulders, indeterminable midrib.

Slightly convex blade; single rivet hole in tang centre.

BL: 16, TL: 4.5, TtL: 20.5, W: 3.5

XII.8.iv.B LBI

Type Family 8

206 Blade fragment

Tell el-'Ajjul, Lower Cemetery, Tomb 364

Petrie 1933, p. 9, pl. XIX.15

Flanged tang, indeterminable blade, tip, shoulders and midrib.

Tang only of what is presumed to have been a blade of some sort. One rivet hole centrally placed in this tang with a forked end.

TtL: 6, W: 2

II#.ind.ind.ind LBI

Missing Tang

207 Small Blade

Tell el-'Ajjul, LA 940=1000, domestic building west of Fort III

Petrie 1933, p. 9, pl. XX.26

Short slim tang, tapering blade, blunt(?) tip, sloping shoulder, indeterminable midrib.

Blade tip is either worn down flat or broken.

BL: 6, TL: 2, TtL: 8, W: 2

XIV.8.i?A LBI

Type Family 17

208 Blade

Tell es-Sa'idiyeh, 17-H-8, Tomb 102, at the head

Pritchard 1980, p. 16, pl. 52.9, fig. 5.12

Hooked tang, tapering, double-edged blade, broken tip, squared shoulders, indeterminable midrib.

BL: 16, TL: 11, TtL: 27, W: 3

III.8.b.B LBIIB

Type Family 5

209 Sword

Tell es-Sa'idiyeh, 17-H-8, Tomb 102, cemetery, sword found in bitumen

Pritchard 1980, p. 16, pl. 52.10, fig. 5.13

Flanged tang, tapering, double-edged blade, pointed tip, no shoulders or midrib.

The sides of the blade 'are decorated with two incised lines extending from the hilt to the point, where they converge, and triangular incisions along the outside of each of these lines; a tang, square in section, extends into the pommel. A flanged grip, with flanges curved and wider at both ends, brazed to a tubular bronze covering for a wooden or bone handle. The grip, in form of a horned collar, extends over the top of the blade. A bronze pommel was attached to the upper part of the grip by a collar brazed to it' (Pritchard 1980: 16).

BL: 34, TL: 16, TtL: 50, W: 3.5

LBIIB

210 Spearhead

Tell es-Sa'idiyeh, 17-J-7, Tomb 129, cemetery, spearhead found at head with point extending downward

Pritchard 1980, pl. 63.3, fig. 31.5

Flared socketed tang, leaf-shaped, double-edged blade, rounded tip, no shoulders, pronounced midrib.

BL: 12, TL: 9.5, TtL: 21.5, W: 2.5

IX.6.iv.n LBII

Type Family 22

211 Knife

Tell Farah (South), Block T 376.7, Fort

Petrie 1930, pl. L.591

No tang, hourglass blade, curled and rounded tip, lugged shoulders, no midrib.

TtL: 11.5, W: 1.5

n.14.ii&iv.F LBA

Individual

212 Dagger

Tell Farah (South), Tomb 914, cemetery

Macdonald, et al. 1932, p. 23, pl. XLVII & XLVIII.2

Flanged tang, leaf-shaped, double-edged blade, pointed tip, no shoulders or midrib.

'The handle is inlaid with wood' (Macdonald, et al. 1932, p. 23).

BL: 20, TL: 11.5, TtL: 31.5, W: 3.5

II.6.iii.n LBA

Type Family 1

213 Small Blade

Tell Farah (South), XP 370, domestic building

Macdonald, et al. 1932, pl. LXII.13

Short slim tang, straight blade, blunt tip, no shoulders, indeterminable midrib.

BL: 5.5, TL: 2, TtL: 7.5, W: 1.5

XIV.9.i.n LBA

Type Family 18

214 Spearhead

Tell Farah (South), Tomb 914, cemetery

Macdonald, et al. 1932, p. 23, pl. XLVII & XLVIII.1

Flared socketed tang, leaf-shaped, double-edged blade, rounded tip, no shoulders or midrib.

BL: 16, TL: 13, TtL: 29, W: 3.5

IX.6.iv.n LBA

Type Family 22

215 Spearhead

Tell Farah (South), Tomb 960, cemetery

Macdonald, et al. 1932, p. 26, pl. LV.293

Flared socketed tang, tapering, double-edged blade, blunt tip, sloping shoulders, pronounced midrib

BL: 11.5, TL: 12, TtL: 23.5, W: 3

IX.8.i.A LBII

Type Family 23

216 Blade

Tell Mevorakh, Stratum X temple, Locus 184, on the platform of the temple

Stern 1984, p. 24, pl. 31.8, fig. 3.6

Long slim tang, tapering, double-edged blade, blunt tip, squared shoulders, pronounced midrib on one side.

'Point is flat from intensive use' (Stern 1984: 24).

BL: 12.5, TL: 11, TtL: 23.5, W: 4

VII.8.i.B LBIIA

Type Family 4

217 Knife

Tell Mevorakh, Stratum X temple, Locus 248, the northeast corner of the platform of the temple

Stern 1984, p. 24, pl. 31.9, fig. 3.5

Riveted tang, recurved, double-edged blade, rounded blade tip, no shoulders or midrib.

Two nails were used to secure the handle. Tip possibly worn down from use.

TtL: 23.5, W: 2.5
XII.7.iv.n LBIIA
Type Family 14

218 Spearhead
Akko Tombs, Section find
Ben-Arieh and Edelstein 1977, pl. XVIII.12, fig. 20.2
Flared socketed tang, tapering, double-edged blade, blunt tip, sloping shoulders,
pronounced midrib.
BL: 11, TL: 7, TtL: 18, W: 3
IX.8.i.A LBII
Type Family 23

219 Dagger(?)
Pella, Settlement, IIP 104.50
Philip, et al. 2003, p. 74, not pictured
LBIIB

220 Axe
Pella, Settlement, IIIQ 121.12
Philip, et al. 2003, p. 74, not pictured
LBI

221 Daggers (26)
Tell Dothan, Western Cemetery, Tomb 1
Cooley and Pratico 1994, p. 162-163, not pictured
LBIIA

222 Daggers (18)
Tell Dothan, Western Cemetery, Tomb 1
Cooley and Pratico 1994, p. 162-163, not pictured
LBIIB

223 Daggers (18)
Tell Dothan, Western Cemetery, Tomb 1
Cooley and Pratico 1994, p. 162-163, not pictured
LBIIB/IA IA

224 Knife
Tell Dothan, Western Cemetery, Tomb 1
Cooley and Pratico 1994, p. 162-163, not pictured
LBIIA

225 Knife
Tell Dothan, Western Cemetery, Tomb 1
Cooley and Pratico 1994, p. 162-163, not pictured
LBIIB

226 Knives (2)
Tell Dothan, Western Cemetery, Tomb 1
Cooley and Pratico 1994, p. 162-163, not pictured

LBIIB/IA IA

227 Spearheads (5)
Tell Dothan, Western Cemetery, Tomb 1
Cooley and Pratico 1994, p. 162-163, not pictured
LBIIA

228 Spearheads (5)
Tell Dothan, Western Cemetery, Tomb 1
Cooley and Pratico 1994, p. 162-163, not pictured
LBIIB

229 Spearheads (7)
Tell Dothan, Western Cemetery, Tomb 1
Cooley and Pratico 1994, p. 162-163, not pictured
LBIIB/IA IA

230 Small Blade
Megiddo, Square N14, Stratum IX, uncertain location within the Square
Loud 1948, pl. 179.26
Short broad tang, tapering, double-edged(?) blade, pointed tip, squared shoulders, and indeterminable midrib.
Tang is triangularly-shaped and possibly broken. A notch is broken into one edge of the blade near the shoulders.
BL: 9, TL: 1.5, TtL: 10.5, W: 1.5
XIII.8.iii.B LBI
Type Family 17

231 Small Blade
Megiddo, Square O14, Stratum IX, uncertain location within Square
Loud 1948, pl. 179.27
Short broad tang, tapering double-edged(?) blade, broken tip, sloping shoulders and indeterminable midrib.
Blade tip is blunt from breakage and tang may be broken.
BL: 9.5, TL: 1, TtL: 10.5, W: 3.5
XIII?.8.b.A LBI
Type Family 17

232 Small Blade
Megiddo, Square N15, Stratum IX, T. 2108, within a domestic building
Loud 1948, pl. 179.28
Short slim tang, convex and tapering double-edged(?) blade, broken tip, squared shoulders, and indeterminable midrib.
One shoulder is slightly damaged.
BL: 9, TL: 1.5, TtL: 10.5, W: 2
XIV?.8&2.b.B LBI
Type Family 17

233 Knife
Megiddo, Square O14, Stratum IX, N=3011, domestic building, room south of temple

Loud 1948, pl. 179.25

Riveted(?) tang, recurved blade, pointed blade tip, no shoulders and indeterminable midrib.

Object is broken into several pieces and the tang appears to be broken.

BL: 22, TL: 2, TtL: 24, W: 2.5

XII?.7.iii.n LBI

Type Family 14

234 Adze, Pierced

Megiddo, Square K8, Stratum IX, Locus 2134, Temple

Loud 1948, pl. 182.11

A pierced adze with a curved cutting edge and sides that taper toward the butt.

TtL: 10, W: 5.5

LBI

235 Adze, Plain

Megiddo, Square M13, Stratum IX, Locus 5029, wall north of temple

Loud 1948, pl. 182.10

A plain adze with a curved cutting edge and sides which taper toward the butt.

TtL: 14, W: 5

LBI

Cited References

- Adams, W.Y. and Adams, E.W. (1991) *Archaeological Typology and Practical Reality*. Cambridge UP: Cambridge.
- Ahituv, S. ed. (1999) Royal Gifts in the Late Bronze Age, Fourteenth to Thirteenth Centuries B.C.E. *Beer-Sheva: Studies by the Department of Bible and Ancient Near East*, 13.
- Ahlström, G.W. (1993) *History of Ancient Palestine from the Paleolithic Period to Alexander's Conquest*. JSOT Press: Sheffield.
- Albright, W.F. (1938a) The Chronology of a South Palestinian City, Tell el-'Ajjul. *The American Journal of Semitic Languages and Literatures* 55 (4), 337-359.
- Albright, W.F. (1938b) The Excavation of Tell Beit Mirsim, Vol. II The Bronze Age. *Annual of the American Schools of Oriental Research* 17.
- Albright, W.F. (1974) Appendix 1: The Chronology of a South Palestinian City, Tell el-'Ajjul. *Studies in Mediterranean Archaeology* 38, 64-75.
- Albright, W.F. and Greenberg, R. (1993) Beit Mirsim, Tell. *The New Encyclopedia of Archaeological Excavations in the Holy Land* 1, 177-180.
- Amiran, R. (1970) *Ancient Pottery of the Holy Land*. Rutgers University Press.
- Balensi, J. et al. (1993) Abu Hawam, Tell. *The New Encyclopedia of Archaeological Excavations in the Holy Land* 1, 7-14.
- Ben-Arieh, S. and Edelstein, G. (1977) Akko: Tombs Near the Persian Garden. *'Atiqot* 12, 1-88.
- Ben-Tor, A. (1993) Hazor: Fifth Season of Excavations (1968-1969). *The New Encyclopedia of Archaeological Excavations in the Holy Land* 2, 604-606.
- Biran, A. (1994) *Biblical Dan*. Hebrew Union College-Jewish Institute of Religion: Jerusalem.
- Biran, A. and Ben-Dov, R. (2002) Part II: The Late Bronze Age "Mycenaean" Tomb--3. Bronze Weapons. Pp. 119-137 in *Dan II: A Chronicle of the Excavations and the Late Bronze Age "Mycenaean" Tomb*. Hebrew Union College-Jewish Institute of Religion: Jerusalem.
- Bunimovitz, S. (1995) On the Edge of Empires—Late Bronze Age (1500-1200 BCE). Pp. 320-329 in T. E. Levy (ed.) *The Archaeology of Society in the Holy Land*. Leicester: London.
- Bunimovitz, S. and Lederman, Z. (1993) Beth Shemesh. *The New Encyclopedia of Archaeological Excavations in the Holy Land* 1, 249-254.
- Clarke, D.L. (1978) *Analytical Archaeology*. 2nd ed. Methuen: London.

- Cooley, R.E. and Pratico, G.D. (1993) Dothan. *The New Encyclopedia of Archaeological Excavations in the Holy Land* 1, 372-374.
- Cooley, R.E. and Pratico, G.D. (1994) Tell Dothan: The Western Cemetery, with Comments on Joseph Free's Excavations, 1953 to 1954. *Annual of the American Schools of Oriental Research* 52, 147-190.
- Cross, Jr., F.M. and Milik, J.T. (1956) A Typological Study of the El Khadr Javelin and Arrow-Heads. *Annual of the Department of Antiquities of Jordan* 3, 15-23.
- Dajani, R.W. (1964) Iron Age Tombs from Irbed. *Annual of the Department of Antiquities of Jordan* 8-9, 99-101.
- Dajani, R.W. (1970) A Late Bronze-Iron Age Tomb Excavated at Sahab, 1968. *Annual of the Department of Antiquities of Jordan* 15, 29-34.
- Dawson, D. (2001) *The First Armies*. Cassell & Co.: London.
- De Maigret, A. (1976) *Le Lance Nell'Asia Anteriore Nell'età Del Bronzo: Studio Tipologico*. Istituto di studi del Vicino Oriente, Università di Roma: Roma.
- Dessel, J.P. (1997) Tell el-'Ajjul. Pp. 38-40 in E.M. Myers (ed.) *The Oxford Encyclopedia of Archaeology in the Near East* 1. Oxford University Press: Oxford.
- Dever, W.G. (1992) The Chronology of Syria-Palestine in the 2nd Millenium BCE: a Review of Current Issues. *Bulletin of the American Schools of Oriental Research* 288 (4), 1-25.
- Dever, W.G. (1993) Gezer. *The New Encyclopedia of Archaeological Excavations in the Holy Land* 2, 496-506.
- Dothan, T. (1979) *Excavations at the Cemetery of Deir el-Balah*. Wiesner-Becker Foundation: Jerusalem.
- Drews, R. (1993) *The End of the Bronze Age: Changes in Warfare and The Catastrophe ca. 1200 BC*. Princeton University Press: Princeton.
- Drower, M. (1985) *Flinders Petrie: A Life in Archaeology*. 2nd ed. Victor Gollancz Ltd: London.
- Fischer, P.M. (1997a) *A Late Bronze to Early Iron Age Tomb at Sahem, Jordan*. Harrassowitz Verlag: Wiesbaden.
- Fischer, P.M. (1997b) Tall Abu al-Kharaz: The Swedish Jordan Expedition 1995-1996. Sixth and Seventh Season Preliminary Excavation Report. *Annual of the Department of Antiquities of Jordan* 41, 129-144.
- Fischer, P.M. (in press) *Tell Abu al-Kharaz in the Jordan Valley Volume II: The Middle and Late Bronze Ages*.

- Fischer, P.M. and Sadeq, M. (2000) Tell el-'Ajjul 1999: A Joint Palestinian-Swedish Field Project, First Season Preliminary Report. *Agypten und Levante* 10, 211-226.
- Fischer, P.M. and Sadeq, M. (2002) Tell el-'Ajjul 2000: Second Season Preliminary Report. *Agypten und Levante* 12, 109-153.
- Gonen, R. (c1992) The Late Bronze Age. Pp. 211-257 in A Ben-Tor (ed.) *The Archaeology of Ancient Israel*. Yale University Press: London.
- Gonen, R. (1992) Burial Patterns and Cultural Diversity in Late Bronze Age Canaan. *American Schools of Oriental Research Dissertation Series* 7.
- Grant, E. (1929) *Beth Shemesh (Palestine)*. Biblical and Kindred Studies: Haverford.
- Guy, P.L.O. (1938) *Megiddo Tombs*. University of Chicago Press: Chicago.
- Hamilton, R.W. (1935) Excavations at Tell Abu Hawam. *Quarterly of the Department of Antiquities in Palestine* 4, 1-69.
- Hankey, V. (1974) A Late Bronze Age Temple at Amman. *Levant* 6, 131-178.
- Harding, G.L. (1953) An Early Iron Age Tomb at Madeba. *Palestine Exploration Fund Annual* 6, 27-47.
- Harding, G.L. ed. (1956) Excavations in Jordan, 1953-1954. *Annual of the Department of Antiquities of Jordan* 3, 74-82.
- Harding, G.L. (1958) Recent Discoveries in Jordan. *Palestine Exploration Quarterly* 1958, 10-12.
- Hasel, M.G. (1998) *Domination and Resistance*. Brill: Leiden.
- Hennessy, J.B. (1966) Excavation of a Late Bronze Age Temple at Amman. *Palestine Exploration Quarterly* 1966, 155-162.
- Hennessy, J.B. (1985) Thirteenth Century B.C. Temple of Human Sacrifice at Amman. *Studia Phoenicia* 3, 85-104.
- Herr, L.G. ed. (1983) The Amman Airport Excavations, 1976. *The Annual of the American Schools of Oriental Research* 48.
- Higginbotham, C.R. (1996) *Egyptianization and Elite Emulation in Ramesside Palestine*. Brill: Leiden.
- Hulit, T. (2002) *Late Bronze Age Scale Armour in the Near East*. Ph.D. thesis. University of Durham.
- Ilan, D. (1992) A Middle Bronze Age Offering Deposit from Tel Dan and the Politics of Cultic Gifting. *Tel Aviv* 19(2), 247-266.
- Ilan, D. (1995) The Dawn of Internationalism—the Middle Bronze Age. Pp. 297-315 in T. E. Levy (ed.) *The Archaeology of Society in the Holy Land*. Leicester: London.

- James, F.W. and McGovern, P.E. (1993) *The Late Bronze Egyptian Garrison at Beth Shan: a study of levels VII and VIII, Vols I-II*. University of Pennsylvania Press: Philadelphia.
- Kelm, G.L. and Mazar, A. (1982) Three Seasons of Excavations at Tel Batash--Biblical Timnah. *Bulletin of the American Schools of Oriental Research* 248, 1-36.
- Kempinski, A. (1983) Syrien und Palatina (Kanaan) in der letzten Phase der Mittelbronze-zwei-B-Zeit (1650-1570 v. Chr.). *Ägypten und Altes Testament* 4, 131-148, plans 5-7.
- Kempinski, A. (1989) Megiddo. Deutschen Archäologischen Instituts: Bonn.
- Kempinski, A. (1992) Urbanization and Town Plans in the Middle Bronze Age II. Pp. 121-126 in *The Architecture of Ancient Israel: from the Prehistoric to the Persian Periods*. Ahva Press: Jerusalem.
- Kenyon, K. (1956) Tombs of the Intermediate Early Bronze-Middle Bronze Age at Tell el-'Ajjul. *Annual of the Department of Antiquities of Jordan* 3, 41-55.
- Kenyon, K. (1969) The Middle and Late Bronze Age Strata at Megiddo. *Levant* 1, 25-60.
- Khalil, L.A.H. (1980) *The Composition and Technology of Copper Artefacts from Jericho and Some Related Sites*. Ph.D. thesis. University of London.
- Klengel, H. (1992) *Syria: 3000 to 300 B.C.; a handbook of political history*. Akademie Verl: Berlin.
- Kletter, R. (2003) Iron Age Hoards of Precious Metals in Palestine--an 'Underground Economy'? *Levant* 35, 139-152.
- Kühnert-Eggebrecht (1969) *Die Axt als Waffe und Werkzeug im alten Ägypten*.
- Kuhrt, A. (1995) *The Ancient Near East c. 3000-330 BC Volume One*. Routledge: London.
- Levy, T.E. (ed.) (1995) *The Archaeology of Society in the Holy Land*. Leicester University Press: London.
- Liverani, M. (1990) *Prestige and Interest*. Sargon: Padova.
- Loud, G. (1948) *Megiddo II: Seasons of 1935-39*. University of Chicago Press: Chicago.
- Macdonald, E. et al. (1932) *Beth-Pelet II*. BSAE: London.
- Mackay, E.J.H. and Murray, M.A. (1952) *Ancient Gaza V: City of Shepherd Kings*. BSAE: London.

- Mackenzie, D. (1912-1913) *Excavations at Ain Shems (Beth Shemesh)*. Palestine Exploration Fund.
- Maxwell-Hyslop, K.R. (1946) Daggers and Swords in Western Asia. *Iraq* 8, 1-65.
- Maxwell-Hyslop, K.R. (1949) Western Asiatic Shaft-hole Axes. *Iraq* 11, 90-130.
- Maxwell-Hyslop, K.R. (1953) Bronze Lugged Axe- or Adze Blades from Asia. *Iraq* 15, 69-87.
- Maxwell-Hyslop, K.R. (1971) *Western Asiatic Jewellery c. 3000-612 B.C.* Methuen & Co. Ltd: London.
- Mazar, A. (1993) Beth-Shean. *The New Encyclopedia of Archaeological Excavations in the Holy Land* 1, 214-223.
- McNicoll, A.W. et al. (1982) *Pella in Jordan 1*. Australian National Gallery: Canberra.
- McNicoll, A.W. et al. (1992) *Pella in Jordan 2*. Meditarch: Sydney.
- Miron, E. (1992) Axes and Adzes from Canaan. *Prähistorische Bronzefunde* 19.
- Moorey, P.R.S. (1986) The Emergence of the Light, Horse-Drawn Chariot in the Near-East c. 2000-1500 BC. *World Archaeology* 18 (2), 196-215.
- Moran, W.L. (1992) *The Amarna Letters*. John Hopkins Press Ltd: London.
- Negbi, O. (1970) The Hoards of Goldwork from Tell el-'Ajjul. *Studies in Mediterranean Archaeology* 25.
- Oren, E.D. (1973) *The Northern Cemetery of Beth Shan*. University of Pennsylvania Press: Philadelphia.
- Petrie, W.M. F. (1917) *Tools and Weapons*. BSAE: London.
- Petrie, F. (1930) *Beth-Pelet I*. BSAE: London.
- Petrie, W.M.F. (1931) *Ancient Gaza I*. BSAE: London.
- Petrie, W.M.F. (1932) *Ancient Gaza II*. BSAE: London.
- Petrie, W.M.F. (1933) *Ancient Gaza III*. BSAE: London.
- Petrie, W.M.F. (1934) *Ancient Gaza IV*. BSAE: London.
- Philip, G. (1988) Hoards of the Early and Middle Bronze Ages in the Levant. *World Archaeology* 20, 190-208.
- Philip, G. (1989) Metal Weapons of the Early and Middle Bronze Ages in Syria-Palestine. *BAR International Series* 526, Vols. I-II.

- Philip, G. (1991) Cypriot Bronzework in the Levantine World. *Journal of Mediterranean Archaeology* 4(1), 59-107.
- Philip, G. (1995) Warrior Burials in the Ancient Near Eastern Bronze Age: the Evidence from Mesopotamia, Western Iran and Syria-Palestine. Pp. 140-154 in S. Campbell and A. Green (eds.) *The Archaeology of Death in the Ancient Near East*. Oxbow Books: Oxford.
- Piccirillo, M. (1993) Medeba (Madaba). *The New Encyclopedia of Archaeological Excavations in the Holy Land* 3, 992-1001.
- Pritchard, J.B. (1980) *The Cemetery at Tell es-Sa'idiyeh, Jordan*. University of Pennsylvania Press: Philadelphia.
- Pusch, E.B. (1990) Metallverarbeitende Werkstätten der frühen Ramessidenzeit in Qantir-Piramesse/Nord-Ein Zwischenbericht. *Ägypten und Levante* 1, 75-113.
- Pusch, E.B. (1994) Divergierende Verfahren der Metallverarbeitung in Theban und Qantier? Bemerkungen zur Konstruktion und Technik. *Ägypten und Levante* 4, 145-170.
- Rowe, A. (1929) Palestine Expedition of the Museum of the University of Pennsylvania. Third Report. *Palestine Exploration Quarterly*. 1929 (2), 78-94.
- Rowe, A. (1930) *The Topography and History of Beth-Shan*. University of Pennsylvania Press: Philadelphia.
- Rowe, A. (1940) *The Four Canaanite Temples of Beth-Shan*. University of Pennsylvania Press: Philadelphia.
- Seger, J.D. (1988) *Gezer V: The Field I Caves*. Hebrew Union College/Nelson Glueck School of Biblical Archaeology: Jerusalem.
- Sherratt, S. (1998) 'Sea Peoples' and the Economic Structure of the Late Second Millennium in the Eastern Mediterranean. Pp. 292-313 in S. Gitin, A. Mazar, and E. Stern (eds.) *Mediterranean Peoples in Transition*. Israel Exploration Society: Jerusalem.
- Stager, Lawrence E. (1995) The Impact of the Sea Peoples in Canaan (1185-1050 BCE). Pp. 332-348 in T. E. Levy (ed.) *The Archaeology of Society in the Holy Land*. Leicester: London.
- Steel, L. (2002) Consuming Passions: A Contextual Study of the Local Consumption of Mycenaean Pottery at Tell el-'Ajjul. *Journal of Mediterranean Archaeology* 15 (1), 25-51.
- Stern, E. (1984) Excavations at Tel Mevorakh, Part two: the Bronze Age. *Qedem* 18 2.
- Stewart, J.R. (1974) Tell el-'Ajjul: the Middle Bronze Age Remains. *Studies in Mediterranean Archaeology* 38.
- Tufnell, O. et al. (1940) *Lachish II*. Oxford University Press: London.
- Tufnell, O. et al. (1958) *Lachish IV*. Oxford University Press: London.

- Tufnell, O. (1962) The Courtyard Cemetery at Tell el-'Ajjul, Palestine. *Bulletin of the Institute of Archaeology, University of London* 1962 (3), 1-46.
- Tufnell, O. and Kempinski, A. (1993) Tell el-'Ajjul. *The New Encyclopedia of Archaeological Excavations in the Holy Land* 1, 49-53.
- Ussishkin, D. (1993) Lachish. *The New Encyclopedia of Archaeological Excavations in the Holy Land* 3, 897-911.
- Van de Mieroop, M. (2003) *A History of the Ancient Near East ca. 3000-323 B.C.* Blackwell Publishers Ltd: Oxford.
- Warburton, D. (2000) Synchronizing the Chronology of Bronze Age Western Asia with Egypt. *Akkadica* 119-120, 33-76.
- Weinstein-Balthazar, J. (1990) Copper and Bronze Working in Early Through Middle Bronze Age Cyprus. *Studies in Mediterranean Archaeology and Literature* 84.
- Yadin, Y. et al. (1958) *Hazor I*. Magnes Press: Jerusalem.
- Yadin, Y. et al. (1960) *Hazor II*. Magnes Press: Jerusalem.
- Yadin, Y. et al. (1961) *Hazor III-IV*. Magnes Press: Jerusalem.
- Yadin, Y. (1963) *The Art of Warfare in Biblical Lands*. Weidenfeld and Nicolson: Jerusalem.
- Yadin, Y. (1993a) Hazor. *The New Encyclopedia of Archaeological Excavations in the Holy Land* 2, 594-603.
- Yadin, Y. (1993b) Megiddo. *The New Encyclopedia of Archaeological Excavations in the Holy Land* 3, 1003-1024.
- Yannai, E. (2000) A Late Bronze Age Tomb at Jatt. *'Atiqot* 39, 49-82.
- Yassine, K.N. (1974) City Planning of Tell el-'Ajjul. Reconstructed Plan: *Annual of the Department of Antiquities of Jordan* 19, 129-134.
- Zaccagnini, C. (1987) Ceremonial Exchange in the Near East During the Late 2nd Millenium B.C. Pp. 57-65 in M. Rowlands, M. Larsen, and K. Kristiansen (eds.) *Centre and Periphery in the Ancient World*. Cambridge University Press: Cambridge.

