

**Tel Anafa II, iii**

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**KELSEY MUSEUM OF THE UNIVERSITY OF MICHIGAN  
MUSEUM OF ART AND ARCHAEOLOGY OF  
THE UNIVERSITY OF MISSOURI-COLUMBIA**

# **TEL ANAFA II, iii**

**Decorative Wall Plaster, Objects of Personal  
Adornment and Glass Counters, Tools for  
Textile Manufacture and Miscellaneous Bone,  
Terracotta and Stone Figurines, Pre-Persian  
Pottery, Attic Pottery, and Medieval Pottery**

edited by

**Andrea M. Berlin and Sharon C. Herbert**

**KELSEY MUSEUM FIELDWORK SERIES**

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# CONTENTS

Preface . . . . .	vii
Summary of Occupation Sequence . . . . .	viii
Site Plan with Trenches . . . . .	ix
1 Wall Plaster and Stucco by Benton Kidd, with Catalogue Adapted from Robert L. Gordon, Jr. (1977) . . . . .	1
2 Personal Adornment: Glass, Stone, Bone, and Shell by Katherine A. Larson . . . . .	79
3 Glass Counters by Katherine A. Larson . . . . .	137
4 Tools for Textile Manufacture by Katherine A. Larson and Katherine M. Erdman . . . . .	145
Appendix: Catalogue of Miscellaneous Bone Objects by Katherine M. Erdman . . . . .	211
5 Terracotta and Stone Figurines by Adi Erlich . . . . .	217
6 Pottery of the Bronze and Iron Ages by William Dever and Ann Harrison . . . . .	261
7 The Attic Pottery by Ann Harrison and Andrea M. Berlin . . . . .	335
8 Medieval Ceramics by Adrian J. Boas . . . . .	359



## PREFACE

Tel Anafa II, iii comprises the last installment of final reports on the objects excavated at the site between 1968 and 1986 by the University of Missouri and the University of Michigan. It joins Tel Anafa II, i, in which the local and imported pottery of the Persian, Hellenistic, and Roman periods was presented, and Tel Anafa II, ii, which contained studies of the glass vessels, lamps, metal objects, and groundstone and other stone tools and vessels. Selected finds from all three object volumes are referenced by catalogue number in TA I, the overview of the occupation history, chronology, and stratigraphy of the site. The externally datable objects—coins and stamped amphora handles—were also published in TA I. In this current volume we present studies of all remaining categories of finds from the excavations: pottery of the Bronze and Iron Ages, imported Attic pottery, medieval pottery, jewelry of stone and glass, equipment related to textile manufacture, figurines, and, finally, the stucco wall decoration that inspired the name of the site’s main structure: the Late Hellenistic Stuccoed Building (LHSB).

The chapters included here represent many years of dedicated research, analysis, and writing. Some were completed quite a long time ago; others were finished more recently. As editors, we have worked to ensure a certain consistency of tone and presentation, but we have not brought bibliography up to the present moment for chapters turned in several years, even decades, ago.

With this final volume in the Tel Anafa series, it is now possible to take a comprehensive view of the movable goods and equipment that the site’s occupants made, acquired, and used over millennia. The chronological range extends from the Early Bronze Age through the medieval era, but as with other remains from the site, most pertain to the Late Hellenistic and Early Roman eras, which were the site’s best-preserved periods of occupation. While as archaeologists we are always aware of the fragility and incompleteness of the material record that comes into our hands, we are also always overwhelmed by the enormous amount that does remain—and impressed anew with the ability of physical artifacts to evoke for us living worlds. The spindle whorls, loom weights, and bone weaving tools evince long days of manual labor by residents. This view of working lives is balanced by many of the goods here and in the preceding studies that reflect delightful individual taste and choices—in interior décor, personal adornment, containers for perfume, and small decorative sculptures. The testimony provided by such remains contributes to one of the animating motives of archaeology: “to save from oblivion and all-erasing time . . . the fleetingness of human memory and . . . traditions [that] are in constant peril of being . . . extinguished” (Asheri 2007, 21).<sup>2</sup>

We are, once again, in debt to Lorene Sterner, who has overseen the amassing and organizing of myriad details. We are most grateful to Margaret Lourie, who interrupted a well-earned retirement to again apply her meticulous care in copyediting and setting the full manuscript. Finally, we extend heartfelt thanks to the authors of these wonderful studies for their patience, cooperation, and high standards.

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<sup>2</sup>In David Asheri, Alan Lloyd, and Aldo Corcella, *A Commentary on Herodotus Books I–IV*, ed. Oswyn Murray and Alfonso Moreno, trans. Barbara Graziosi, Matteo Rossetti, Carlotta Dus, and Vanessa Cazzato (Oxford: Oxford University Press, 2007).

## SUMMARY OF OCCUPATION SEQUENCE

Stratum	Date	Remains	Datable material
EB II	2900–2300 BCE	Flint knapping area to north	Pottery Dever/Harrison TA Vol. II, iii, PH 1–10  Canaanite blades TA I, i, Pl. 124b
EB IV	2300–2000 BCE	None	Pottery Dever/Harrison TA Vol. II, iii, PH 20–45
MB I–II	2000–1500 BCE	None	Pottery Dever/Harrison TA Vol. II, iii, PH 62–110
MB/LB I	1500–1400 BCE	Earlier pavement and walls on south slope	Pottery Dever/Harrison TA Vol. II, iii, PH 82, 86–89, 107, 111–127
LB II	1400–1200 BCE	Later pavement and houses on south slope	Pottery Dever/Harrison TA Vol. II, iii, PH 128–162
LB II/ IRON I		Damaged walls and debris on south slope	Pottery Dever/Harrison TA Vol. II, iii, PH 131–133, 140
IRON I	1200–1000 BCE	None	Pottery Dever/Harrison TA Vol. II, iii, PH 163–171
IRON IIA/B	1000–800 BCE	North enclosure wall	Pottery Dever/Harrison TA Vol. II, iii, PH 172–187
IRON IIC	800–586 BCE	None: occupation gap?	Pottery Dever/Harrison TA Vol. II, iii, PH 188–189
PERSIAN	538–332 BCE	None	Pottery Harrison TA Vol. II, iii, AW 1–40; Lamps Dobbins TA Vol. II, ii, L 3–19, 22–39; Glass Grose TA Vol. II, ii, G 1–6
HELL 1A	332–198 BCE	Scattered walls under LHSB and west annex	Coins Meshorer TA I, i, 1–18; SAHs Ariel/Finkielsztejn TA I, i, SAH 45, 70
HELL 1B	198–125 BCE	Scattered walls under LHSB and west annex	Coins Meshorer TA I, i, 19–37; SAHs Ariel/ Finkielsztejn TA I, i
HELL 2	125–75 BCE	LHSB, houses on south slope	Coins Meshorer TA I, i, 38–248; SAHs Ariel/Finkielsztejn TA I, i
SUBPHASE HELL 2A	125–? BCE	Initial construction of LHSB	ESA under floors, coin of Alexander Zebina Meshorer TA I, i, 100; Ariel Finkielsztejn TA I, i, SAH 65
SUBPHASE HELL 2B	?–98 BCE	Minor modifications to LHSB	Tyrian shekel 116/115 BCE Meshorer TA I, i, 205
SUBPHASE HELL 2C	98–75 BCE	Major modifications to LHSB; construction of northeast building and north colonnade	Coin of Sidon 98–97 BCE Meshorer TA I, i, 184
SUBPHASE HELL 2C+/ ROM 1	75–20 BCE?	“Windblown” layer debris	
ROM 1	Late 1st cen. BCE/ Early 1st cen. CE	Roman buildings 1–11	Coins Meshorer TA I, i, 121, 201, 249–256, 224, 225; Roman lamps Dobbins TA Vol. II, ii, L 285–406
SUBPHASE ROM 1A	Late 1st cen. BCE & early CE	Roman buildings 1–5	ESA in Roman shapes, Galilean cook ware, Roman lamps
SUBPHASE ROM 1B	Early 1st cen. CE	Roman buildings 6–11 and modifications to 1–5	Cypriot sigillata, pink ware
SUBPHASE ROM 1C	Early-mid 1st cen. CE	Wall thickenings, pavement	ESA SAM 14s
ROM 2	Late 1st–7th cen. CE	Tanur complex, burial	Mehsoror TA I, i, 257–259; ARS
ARABIC	9th–20th? cen. CE	7 one-room buildings, cemetery, watchtower	Khirbet Mafjar ware, lead glaze pottery
SUBPHASE ARABIC 1	9th–11th cen. CE	7 one-room buildings	Khirbet Mafjar ware, lead glaze pottery
SUBPHASE ARABIC 2	?	Cemetery	Ottoman coin Meshorer TA I, i, 260
SUBPHASE ARABIC 3	?	Bunker	Modern bullet casing





# 1. DECORATIVE WALL PLASTER

by **Benton Kidd,**

with Catalogue Adapted from  
**Robert L. Gordon, Jr. (1977)<sup>1</sup>**

<sup>1</sup>The report on the Anafa stucco is the culmination of a number of years of research and collaboration with many colleagues and scholars. Many generously shared information about Masonry Style stucco decoration and Hellenistic architecture in Egypt and the Levant: Emily Egan, Mosche Fischer, Jean-Baptiste Humbert, Heather Jackson, Anne Laidlaw, Jessica Nitschke, Patrizio Pensabene, Jacques Seigne, Marjorie Venit, Agata Villa, and Adi Ziv. I am also indebted to others for on-site help or with *in situ* comparanda. Many thanks to Fawwaz Al-Khraysheh, Gina Borromeo, Katharina Galor, and Ayda Naghawy, for their help in Jordan; in Alexandria, to Jean-Yves Empereur, Sahar Hamouda, Mervat Seif el-Din, the Alexandria Center for Hellenistic Studies, and the Graeco-Roman Museum. I also very cordially thank the staff of the Israel Antiquities Authority for their assistance with the Anafa stucco fragments stored at Beth Shemesh. Over time, many of my graduate research assistants also helped me keep my notes and unwieldy bibliography in order. For this I am grateful to Mary Conley, Lauren Disalvo, Olivia Fales, Ethan Gannaway, Kate Livingston, and Erin Walcek. Let me also sincerely thank Sharon Herbert and Andrea Berlin for their patience and careful editing, and Lorene Sterner for her archival information and competent design skills. Finally, I specially thank Jane Biers, who was among the original excavators of Tel Anafa and who convinced me to take on this project. She provided much invaluable advice along the way.





# CONTENTS

I	Introduction . . . . .	5
	Overview and Archaeological Context . . . . .	5
	Previous Research and Publication . . . . .	7
II	Reconstruction . . . . .	8
	The Plinth and Orthostates . . . . .	9
	The Stringcourse . . . . .	9
	The Isodomic Zone . . . . .	10
	The Large Corinthian Order . . . . .	10
	The Corinthian Entablature . . . . .	13
	The Doric Frieze . . . . .	14
	The Attic Zone . . . . .	14
	The Small Applied Pilasters and Colonnettes . . . . .	14
	The Lozenge Decoration inside the Upper Bays . . . . .	17
	The Moldings above the Attic . . . . .	18
	Ceiling Fragments . . . . .	18
III	Technical Considerations . . . . .	19
	Construction of the Plaster Elements . . . . .	19
	The Large Corinthian Order . . . . .	19
	The Moldings . . . . .	20
	The Attic Story . . . . .	20
	Literary and Archaeological Comparanda for Masonry Style Construction . . . . .	20
	Replastered and Repainted Elements . . . . .	22
	Gilding . . . . .	22
	Colors: Description and Chemical Analyses . . . . .	24
IV	The Wider Context of the Wall Decoration from the LHSB . . . . .	27
	The Masonry Style: Its Origins and Diffusion . . . . .	27
	The Masonry Style in Alexandria and the Hellenistic Levant . . . . .	29
	The Corinthian Order: Background and Levantine Context . . . . .	32
	The Masonry Style after the LHSB . . . . .	34
V	Catalogue . . . . .	35
	Orthostates, Stringcourse, and Isodomic Zone (WP 1–20) . . . . .	35
	Large Corinthian Order . . . . .	39
	White Fluted Shafts (WP 21–26) . . . . .	39
	Smooth Red Lower Shafts and Plugs (WP 27–30) . . . . .	40
	Bases of Large Columns (WP 31–33) . . . . .	41
	Astragals (WP 34–37) . . . . .	42
	Large Corinthian Capitals (WP 38–53) . . . . .	43

The Corinthian Entablature . . . . .	47
Drip Molding ( <b>WP 54–55</b> ) . . . . .	47
Dentil Frieze ( <b>WP 56–60</b> ) . . . . .	47
Sima ( <b>WP 61–68</b> ) . . . . .	48
The Doric Frieze ( <b>WP 69–70</b> ) . . . . .	50
Attic Zone . . . . .	50
Pilasters ( <b>WP 71–78</b> ) . . . . .	50
Colonnettes ( <b>WP 79–90</b> ) . . . . .	53
The Lozenge and Triangle Design ( <b>WP 91–112</b> ) . . . . .	55
The Attic Moldings and Frieze ( <b>WP 113–123</b> ) . . . . .	60
Miscellaneous Fragments Probably from the Attic Zone ( <b>WP 124–129</b> ) . . . . .	62
Replastered Elements ( <b>WP 130–132</b> ) . . . . .	63
Appendix: Limestone Architectural Elements . . . . .	64
Context Concordance . . . . .	65
Bibliography . . . . .	67

# I. INTRODUCTION

## OVERVIEW AND ARCHAEOLOGICAL CONTEXT

The elder Pliny marveled at the remarkable freshness of ancient paintings he saw in temples that were already roofless ruins by his time (35.17). Though he was undoubtedly looking at two-dimensional frescos, the ancient technique of molding and painting plaster is a marvelous one indeed. Diodorus (20.8) confirms its equation with the dwellings of the elite, while Pausanias indicates that it could easily be mistaken for stonework (8.22.7). This versatile and durable medium has come down to us in countless examples, from minute and tantalizing fragments to entire compositions of remarkable complexity. In the Graeco-Roman world, from the Late Classical period to the Late Empire and beyond, tombs, temples, civic buildings, palaces and villas of the elite were all embellished with painted plaster, either molded three-dimensionally to simulate stonework or rendered as two-dimensional scenes of pictorial illusionism.<sup>2</sup> Into the first of these colorful traditions, we can place some 1,000 polychromed and gilded fragments from the mural decoration of an unusual upper-floor room in the LHSB (Late Hellenistic Stuccoed Building) at Tel Anafa (figs. 1a and 1b). Though our evidence for Phoenician dwellings is scanty, we may infer that this ornately plastered room was either a dining or reception room and that its elaborate décor is evidence that the LHSB belonged to somebody of wealth and/or position, such as an official or well-connected merchant.

The great majority of wall plaster fragments were recovered from Room 10, in the southeastern corner of the LHSB, where they had fallen from a collapsed room above.<sup>3</sup> In the lowest level was an especially large fragment showing interlocking triangles (**WP 91**), along with mosaic tesserae, remnants of a floor that must have had large areas of white surrounding a central design of unknown subject. In the fill above was more plaster, tesserae, and fragments of a large red plaster column. Yet higher in the fill excavators found more of the same, along with red wall surfaces, large white plaster column fragments, small cyma-reversa moldings, and portions of an attic zone. Additional fragments with many of the same designs were also recovered from a Roman-period dump south of the LHSB, the residue of an episode of robbing ashlar for reuse and stripping off their plaster.<sup>4</sup> Other elements from both the collapse and the dump include large black panels with wide drafted margins, narrow strips imitating stone, yellow panels with drafted margins and banded borders, white panels with drafted margins, and painted Lesbian simas, one joining a panel decorated with a pattern of scallops, triangles, and other illegible designs.

All fragments belong to the decorative fashion known as Masonry Style plasterwork and represent at least four zones, including orthostates, a stringcourse, a course of pseudo-ashlar blocks, a large applied order, and an especially ornate attic with a smaller, more elaborate applied order (fig. 1a–b). These fragments are the subject of this chapter, and provide the evidence for the reconstruction of the decorated room in the LHSB's latest Hellenistic phase of occupation (ca. 100–75 BCE). While we offer a reconstruction of only one plastered wall, the number and variety of fragments indicate that at least two walls carried decoration. Indeed, on the basis of decorated rooms elsewhere as well as simple aesthetic probability, it is likely that all four of the room's walls were similarly adorned.

The decorated upstairs room was not the only place in the LHSB with plastered wall decoration. The central court, the northern forecourt after the remodeling phase, and two rooms of the bathing complex on the eastern side of the

<sup>2</sup> Scholars have used, sometimes interchangeably, a somewhat bewildering array of terms for the decoration of walls by means of plaster that has been molded and/or painted: wall painting, painted (or colored) stucco, painted (or colored) plaster, plaster decoration, molded plaster, stucco, fresco. Some of these terms are synonymous (e.g., wall plaster and stucco), while others denote objective differences, of which the most significant is plaster that has been molded in relief vs. flat painted walls that render the illusion of three-dimensional relief in two dimensions. The wall decoration from Tel Anafa is all in relief, molded in three dimensions. The most widely used term for such adornment is Masonry Style Stucco, and that is adopted here. In addition, stucco and wall plaster are used interchangeably.

<sup>3</sup> Herbert TA I, i, 60–61, and n. 104 for the list of fragments from this collapse.

<sup>4</sup> Herbert TA I, i, 117.



Yellow orthostate panel with adjoining red isodoma (WP 8).  
Figure 1a



Yellow orthostate panel with red borders and adjoining patterned stringcourse (WP 7).  
Figure 1b

court all yielded scant remains of Masonry Style plaster.<sup>5</sup> In the north room of the bath complex (Room 17), as well as on the north and east sides of the court, the plaster *in situ* on the wall reached to orthostate level (about 30 cm in the bath; about 1 m on the east side of the court).<sup>6</sup> These orthostates were red and incised with vertical margins.<sup>7</sup> The scheme above the orthostate zone is impossible to reconstruct, but it does not appear to have been as elaborate as the upstairs room.

The discovery of an elaborately decorated room on the LHSB's second floor is of great interest when considering the broader social and cultural context of the building's inhabitants. In Greece, Macedonia, and Asia Minor, such decorated rooms, whether for reception or dining, were generally located on the first floor. The best examples contemporary with the LHSB come from wealthy merchant houses on Delos, where broad rectangular dining rooms tend to be situated immediately off the central peristyle courtyard.<sup>8</sup> On the margins of the Hellenistic Mediterranean, however, house plans—even those with some of the accouterments of Mediterranean style—were not laid out in so open a manner. In the Hellenistic town of Maresha, with a mixed population of Idumeans and Sidonians, dining rooms

<sup>5</sup> Central court: Gordon 1977, 51–52. The northern forecourt: Herbert TA I, i, 81, pls. 49A, 53B, 54; the bath complex: 62–71. In addition, when the court was divided by north-south wall 2523 (in HELL 2C?), some of the plaster was destroyed as bits turned up in the fill by the bottom of the wall (Gordon 1977, 52).

<sup>6</sup> Bath complex: Herbert TA I, i, 64. Courtyard: Herbert TA I, i, 81.

<sup>7</sup> Gordon 1977, 51–52.

<sup>8</sup> Dunbabin 1998, 82–85.

were on the second floor, sheltered from easy view or access.<sup>9</sup> Second-floor dining rooms are a likelihood for Roman houses in North Africa, where a lingering Punic influence may have shaped the region's domestic architecture.<sup>10</sup> As for other cities of the Levantine Phoenician heartland, in addition to the evidence from Tel Anafa, there are remains from a Hellenistic complex in Beirut, which had elaborate plasterwork in at least one of its rooms.<sup>11</sup> These findings, tantalizing though admittedly scanty, may illustrate what the first-century CE Jerusalem native Josephus had in mind when he remarked that he admired the beauty of the houses in the Galilean village of Chabulon, which were "built in the style of those at Tyre, Sidon and Berytus" (*War* 2.504).

## PREVIOUS RESEARCH AND PUBLICATION

The material treated in this chapter formed the subject of a 1977 doctoral dissertation by Robert L. Gordon, Jr. Gordon was a graduate student of Saul Weinberg's at the University of Missouri–Columbia and was a supervisor under Weinberg at Tel Anafa when the stucco was excavated in 1968 and 1969.<sup>12</sup> Gordon worked with painstaking detail to understand and reconstruct the villa's original decoration from its extremely fragmented remains. At the time that he was pursuing this research, in the early–mid 1970s, there was very little comparative material from anywhere in the Levant, a situation that required Gordon to look widely throughout the Mediterranean world in order to put the finds from Tel Anafa into context. The scantiness of similar remains meant that Gordon was regularly thrown back on his own intuition in describing, linking, and reconstructing these finds, which he presented in the complex format of a fragment-by-fragment catalogue raisonné.

Gordon's identifications, ideas, and reconstructions underpin the present study. The catalogue that follows the text is based directly on that from his dissertation, although it is here rearranged, edited for clarity, and substantially shortened. The text of this chapter, however, is the product of much new research, thinking, and writing. In those places where my ideas follow those of Gordon's, a reference to his dissertation is provided in the footnotes.

In the forty-plus years since Gordon completed his dissertation, our understanding of Levantine culture and society has changed substantially, and our knowledge of interior decoration has grown exponentially. And yet, amazingly, there is still nothing quite like the interior decoration from this private villa in the Hula Valley of Israel. Following the reconstruction, below, is a discussion of the wider comparative context, technical analyses of the plastering, gilding, and pigments, and a detailed catalogue of the fragments.

<sup>9</sup> Kloner 1996, 20–21.

<sup>10</sup> Carucci 2007, 99–100; Daniels 1995, 90. Elsewhere on Phoenician/Punic sites, we have little evidence. Markoe (2000, 74–76) says Phoenician houses had "no separate dining facility" and that families must have eaten in the court. He gives no justification for this assumption, however, and does not consider the possibility of upper floors, except for bedrooms. If we can believe Diodoros's account (14.51) of the assault on Phoenician Motya by Dionysius of Syracuse in 397 BCE, there were six-story houses, though these may have been multi-family dwellings.

<sup>11</sup> Aubert 2001–2002, photo 3; Aubert and Eristov 2001, 211–214 and pl. XXXIX.2–4.

<sup>12</sup> Gordon's debt to Weinberg, and the intensity of his love for this material, is best seen in his acknowledgments, which in their entirety read as follows: "My thanks to Dr. Saul S. Weinberg, who knew that the stucco itself would convince me."

## II. RECONSTRUCTION

The jumble of fragments from the two main plaster deposits (Room 10 and the Roman dump) is such that we will never have a precise reconstruction of the elaborate scheme that decorated the walls of the collapsed upper-floor room. It seems probable, however, that most if not all of the fragments that collapsed into Room 10 did belong to a single room. As noted above, many of these fragments match others found in the Roman dump, where plaster was deposited after it was stripped from ashlar retrieved by later builders. Fragments of other designs come from the dump only, though this need not mean that these did not originate from the collapsed upper room.



Reconstruction of the decorated plaster of the LHSB at Tel Anafa (AutoCAD: Ahmed Alawadhi).

Figure 2

The reconstruction offered here is based on Gordon's scheme with some alterations and relies on remains from both deposits (fig. 2).<sup>13</sup> It is admittedly conjectural, though some details are more certain than others. We here reconstruct only one wall, though, as noted above, it is likely that all four of the room's walls were similarly adorned. The walls carried at least four, and possibly five, zones. There may have been a plinth along the bottom. There certainly was an orthostate zone, a stringcourse, an isodomic zone of pseudo-ashlar blocks, and an ornate attic. There were also two levels of applied engaged Corinthian columns, a large set from the floor to the top of the isodomic course, and a small set that alternated with fluted engaged pilasters along the attic level.

<sup>13</sup> Gordon 1977, ch. 4. See also Kidd 2015, fig. 3, for an earlier publication of the new reconstruction included here.

## THE PLINTH AND ORTHOSTATES

We reconstruct a black plinth as the room's lowest course. On the evidence of some white mosaic tesserae that show evidence of meeting a black wall, it is clear that at least some of the wall's lowest level was colored in black. This could have comprised either black orthostates, fragments of which were found (**WP 1–5**), or the single narrow black plinth reconstructed here.<sup>14</sup> Admittedly, the existence of a plinth in the upstairs room is uncertain as no fragments certainly belonging to a plinth were found. We note, however, that a trace of a plinth was preserved *in situ* on the north wall of the court, and while this need not imply that there were plinths elsewhere in the house, it seems reasonable to postulate that the builders sought consistency.<sup>15</sup>

Orthostate panels variously colored in black, red, and yellow created an alternating color scheme along the lower wall.<sup>16</sup> The existence of black orthostates is certain on the basis of several fragments whose borders are too wide and central panels too high to be isodomic panels (**WP 2–4**); both the orthostate panels and the isodomic panels had faux-drafted margins, but the depth of relief is greater on the orthostates than on the isodomic panels. The orthostate panels vary in design. Some have articulated margins, while others do not; some have sections raised in relief; some do not. The restored height of the orthostates is 1.2 m; the width of the individual panels ranges from 1.08 to 1.15 m.

Red orthostates are indicated by one fragment of black panel with a red return (**WP 1**), along with several fragments of yellow and black orthostates with adjacent red borders (**WP 6–7**). Yellow panels in this zone are attested by two fragments that are attached to a stringcourse (**WP 7–8**). The yellow panels must be interstitial; they are extremely narrow, as seen by the one with a fully preserved width of 0.50 m (**WP 7**).<sup>17</sup> Some of these orthostates may have projected farther than others since returns crown some fragments (e.g., **WP 1**). The combination of flat and molded panels is not unusual.<sup>18</sup>

There remain also two orthostate panels that do not match the above-described fragments in design. One shows the corners of two yellow panels with snap-line borders (**WP 9**); a second shows the corners of two non-relief red panels separated by a white band (**WP 10**). Their placement is uncertain. It is possible that the scheme reconstructed here repeated on all four walls but with minor variations from wall to wall; this might account for some of the more problematic fragments.

## THE STRINGCOURSE

Attached to the black, yellow, and red orthostate panels were stringcourse panels, decorative friezes that could be figural or painted to resemble stone and/or other patterns. Fragments attached to black and yellow orthostate panels (**WP 5**, **WP 7**, **WP 14**) show a brecciated pattern, variously with black and pink lines over a yellow and white background or yellow and green spots and veins of dark red on a dark rose background (**WP 13–16**). Another fragment (**WP 17**) has red and green wavy lines on a white background, probably inspired by alabaster/onyx, though not imitating the actual color. A third design has a lattice composed of mostly green and black squares with black outlines

<sup>14</sup> Plinths could be eliminated. Examples of the orthostate zone sitting directly on the floor without a plinth occur at the Hieron at Samothrace (Lehmann 1969, pl. CVI), in Tomb I, Room 1 of the Anfushy Necropolis *in situ* in Alexandria (Venit 2002, pl. 1; the main vaulted chamber of Tomb 5 is probably the same, though it has been submerged for some time up to the isodome level), at the administrative center at Tel Kedesh (Berlin and Herbert 2012), and in Cubiculum C of the House of the Ship Europa *in situ* at Pompeii. Where the plinth is preserved, it is usually low, like the equivalent of the baseboard of a modern house, and colored variously, usually black or white or, more rarely, red or yellow. For example: Pergamon (white) in Kawerau and Wiegand 1930, abb. 62; Amphipolis (black) in Ginouvès et al. 1994, ill. 93; Ammoi/Paphos (black) in Młynarczyk 1990, pl. XL, no. 78. Red plinths occur at Jebel Khalid (Jackson 2009, fig. 16) and on Delos (House of the Masks, *in situ*). Priene's House 32 had a very unusual yellow plinth (Stefani 2000, fig. 133).

<sup>15</sup> Gordon 1977, 51.

<sup>16</sup> A similar alternating color scheme in the orthostate course appears in the House of the Painted Frieze at Jebel Khalid (Jackson 2009, fig. 16) and in the Hellenistic naos at Jerash (Eristov, Seigne, et al. 2003, 33). Later we also see alternately colored orthostates at Herod's palaces at Masada and Jericho (Rozenberg 2010a, figs. 14–15). Gordon may not have postulated an alternating color scheme because the material from these sites was published after his dissertation was written.

<sup>17</sup> Compare the width of these at Jebel Khalid (House of the Painted Frieze: 1.2–1.3 m) and Jerash (Hellenistic naos: ca. .75 m). Another important analogue comes from Wadi Ramm in Jordan (temple: ca. .75 m). The Wadi Ramm plaster is no longer *in situ*. See Savignac and Horsfield 1935 (when plaster was first recorded) and Kirkbride 1960.

<sup>18</sup> Gordon 1977, 53.

(**WP 18**, **WP 130–131**). Of the above fragments, **WP 5** and **WP 15** were found in the collapsed debris in Room 10; the remainder come from the Roman dump.

The upper borders of **WP 13**, **WP 14**, and **WP 16** indicate that the brecciated design continued onto the next block above. This suggests either a double row for the stringcourse or possibly that the pattern extended onto the borders but then stopped and did not continue onto the row above. In addition, a fragment of a two-dimensional, painted egg-and-dart may have bordered one of the stringcourses.<sup>19</sup> The fragment shows a pink fillet below which is painted a black egg-and-dart on a white ground (**WP 19**). Considering all of the evidence, we reconstruct a double-rowed stringcourse, with the bottom row alternating between red and faux stonework panels and the upper row comprising only the brecciated pattern. Since there is only a single fragment of the painted egg-and-dart, it is not included in the reconstruction.

The two fragments depicting lattice designs are also presumably from a stringcourse (**WP 130–131**; see also **WP 18**). As they clearly do not match the faux-stonework design of the above-described fragments, these may have been part of the decoration from other walls in this room, from another room altogether, or remnants from an earlier phase of decoration (as might be suggested by all the lattice fragments).

### THE ISODOMIC ZONE

Above the stringcourse is a zone of isodomic “ashlar” panels, a typical arrangement for Masonry Style walls. All are rectangular in shape with centers in relief that give the appearance of drafted margins 2.0–2.5 cm in width. Their borders are smaller and the relief centers slightly lower than those panels that represented orthostates. We can be certain that the rows of isodomic panels were colored red, yellow, white, and black since sections of these are preserved (e.g., **WP 8**, **WP 11**, **WP 12**, and **WP 20**). Their exact placement relative to one another is somewhat speculative, though one yellow fragment does preserve a trace of red on its long side (**WP 12**), indicating alternating colors in at least one instance. On analogy with other houses from the period, particularly on Delos, it seems logical to suggest that red and yellow isodomies were the most dominant.<sup>20</sup> Placement of the black panels is necessarily guesswork. Here we have restored them as a single row at the top of the zone. The upper portions of the large Corinthian columns reached to this point; black panels would have made a dramatic backdrop for the gilded capitals, setting them off and allowing viewers to better appreciate their detail. In addition, an upper black row would form a visual halt to this zone and create an emphatic ground line for the cornice above, whereas placement of a black row elsewhere in the wall would seem obtrusive. Finally an alternating course of yellow and white has been placed below the black row, though its placement could conceivably have been elsewhere in the wall. White panels would seem to show off better in alternation with another color rather than as a single monochromatic row, which might appear somewhat glaring. As for the dimensions of this zone, the usual number of courses is seven. Based on the preserved fragments, we can estimate a height of about 27 cm for each row of isodomic panels, including each block plus its borders. Seven such rows would make this zone just over 2 m in height (as Gordon reconstructed).

### THE LARGE CORINTHIAN ORDER

Numerous fragments of large engaged Corinthian columns were recovered from the debris in Room 10, enough to reconstruct an order that ran across at least two of the walls.<sup>21</sup> These were undoubtedly engaged columns and must have separated the lower portion of the wall into bays; two fragments appear to be from the corner of a room (**WP 25–26**).

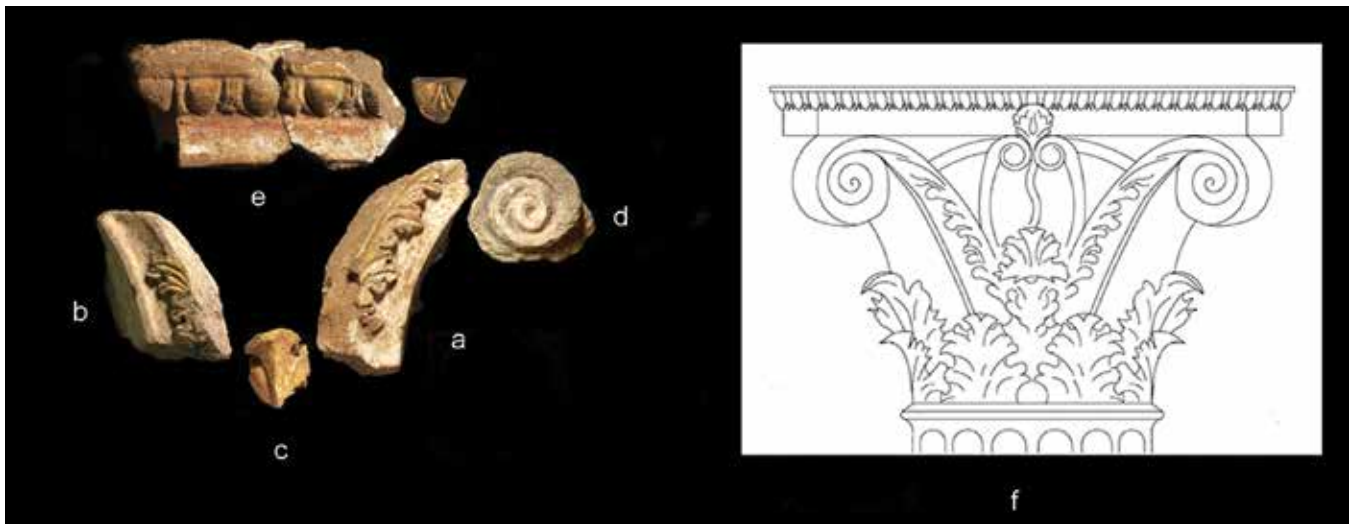
The columns included both fluted and unfluted portions. Four sizeable fragments of large fluted white shafts were found (**WP 21**, **WP 25–26**), with cores of plaster mixed with rough pieces of limestone (up to 20 cm long). These fragments have the typical flattened arrises of the Ionic and Corinthian orders and carry six flutes each. Other fragments of the large shafts include **WP 22–24**.

<sup>19</sup> Such borders are known from the Delian houses. One can be seen *in situ* at the House of the Inopos.

<sup>20</sup> Alternating colors in the same row are known on walls of other houses of this region and period, e.g., the Petit Serail building, Beirut (Aubert and Eristov 2001, pl. XXXIX, fig. 4) and the House of the Painted Frieze, Jebel Khalid (Jackson 2009, fig. 16).

<sup>21</sup> Gordon 1977, 93.





Polychrome, gilded fragments of a large Corinthian capital (a: **WP 39**, b: **WP 41**, c: **WP 50**, d: **WP 42**, e: **WP 43**, f: reconstruction of capital [redrawn after R. Gordon]).

Figure 3

Three fragments of unfluted quarter column shafts were found; these come from the columns' lower thirds (**WP 27–29**). Their construction is the same as that of the fluted shaft fragments, and the curvature and cross section of **WP 29** match those of the upper fluted shaft fragment **WP 21**. Smooth lower column sections, painted red, seem to have occurred with some regularity in Hellenistic architectural décor.<sup>22</sup> The red lower third of the large columns is not shown in the reconstruction (see fig. 2).

Three base fragments were recovered (**WP 31–33**; see fig. 4a). The largest, **WP 31**, is a limestone torus and fillet fragment coated with plaster. In Masonry Style wall plaster from this period, when the columnar order was large, it is not uncommon to use some stone elements, which were then refined and “fleshed out” in plaster.<sup>23</sup> The three base fragments come from the same deposit as the plaster and have commensurate sizes, proportions, and coloring, which supports associating them together.

The torus and fillet fragment **WP 31** and lower torus fragment **WP 32** could be interpreted as, respectively, the upper and lower torus of an Attic-Ionic base. The remaining base fragment, **WP 33**, is a tall fillet whose proportions do not match the normal Attic-Ionic base. It was, however, found in the same area as the pieces of **WP 32**, and both share the same qualities of attachment, finish, and color. For these reasons, we tentatively take **WP 33** to be a part of a tall fillet, which was attached to the top of the upper torus, or more likely the lower torus, of an engaged column base.

The astragals at the tops of the shafts (**WP 34–37**) were added over the rough pointed fluting of the shaft core. The profile of the astragals is simply modeled in a half-round style, perhaps including a smaller fillet.

The fragments of large Corinthian capitals include a left corner volute and central helix (**WP 38**, **WP 41**), right corner volutes (**WP 39**, **WP 40**, **WP 42**), abacus fragments (**WP 43**, **WP 44**), and acanthus leaves (**WP 45–53**). These pieces can allow a fairly full reconstruction (fig. 3).

Enough leaf fragments are preserved (**WP 45–53**) to indicate that there were two tiers of acanthus and probably also axial leaves that rose between the central helices. It appears from **WP 45** that the lower corona leaves hugged the kalathos. The upper corona is represented by the lower leaf of **WP 53**; the leaf above that should be further foliage,

<sup>22</sup> The closest geographical parallel for the LHSB are the colored columns from Nabataean Wadi Ramm temple (Savignac and Horsfield 1935, fig. 6; Kidd 2015, fig. 7). On Delos, a column *in situ* from the House of the Trident preserves red plaster, while plaster remaining on the lower thirds of the columns of the Agora of the Italians is pinkish in color. At Herculaneum, the House of the Telephus Relief preserves bright red column plaster, though later in date.

<sup>23</sup> For example, the engaged order in the lower court of Herod's palace at Masada, *in situ*.

probably an axial leaf between the central helices (or, less likely, a calyx leaf). The leaves were crafted in high relief, with at least one upper leaf formed around a lead strut for support.

The leaf fragments allow the approximate height of this portion of the capital to be determined. **WP 45–47**, which are all the same size, represent part of the thick central rib of several leaves. **WP 50–53** reveal the general form and size of the leaf tips. Combining these parts results in a leaf height of not less than 7 cm. By filling in the gaps, we can posit a maximum height of about 12 cm.

The acanthus fragments divide themselves into two groups. The leaf surfaces of **WP 45**, **WP 52**, and **WP 53** lie in one plane, together with their central ribs. The surfaces of **WP 46–47** and **WP 50–51** recede on either side of the projecting central rib. This indicates that the first group were the leaves near the median line of the capitals that hugged the kalathos. Their full decorative effect could be obtained without strong relief. By contrast, the leaves near the wall on either side had to project away from the bell to give the effect of relief and depth in the profile of the corona.

From the relations between the leaves and the fluting evident on **WP 45**, the horizontal spacing of the leaves can be understood. This fragment cannot fit next to the wall or next to the median line of the capital since, in either of these positions, some leaves would be abruptly cut off. Such a leaf could only have stood in the second flute from the wall on either side of the capital, with its edges spilling over into the adjoining flute spaces. The rib does not fall at the center of its flute but well to the left of center. If this piece came from the left side of a capital, there would be room for only five corona leaves in the quarter-capital design—two lower leaves and three upper leaves. If it came from the right side, then the rib lay closer to the median line of the capital. Regular lateral spacing of the leaves would then make room for two further lower leaves next to the wall on either side. Unless the leaves were very broad, the five-leaf reconstruction would leave large spaces between the lower leaves. A seven-leaf reconstruction would still show the ribs of the upper leaves between the lower leaves. With **WP 45** assigned to the lower tier, an axial leaf would arise at the median line, between the central helices, and two at the sides under the stalks of the corner volutes. This arrangement then conforms to the normal arrangement of leaves on Corinthian capitals.

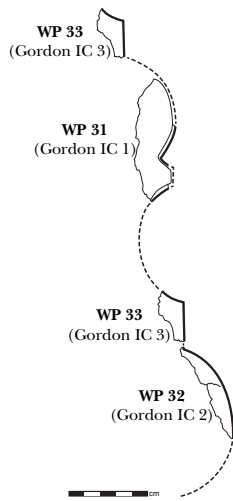
One problem in the reconstruction is the absence of evidence for cauliculi, the fluted stem from which the volutes “grow.” While no fragments of these are preserved, some fragments could possibly represent calyces, the small leaves that spring off the tops of cauliculi. Although **WP 85** shows the volute and helix stalk springing from behind a leaf, the leaf’s overfall seems more typical of one in the upper corona, rather than a calyx from a cauliculus. The foliage attached to the acanthus tip on **WP 53** from a large capital might also be interpreted as part of a calyx, but its position is much more typical of an axial leaf, rising between the helices as we have shown in the reconstruction. This suggests that the large stucco capitals did not have cauliculi (see reconstruction); if they did, they must have been extremely short to fit on our squat capitals. Gordon believed some of the acanthus fragments could be identified as calyces (e.g., **WP 90**).

The central helices are simple arcs that curve inward and terminate in a flat eye. On the volute ribs, a string of acanthus leaves grows up the back; this is perhaps the most unusual aspect of these capitals. Though gilt is not preserved, traces of yellow iron oxide paint on the relief parts of the capitals were probably a substratum for gilt. It would be odd if the details of these capitals were only highlighted with paint, when the smaller capitals were gilded. The abaci were molded with an egg-and-dart, and colored bands were located on a fascia below the molding. This combination of an egg-and-dart on the abacus and leaves growing on the volute spine is unusual. Though there are no precise parallels for this combination of elements, we place these into context below.

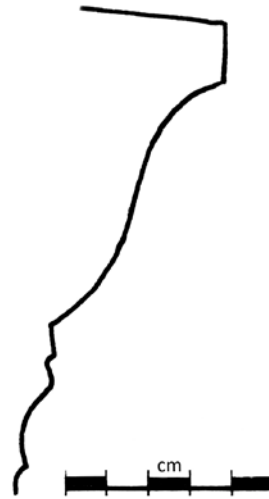
At the top, the helix projected slightly more from the kalathos than it did at the bottom. A “ghost” along the left edge and top shows that there was an arced rib, now lost, which met that of the corner volute. There are traces of pink paint on the helix and yellow at its right edge. The space to the right was pink to its right edge, where another “ghost” appears at the mid-line of the capital, apparently where the fleuron stem was attached. Like other areas of the décor, such as the gilded dentils and small Corinthian capitals, pink probably colored the negative space of the capitals.

Estimating the height of the wall at ca. 4 m, these capitals must have been about 25–27 cm tall. They are rather squat, due to the volutes beginning close together at the bottom of the kalathos and slanting outward at an extreme angle.

As for the full height of the columns plus their capitals, a rough estimate can be calculated. White fluted shaft fragment **WP 21** and red unfluted shaft fragment **WP 27** give the best information. They seem to have come from the same column, as they were found in the dump and the discrepancies in their thickness from left to right are the same. When their wall surfaces are aligned on a flat surface, their decorated surfaces also align. The upper, fluted fragment (**WP 21**) is fragmentary; at 0.54 m, only its bottom portion is preserved. The diameter of this section diminishes at a rate of a little more than one percent of the radius for the given length. The missing upper portion must have diminished



Reconstruction of  
large quarter-column  
base (R. Gordon).  
Figure 4a



Reconstruction of large  
sima with cyma recta  
profile (R. Gordon).  
Figure 4b

much more rapidly. The lower portion (**WP 27**), also only partially preserved at 0.26 m, does not diminish at all from bottom to top. Christoph Börker has published data on numerous examples of partially unfluted columns.<sup>24</sup> He shows that the height of the unfluted portion varies from one-third to nearly one-half of the total column height and notes that the height of the unfluted portion can be estimated as the shoulder height of a man, or greater where the columns are so tall that this estimate would amount to less than one-third of the total column height.<sup>25</sup> Applying this rule of thumb, we estimate that the unfluted portion of our columns together with the bases had a height of about 1.25–1.50 m. The estimate of the total column height then falls between 3.25 and 4.25 m. Considering that the apparent lower diameter of these columns was less than 30 cm and the room small for such columns, we accept the minimum estimates.

Including the ca. 1 m high orthostate course and the ca. 2 m of the isodomic zone, the height of the wall up to the attic would be about 3.25 m, which would provide the columns with an approximate height to lower diameter ratio of 10.8:1. This is appropriate for Corinthian columns, which typically had a height to lower diameter ratio of about 10–11:1.

## THE CORINTHIAN ENTABLATURE

Atop the columns in the standard Corinthian order there was typically a three-part entablature: at the bottom, an architrave comprised of three stepped fasciae; a frieze; and, at the top, a cornice that generally included large and small cyma recta and/or sima moldings. No stepped fragments for fasciae were found, but numerous fragments attest to other portions of this arrangement. These consist of the following:

- two sizeable fragments of a drip molding, painted white and without a trace of further decoration (**WP 54–55**);
- a large dentil course (max. H. 0.085 m), painted white on the face, with the sides and interstices painted pink/red (**WP 56–60**);<sup>26</sup>
- several fragments of a sima, in the form of a large cyma recta molding, on which rested the pilasters and colonnettes of the attic (**WP 61–68**; fig. 4b).

None of the moldings show dowel holes or interior matrices for attachment to the wall, but some do show impressions of reed bundles around which they were shaped on the wall (i.e., **WP 68**). On the basis of these fragments we reconstruct the entablature in three elements: a drip molding, a dentil course, and a projecting sima.

<sup>24</sup> Börker 1971, 39–48.

<sup>25</sup> Börker 1971, 40.

<sup>26</sup> Gordon 1977, 161, where he discusses the roundel at the top of the dentil course, which sets this molding apart from many second-century examples.

The large cyma molding was painted with a colorful Lesbian leaf design. The palmettes were yellow (originally gilded?) with red stems on a black background, while negative space (eyes) alternated between green and rose, surrounded by a painted shadow at the upper right that gives the illusion of depth. The bottom of this molding terminated in a red band.

### THE DORIC FRIEZE

Quite interesting are five Doric frieze fragments, all recovered from the collapsed debris of Room 10. The fragments are all white and preserve triglyphs, metopes, taenia, guttae, and part of the horizontal cornice above (**WP 69–70**; the remaining three are uncatalogued). These Doric elements are smaller than the fragments of the Corinthian order and are also far outnumbered by them. If a Doric frieze spanned a full wall or the entire room, we would expect more fragments, and at a larger scale. We tentatively suggest that the Doric frieze ran over a doorway and was perhaps supported by Corinthian shafts or pilasters since no fragments of Doric column shafts were recovered.<sup>27</sup>

### THE ATTIC ZONE

Above the large Corinthian order was an attic zone, the most flamboyant and unusual aspect of this room's décor, but one clearly supported by several aspects of the archaeological evidence.<sup>28</sup> First, the position of the elements in the collapse indicated that the attic zone had fallen from a higher position on the wall than the large Corinthian order and the elements of the lower zone. Second, the elements of the lower zone were much wider than those in the attic, indicating two different sets of proportions. Finally, there were found fragments of white pilasters and small gilded Corinthian half-columns (colonnettes). The sima of the large Corinthian order was adequate in width to support both, and the sima fragments had drops of paint on their upper surfaces, whose colors match those from the attic.<sup>29</sup> Given this evidence, particularly the presence of the small Corinthian order, there can be little doubt that these elements come from an attic.

### *THE SMALL APPLIED PILASTERS AND COLONNETTES*

White pilasters and gilded, engaged half-columns separated the upper zone into bays (pilaster: **WP 71–78**; colonnette: **WP 79–90**). Pilaster shaft fragments were numerous enough to account for four or more pilasters in this room. Pilasters and colonnettes may have alternated from bay to bay or from wall to wall; our reconstruction combines the two elements on one wall. The pilasters probably had no more than six flutes, while the colonnettes had more, possibly as many as ten flutes each.

Fragments of pilaster capitals (**WP 77–78**) show a molded, gilded egg-and-dart and a gilded leaf at the corners.<sup>30</sup> The recess below the egg-and-dart has a dark red band, then a projecting yellow fillet and a flat, light blue surface below. Above is a light blue cavetto of the same height capped by a white fillet; alternately the cavetto is bright pink (**WP 78**). A reconstruction is illustrated in figure 5.

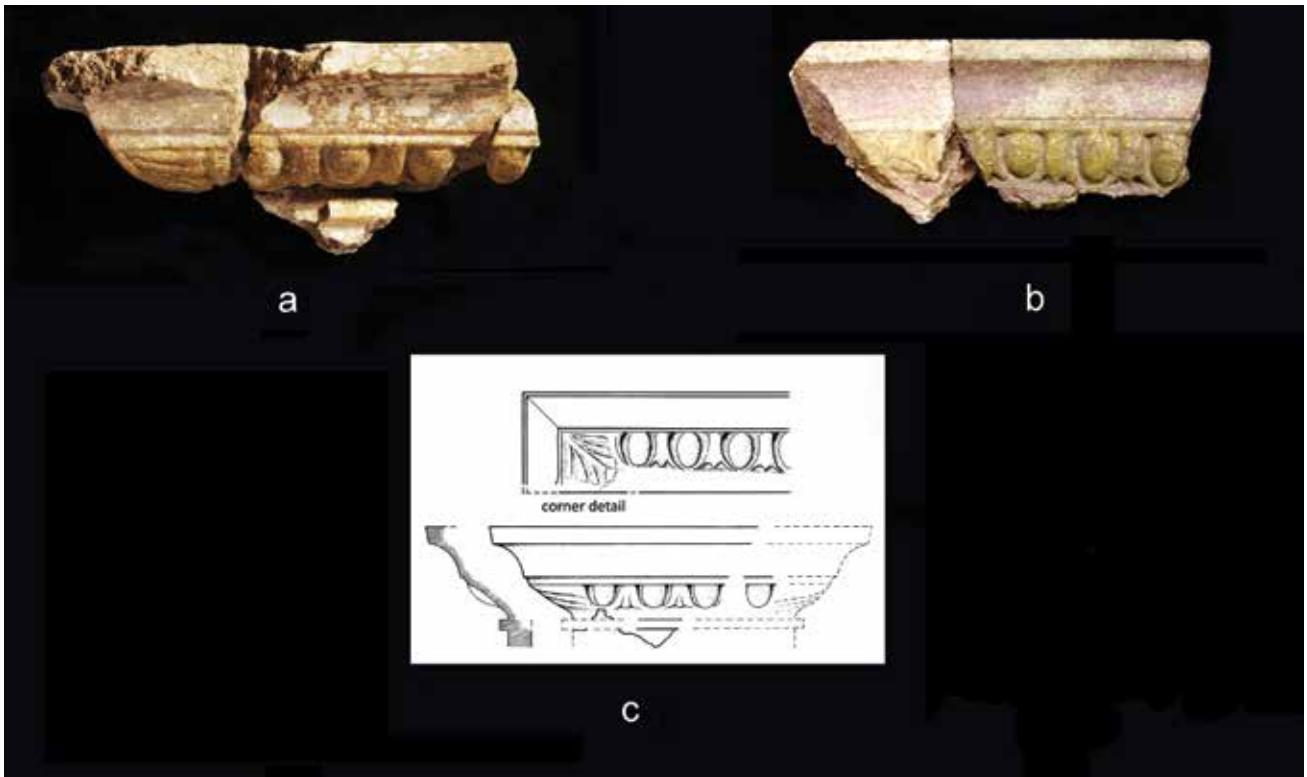
The small Corinthian colonnette capitals had squat proportions, just as those of the large Corinthian order. A comparison of available measurements allows the relative sizes and proportions of both the large and small Corinthian orders to be assessed (table 1). We cannot be certain, but these capitals must have been ca. 17 cm tall. The best preserved fragments (**WP 85**, **WP 88**, **WP 90**) give us some idea as to the appearance. **WP 85** preserves a leaf from the upper row of acanthus. From this leaf spring the volute and one of the central helices. The fleuron stem originally

<sup>27</sup> It is not unusual to find Doric friezes combined with the Corinthian order in the Hellenistic period, particularly on grave stelai (below, n. 149). Moreover, other combinations of the Doric with Ionic or newly invented elements are not uncommon in Alexandrian architecture. See Pensabene 1993, nos. 944, 955, etc.

<sup>28</sup> Gordon 1977, 227–228.

<sup>29</sup> Gordon 1977, 227.

<sup>30</sup> The form is not unusual. See Gordon 1977, 201.



Polychrome, gilded fragments of pilaster capital (a: **WP 77**, b: **WP 78**) and reconstruction of pilaster capital (redrawn after R. Gordon).  
Figure 5

	Shaft, max. width	H. of dentils	H. of abacus	H. of leaf	est. H. of capital
Large order	13.9 cm	6.4 cm	3.8 cm	ca. 5.3 cm*	25–27 cm
Small order	8.9 cm	4.1 cm	2.5 cm	4.5 cm	17 cm

\* A complete leaf from the large order is not preserved.

Comparison of elements in large and small Corinthian orders found at Tel Anafa.  
Table 1

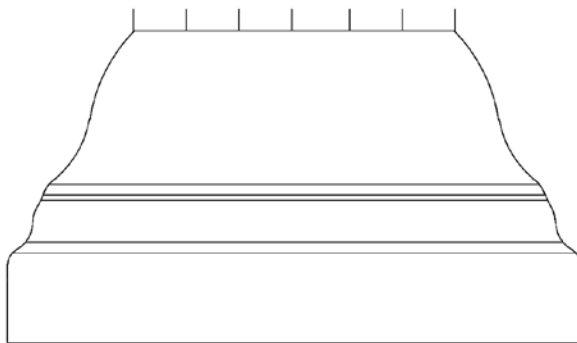
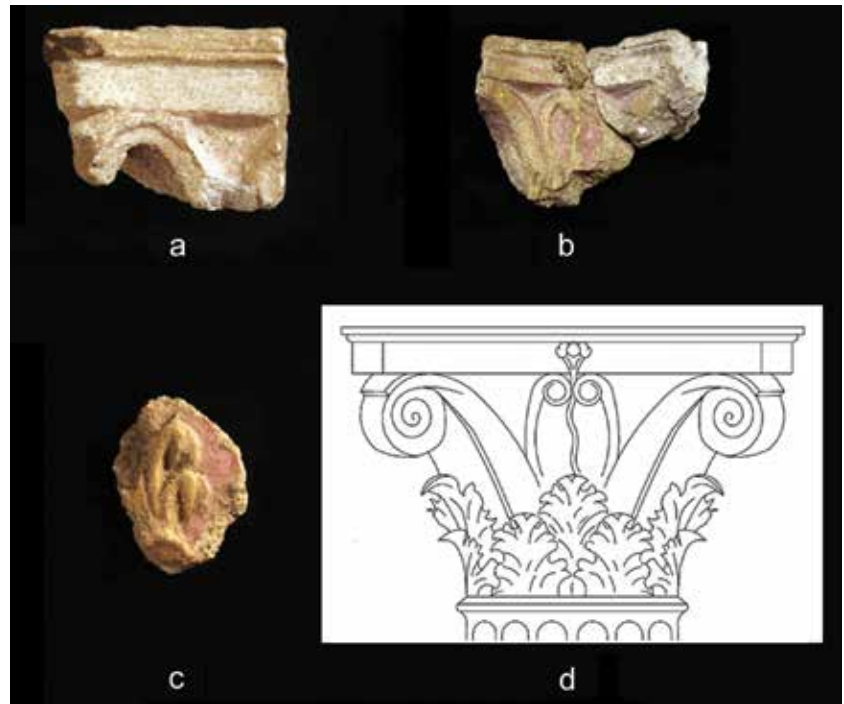
snaked its way down between the two helices to the upper row of leaves, where there is now a break. Though we can see the ribs of the leaves, there is none of the intricate notching or eyes seen on stone capitals. An ovolo and a fascia-like band crown the abacus. The reconstruction does not include cauliculi since no trace of this feature was found (fig. 6).<sup>31</sup> The small capitals' most striking characteristic was their coating of gilt. The majority of the decoration (acanthus leaves, fleuron and stem, volutes, helices, and abacus) appears to have been gilded, while recessed areas and undersides of the volutes were painted the bright rose used so frequently in the building's décor.

Indications from all fragments of the colonnettes suggest that the shafts tapered from a maximum width of 12 cm at the base to something between 7 and 9 cm at the top.

<sup>31</sup> Gordon was certain that some remaining leaf fragments formed part of the calyx leaves of cauliculi, and thus the small plaster capitals were of the "normal" variety (Gordon 1977, 222). See also Catalogue, **WP 90**.

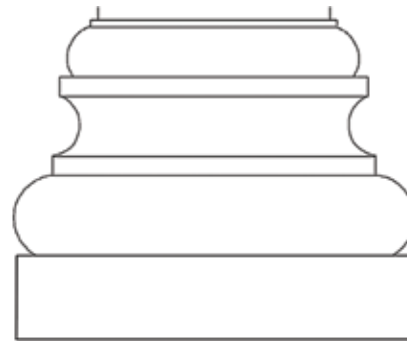
Polychrome, gilded fragments of Corinthian colonnette (a: **WP 88**, b: **WP 85**, c: uncatalogued fragment, d: reconstruction of small capital, redrawn after R. Gordon).

Figure 6



Reconstruction of a pilaster base  
(redrawn after R. Gordon).

Figure 7



Reconstruction of a small  
engaged Corinthian column base  
(redrawn after R. Gordon).

Figure 8

The cyma recta bases of the pilasters are quite unusual; this is a type more commonly found on statue bases (fig. 7).<sup>32</sup> The bases for the colonnettes were of the Attic-Ionic variety (torus-scotia-torus), even including the projecting fillets above and below the scotia (fig. 8). This form was widespread in Asia Minor and the east by the second century.<sup>33</sup> The plinths of pilaster **WP 71** and colonnettes **WP 79** and **WP 80** match in length and depth but differ in height. Though the differences may be attributed to carelessness, they were not likely appreciable from the floor.

<sup>32</sup> Gordon 1977, 201–203.

<sup>33</sup> Meritt 1969, 190–191.

*THE LOZENGE DECORATION INSIDE THE UPPER BAYS*

The existence of both white pilasters and gilded colonnettes indicates that the main attic zone was divided into bays. Based on **WP 74** and on limestone grille fragments recovered in the plaster deposit, these bays were adorned with a pattern of interlocking diamond-shaped lozenges and triangles as well as windows.<sup>34</sup> Over one hundred fragments can be associated with the lozenge decoration. The lozenges had relief centers and were surrounded by gilded egg-and-dart moldings. The central row of lozenges was green, based on the largest preserved piece (**WP 91**), which shows interlocking green lozenges surrounded by a gilded egg-and-dart and bordered by a pilaster fragment.<sup>35</sup> Side lozenges alternating in yellow ocher and rose, and with plain rather than gilded borders, include **WP 104–109** and **WP 112**.<sup>36</sup>

The preserved decoration on **WP 91–112** allows a reconstruction of the triangles and diamonds between the pilasters. The most complete triangle has the following approximate measurements: base 34 cm with angles of 73°; side 53 cm with angles of apex 34°; H. 50 cm. The apices of these triangles therefore reach nearly to the opposite end of the block (minus 4 cm). We reconstruct the diamonds with the more elaborate gilded moldings in the center of the wall and the triangles with simpler molded margins, such as **WP 104–106**, **WP 109**, **WP 112**, to the sides. This is supported by the fact that among the numerous fragments of gilded borders, none displays the acute angle necessary to complete the triangle, while several gilded corners have the obtuse angle required to form a diamond-lozenge.

The gilded egg-and-dart moldings consisted of a dark red margin on the outside, where the lozenges meet, the gilded section, and narrow bands of black, red, and pink within the relieved portion (**WP 97**, **WP 99–101**). These multi-banded borders in the lozenges' centers, which progressed from dark to light, gave the effect of *trompe-l'oeil* coffers. The gilded borders normally continued right around the wide corners of the lozenges, with apparently little regard to the exact placement of an "egg" at the corner. The narrow corners, by contrast, were finished in a sharp-spiked fleur-de-lis design (not shown in reconstruction). The triangular sections on the sides of the diamonds preserve both a yellow and a pink triangle, but we have no way of knowing exactly how these colors were disposed (either two yellow triangles with a pink one in the center or vice versa). With regard to the ocher and rose/pink lozenges mentioned above, which are not in relief, we reconstruct them on the side of the relief lozenges, but their precise integration with the other elements is unclear. It is also possible that they come from another wall in the room that varied the schema.

From the variation of the proportions of the lozenges we can calculate the lengths of the wall segments covered by this design. The most elongated form of the lozenge design is seen on **WP 91** with a preserved base-angle of about 73° for the triangle. The length of the triangle can be determined as being 50 cm. Doubling this, we get the length of the lozenge, and thus the length of the wall-segment covered: just 1 m. From the angle measurements, a height of 30.6 cm would be expected for the base of each triangle. From **WP 91**, however, we can see that this dimension actually varied up to 34 cm.

It must be the case that the height of this zone was fixed at an even multiple of 31–34 cm. With the height being consistent, the length of the wall segments covered by the design must have varied, producing the variations in the proportions of the preserved fragments. **WP 91** and other similar examples represent the widest of the wall segments involved, at about 1 m. The examples with narrower base angles and thus broader, shorter forms covered wall segments with lengths as short as 50 cm. The wall segments or sections of this zone apparently varied between these two values.

Separating each bay of lozenges were pilasters and colonnettes. Though our reconstruction shows colonnettes terminating the lozenge design, we have no evidence that any of these stood at the corners of the room. The design itself may have reached right to the corners of the room. In that case, we should find a lip or a butt end on the side of some molded triangle fragments, as on **WP 109**. Unfortunately, it is impossible to determine whether this fragment abutted the opposite wall or a colonnette.

Finally, there is evidence for windows in the uppermost portion of the attic zone. In addition to the limestone grille fragments found, there is **WP 74**, a block with a small pilaster attached to a short end, one broad surface painted light blue, and the other end being rough and unfinished. Both the unfinished end and the broad blue face had

<sup>34</sup> Gordon 1977, 58–59, 194–195.

<sup>35</sup> Colors probably alternated for these central lozenges. **WP 97–99** clearly show pink centers.

<sup>36</sup> Two replastered fragments with the lozenge-triangle design suggest that there was an earlier phase of this design (**WP 110–111**).

hardened, weathered surfaces, as if from being exposed. This appears to have been part of the jamb for an opening in the wall. The size of the pilaster suggests that the opening was for a window, a possibility that neatly explains the choice of light blue for the broad surface of the block. Azure blue paint was used widely to represent transparency or open space, as for example in the false windows in one hypogeum in the necropolis of Chatby in Alexandria.<sup>37</sup> The negative space of these grilles was painted azure blue to suggest they were open to the air.

#### *THE MOLDINGS ABOVE THE ATTIC*

A number of fragments come from the entablature of the attic:

- a small cyma reversa molding with a Lesbian leaf design (**WP 114–115, WP 117**);
- a small cyma reversa molding with a Lesbian leaf attached to a painted frieze with a whitish/light green/yellow-green scallop design on a green ground, some showing a faint border of triangles at the top (**WP 113, WP 116, WP 117–118**);
- fragments of the painted frieze with the scallop design only (**WP 119–120**);
- small dentil courses (max. H. 0.041 m), gilded on the face but with interstices painted rose (**WP 121–123**).

Whatever overall design embellished the frieze is unclear, and that shown in the reconstruction is guesswork. Something similar to our light green scallop design was found from Herod's palace at Jericho,<sup>38</sup> and it is on this design that our reconstruction is tentatively suggested.

The painted frieze fragments attached to a Lesbian sima require that the dentil course be placed at the top, a contrast to the lower order, and indicate the need for an intermediate molding between the dentils and the upper sima, as shown in the reconstruction. This arrangement can be paralleled in Alexandria and at several sites in North Africa.<sup>39</sup>

#### CEILING FRAGMENTS

Colored fragments in green, red, and black/blue were among the earliest to collapse from the upper-floor room into Room 10 below. Enough fragments remain to attest to a painted ceiling in the upper-floor room, but the design is now impossible to reconstruct.<sup>40</sup>

In sum, this reconstruction displays how much decorative flexibility and sheer glamour could be achieved within the formal order of the Masonry Style. While the relative scantiness of preserved domestic interiors in the Hellenistic Levant makes it difficult to assess just how innovative the LHSB design was, it is nonetheless clear that this room would have made an extraordinary impression on its viewers. The design's complexity, variety of colors and patterns, abundant use of gilding, impressive architectural order, detailed attic level, and additional ceiling decoration were intended to impress. These remains testify to the villa's owners' desire to make a significant aesthetic and cultural statement, as well as to display their wealth and cosmopolitan taste.

<sup>37</sup> Alexandria: Adriani 1961, C I–II, no. 79, p. 124 and pl. 45 fig. 171.

<sup>38</sup> Rozenberg 2000, pl. IV.

<sup>39</sup> On some architectural fragments from Alexandria, this sequence is used (Pensabene 1993, nos. 836, 838, 839, 936; though it is difficult to tell in some of these images, additional moldings appear to have come below the frieze, rather than the typical fasciae bands); another is illustrated in McKenzie 1990, pl. 215, d, though what came below the moldings is missing (presumably the frieze). We can also find this sequence used in various Roman buildings in North Africa, such as the Capitolium at Dougga, the lower level of the skene of the Sabratha theater, etc.

<sup>40</sup> Gordon 1977, pl. XV.



### III. TECHNICAL CONSIDERATIONS

In this section we examine our evidence for the construction of the plastered walls at Tel Anafa and compare it with literary and other archaeological evidence from related sites. We begin by noting that the walls carrying the plasterwork were composed of both limestone ashlar blocks and basalt boulders, as were the walls of the lower story (see, e.g., **WP 92**, a basalt block with stucco from the attic). In general, we suggest four layers of base plaster covered the walls themselves, including a final layer of marble plaster (fig. 9), though in some areas, less plaster was required given the height of the stone blocks (see below, attic section). While the various sections were still damp, a grid delineating the orthostates, isodomos, and attic design was produced using snaplines. Some sort of molds/stamps were perhaps used to produce the relief centers of the isodomos and lozenges. Once the base sections of the walls were completed, moldings, columns, pilasters, etc. were added.



Micro-photograph of plastered fragment showing four layers of deposition. Layer 4: coarse aggregate base layer; Layer 3: intermediate layer; Layer 2: intermediate layer; Layer 1: fine layer of marble plaster with crystals burnished by saw during cutting.

A layer of pink paint is at the top. Magnification  $\times 30$ .

Figure 9

#### CONSTRUCTION OF THE PLASTER ELEMENTS<sup>41</sup>

##### *THE LARGE CORINTHIAN ORDER*

The workmanship of the large Corinthian order was sturdy, with variations suggesting that several craftsmen took part. In part it was also somewhat makeshift. Regarding the column bases, the inner surfaces of the fragments show that they were attached to an uneven surface. The difference in profile between the core and the plaster surface of **WP 31** could mean either that the proportions were adjusted in the plastering or that the stone base had been damaged. Perhaps these stone bases had been reused from another context.

The fragments of column shafts display some unusual construction techniques. The core of the columns was of plaster with rough pieces of limestone (up to 20 cm long) used as a gross temper to prevent the core from shrinking. Next, the top and bottom levels of the fluting were determined. On the face of the plaster-limestone core, a second rough coat of plaster was tooled to form rough flutes beginning at a point above the astragal. Next, the lower, unfluted portion of the surface was finished. Two fine finishing coats of plaster were added to build up the final form of the shaft, with one coat carried up over the bottom of the fluting. Finally, the juncture between the fluted and unfluted parts of the shaft was cut off cleanly against the dry fluting; these formed the ends of the plug fragments (**WP 30** and two uncatalogued items). The curved unpainted surfaces of these plug fragments fit into the flutes of the white fluted shafts.

The fluting is arranged so that arrises lie on axis against the wall surfaces on either side of the column. The horizontal profile of the flutes is quite uneven compared to stone shafts, while the arris edges are rounded rather than

<sup>41</sup> This section on construction is closely adapted from Gordon 1977, 91–144.

sharp. The material itself works against precision, especially in the case of large-scale relief work, which had to be shaped in place. The visual effect is nevertheless crisp, and the flaws are not obvious except on close inspection.

The fluting seems to have been finished immediately after the construction of the core, while the astragals were added later, when the more delicate work on the capitals was done. The fluting at the top of the shaft (**WP 22**) fits cleanly against the back of the two-flute astragal fragment (**WP 36**). This is notable because such combinations between two successive construction stages of complex plaster work rarely yield clear joins since the first-stage work had often dried before the outer elements were applied.

The astragals at the tops of the shafts were added over the rough pointed fluting of the shaft core. The impressions of these rough flutes left half-round forms in the backs of the astragal fragments. Being very thin and delicate, the astragals broke apart with the flutes, and an upper portion of a flute still adheres to each astragal fragment.

The capitals are the most complex portions of the entire design, and both the quality of workmanship and the mode of fashioning varied among the preserved fragments. In terms of style, there are three types of acanthus leaves. Fragments **WP 45** and **WP 51** have very lightly modeled surfaces. **WP 50–53** have simple, precisely defined leaf segments divided by deep grooves and ridges. **WP 46–49** have prominent ridges decorated throughout with a series of perforations ranging from pinholes to crescent-shaped gouges. These variations might represent the work of different plasterers or, more likely, planned variation within one design. Preserved leaf tips do not contain perforations.

One of the gilded upper acanthus leaf fragments (**WP 53**) was formed around a lead strut for support. This is the only example of an armature in the plasterwork at Tel Anafa. Examples of similar lead strips have been found in other Hellenistic plaster Corinthian capitals from domestic contexts at Pergamon, Knidos, and Delos.<sup>42</sup>

#### *THE MOLDINGS*

Drip molding fragment **WP 54** and large sima molding **WP 61** originally contained bundles of reeds around which these elements were molded in order to reduce the weight. Some of the large iron nails found with the stucco may have been used to attach these moldings, though no holes remain. More likely, the nails were fixed in the wall and bundles of reeds were hung on them. Plaster was then built up on the reeds and profiles were shaped by wooden floats, while the plaster remained wet. When the molding was enlarged and replastered, the same process was repeated over the earlier molding. The variations in the profile occur because the floats were not held at a precisely fixed angle.

#### *THE ATTIC STORY*

On the basis of **WP 91**, a large limestone block carrying a piece of an attic pilaster and molded panel, it is possible to see further details of the base coats of plaster in this section. Coarse plaster with a matrix of stones and shells was spread over the wall to fill the depressions and build up an even surface. Where these depressions were more than 2 cm deep, sherds were embedded in the coarse plaster as filler (as at the end of this block opposite the fluting). Since the salient portions of the blocks were already at the desired surface, they received no coarse coat. On the coarse layer, a thin layer (7 mm) of fine plaster formed the basic surface for decoration. The design was mapped out with a pattern of snaplines while the plaster was still wet. With these lines as guides, relief portions were formed using the appropriate templates and stamps (i.e., egg-and-darts). Painting and gilding were applied after all the plasterwork had thoroughly dried.

Two diamond lozenge fragments show replastering, indicating that there was an earlier phase of this design (**WP 110–111**). Based on just these fragments, it seems that the earlier color scheme was more delicate; the later one, bolder in contrasts.

#### LITERARY AND ARCHAEOLOGICAL COMPARANDA FOR MASONRY STYLE CONSTRUCTION

Though commonplace, the preparation of Masonry Style walls in antiquity must have been time-consuming and expensive. The Roman architect Vitruvius describes the process and how surfaces of great brilliance and durability

<sup>42</sup> Pergamon: Kawerau and Wiegand 1930, 5 and fig. 64; Knidos: Love 1972, 398; Delos: Roux 1961, 361.

could be produced if proper technique was used (7.2–3). First the raw lime had to be slaked thoroughly so that it was rendered into a fine, smooth powder. It could then be mixed with water, and only when it clung to a trowel like glue was it thoroughly mixed and ready for application.

The process continued by gradually building up layers of plaster. Pliny suggested five (36.55), but Vitruvius believed in no fewer than six (7.2–3). Only with multiple layers could the wall be expected to maintain its structural integrity. The first three layers were mixed with a sand/gravel binder to increase stability and durability. Each was allowed to dry first before the next was added, and each was left with a rough surface to aid the adhesion of the next. The last three layers were to be composed of marble dust, though other substances such as calcite or alabaster dust might be substituted. This was mixed into a fine mortar so that the trowel came away clean from it rather than the mixture adhering as above. These final three layers were applied in successively thinner applications and while the previous layer was still damp. The last stage involved working over the surface with tools, polishing it to a glittering sheen, then painting it. Vitruvius (7.3.9) says that, if properly polished, fresco might be as reflective as a mirror.<sup>43</sup>

Pre-molded elements, such as moldings and capitals, could then be applied to the wall and held in position with a stay until dry or attached to pegs.<sup>44</sup> They could also be formed on the wall by building them up around form matrices. This was the procedure for the dentil frieze of the LHSB plaster. On some dentil fragments, there is a core form and a thin layer of plaster added over this to produce the final shape.<sup>45</sup> As we have already discussed, it is also evident that some of the LHSB moldings were shaped around bundles of reeds.

Floats for shaping such moldings on the wall are also known.<sup>46</sup> If pre-cast, such elements were usually made of quick-setting gypsum plaster (plaster of Paris), while other elements (i.e., walls and vaults) were done with lime plaster. Lime plaster remained damp for much longer and could be tooled on the wall. In general this was how the Romans made use of lime and gypsum plaster, but lime plaster might be used for casting, while gypsum plaster was used for walls in Egypt (and surely other places). Gypsum might also be combined with lime, and such a combination also yields a surface that remains workable for several hours.<sup>47</sup> In the LHSB plasterwork, simulated masonry with drafted edges was accomplished by using straight edges, snaplines, and stencils. In this manner lines (or other motifs) could be simply stamped into the wet plaster. For example, it is clear that a ridge of plaster was put down often for egg-and-darts, and the motif was impressed into the wet plaster. Precision varied, however, and the excess plaster was cleaned up much better in some examples. The quality at Tel Anafa is good, while the egg-and-darts at the roughly contemporary Hellenistic naos at Jerash are slipshod (cf. fig. 10a–b with **WP91**, **WP 97**, **WP 99**, and **WP 100**).<sup>48</sup>

Micro-photography of the LHSB's four-layer plaster technique also reveals that the paint was applied *a secco* since there is little absorption of the pigment into the plaster (see fig. 9). As for the recommendations of Vitruvius, six layers seem unlikely at the LHSB, and also uncommon elsewhere, at least according to surviving evidence. Some walls, such as those from the House of Livia in Rome, do show the six-layer technique, but most sites with well-preserved plaster show evidence of three or four layers, so that from the LHSB seems to have been standard practice. For example, at Hellenistic Jebel Khalid, there were probably four layers, while the walls of Herod's Third Palace at Jericho had three or four layers, including the upper layer composed of marble dust. Republican-period painting from Brescia shows three layers, while Campanian fragments in the Getty collection show both a five- and a three-layer technique. Roman painting fragments from the excavations of the "Southeast Building" at Corinth also show varying numbers of layers.<sup>49</sup>

<sup>43</sup> In baroque Italy, polishing was done with pumice using oil as a flux. See Beard 1983, 20.

<sup>44</sup> In his introduction to the *Lives of the Artists*, Vasari details similar procedures in the Renaissance, and evidence bears out these techniques in antiquity too. See Macle hose 1960, 170–172. On peg attachments, see Laidlaw 1985, pl. 35a.

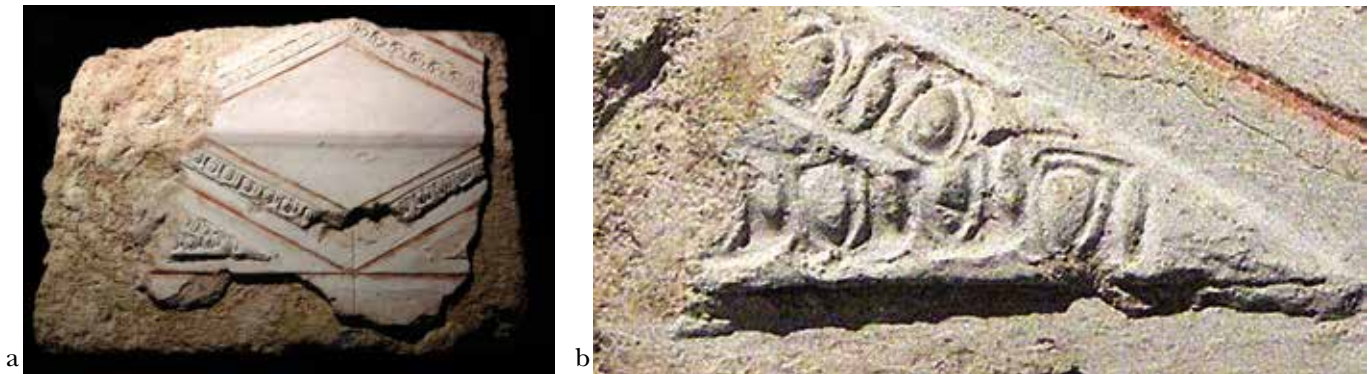
<sup>45</sup> It is also possible that the core dentils were the finished dentils of the earlier phase of decoration. See Gordon 1977, 156.

<sup>46</sup> On floats, see Ling 1976, fig. 346.

<sup>47</sup> Ling 1976, 209; Debevoise 1941, 49.

<sup>48</sup> Cf. Laidlaw 1985, pl. 61, from the temple of Apollo, Pompeii.

<sup>49</sup> Jericho: Rozenberg 1997, 63; Brescia: Bugini and Folli 1997, 97; Campanian fragments: Wallert and Elston 1997, 107; Corinth: Meggiolaro, Molin, Pappalardo, and Vergerio 1997, 121. The information on Jebel Khalid was provided by Heather Jackson via personal correspondence.



a: Panel with slipshod egg-and-dart molding from the Hellenistic Naos at Jerash;  
 b: detail of slipshod egg-and-dart molding from Jerash (photos: Benton Kidd).

Figure 10

### REPLASTERED AND REPAINTED ELEMENTS

We reiterate that a number of fragments show evidence of replastering, repainting, and decorative changes. The most notable are in the moldings. The fragments of the small cyma reversa molding, the sima (esp. **WP 63–65**), and the cornice were all attached directly to the face of an earlier cornice molding. The profile of the earlier molding cannot be reconstructed because the traces of it are difficult to follow and they are found at varying depths behind the later molding. The back of **WP 54** could represent two stages of construction (tidying up the profile where two molded portions did not meet correctly) but more likely indicates two distinct phases of decoration since the profile of the earlier molding is quite different from that of the larger, later one.

Colors were also redone for an overall bolder design.<sup>50</sup> Lozenges were given brighter colors (**WP 110–111**). Other elements, such as the lattice pattern stringcourse (**WP 130–131**)<sup>51</sup> and a white molding (**WP 132**) were replastered red. The brecciated stringcourse design (best represented by **WP 13**) was replastered with a marbled(?) design with varicolored splotches on yellow. This study reconstructs the earlier version of the wall plaster. Based on the few fragments with remnants of replastering, it seems safe to conclude that only certain elements were “updated” rather than the entire wall.

### GILDING

We know that every kind of surface, including plaster, wood, stone, ivory, terracotta, and metals, was gilded in antiquity. Plaster gilding probably appeared regularly in lavish public buildings or upscale private dwellings, as for example in the tomb of Eurydike in Macedonia.<sup>52</sup> Unfortunately, gilding is fragile and rarely survives; pillaging must also explain its conspicuous absence. One Pompeiian house, of Caecilius Iucundus, excavated in 1875, had details in two of its frescos picked out in gilt, but when the frescos were removed to Naples, the gilt was lost.<sup>53</sup> In the Levant or Egypt, few Hellenistic buildings preserve gilding.<sup>54</sup> One remarkable aspect of the fragments from the LHSB is the amount of gilt preserved, an abundance that may allow us to imagine what has been lost in other architecture.

For marble and materials other than metal, Pliny suggested using a suitable adhesive such as egg whites (33.20). The LHSB fragments show that gilt was laid on a clay substratum of yellow iron oxide, the top layer of which has

<sup>50</sup> Gordon 1977, 182–184.

<sup>51</sup> Gordon 1977, fig. 4, for reconstruction of the lattice.

<sup>52</sup> While most of the gilding in this tomb is on marble, gilt embellished plastered capitals. See Kottaridou 2006, 159; Kakoulli 2009, 60.

<sup>53</sup> See Clarke 1998, 155–156.

<sup>54</sup> At the “Governor’s Palace” at Jebel Khalid, a couple flakes of gilt were recovered from one room. There is no evidence, however, that these flakes once decorated plaster. See Clarke et al. 2002, 43. Gilded plaster from the Great Temple at Petra (Egan 2015, 121) postdates the LHSB, while an architectural fragment from Alexandria is not firmly dated (Kakoulli 2009, 60). It is interesting, however, that both of these examples again link Tel Anafia to architectural decoration in Nabataea and Alexandria.

formed a crust, probably from mixing with an adhesive (fig. 11).<sup>55</sup> The iron oxide may have aided adhesion but also served to even out cracks or fill small gaps in the gilt if pieces were lost over time. Even today, where the gilt has flaked off in small pieces, the absence is only discernible under a microscope. Given that the gilt was far above eye level in its original setting, it probably would not have been perceptible even if larger pieces were lost.



Micro-photograph of a colonette flute with gilding on a yellow iron oxide ground. Magnification ×30 (photo: Benton Kidd).

Figure 11

Color	Copper	Calcium	Iron	Mercury	Gold	Lead	Aluminum
gold (gilt)	765	420,862	143,752	25,339	66,523.00	426	18,620
red	452	575,614	251,375	130	0.12	44	117,204
yellow	109	605,460	124,653	298	0.40	111	12,789
black	52	644,887	40,163	428	10.00	813	86,868
white	22	743,161	13,727	325	0.24	51,371	53,970
green	154,360	168,685	93,251	1,649	0.14	3,566	58,925
pink1	189	424,424	15,211	1,433	2.00	317,782	99,223
pink2	165	431,558	12,119	5,021	2.00	323,989	97,586

Analyses of color pigments from the LHSB at Tel Anafa measured in PPM (parts per million).

Table 2

Surprisingly, chemical analysis showed very high levels of mercury in the gold (see table 2). In antiquity, mercury gilding utilizing an amalgam of mercury and gold was used for metal surfaces.<sup>56</sup> Heating caused evaporation of the mercury and thus adhesion of the gold. This process was generally confined to metals since other materials such as plaster could not be expected to withstand the thermal shock. The presence of mercury in the LHSB gilding is, therefore, unexpected. Perhaps the site’s artisans made the gold leaf to use on both metal and plaster at the LHSB

<sup>55</sup> Two examples of gilding in the University of Missouri Museum of Art and Archaeology also show gilt laid on a ground of yellow iron oxide. These objects are a terracotta Eros (81.2) from Myrina with gilt on the rib of the wings and terracotta appliques of griffins and Arimaspians from Tarentum (62.1.1–6). This may have been fairly standard practice on marble as well (Kakoulli 2009, 60, on Tomb of Eurydike throne). Red and black substrates are also known, each adding a different effect to the gilt’s overall appearance. See Jockey and Bourgeois 2005, 266. Kakoulli (2009, 60) describes the substrates as “mordants.”

<sup>56</sup> Sherlock 1976, 20; Oddy 2000, esp. 1–6.

and used the single process for efficiency. On the other hand, perhaps the presence of mercury suggests that the gilt was not made on site since mercury is not native to Israel and would have had to be imported. Despite its fragility, the gilt that adorned the plaster decoration in the LHSB may have been made elsewhere and brought specially to the site to complete the building's décor. With the exception of the evidence from the LHSB, mercuric oxide is not known in the Levant before the Herodian period, when it is also attested elsewhere in the Mediterranean.

#### COLORS: DESCRIPTION AND CHEMICAL ANALYSES

Ancient artisans used a variety of natural substances to produce the colors for plastered surfaces.<sup>57</sup> Initially, these colors were largely confined to red and yellow ochers, black, and white, a palette praised by Pliny (35.50). A predominantly tetrachrome palette is evident from the plastered building beneath the Stoa of Attalos II in the Athenian Agora, in a house at Kolophon, and in tombs at Olynthos, Pydna, and Alexandria.<sup>58</sup> In the Hellenistic era, this palette remained popular, as attested by the plaster from the House of the Painted Frieze at Jebel Khalid<sup>59</sup> and from many of the houses on Delos. At the same time, however, more unusual colors such as pink, green, and blue came to be used. There were blue orthostates in the Pergamene palace and the administrative center at Tel Kedesh, and both green and blue were prevalent in the stringcourse of the Hellenistic naos at Jerash and the Petit Serail building at Beirut.<sup>60</sup>

The owners of the LHSB commissioned an arrestingly vivid palette of yellow, red, black, blue, green, pink, and white, sometimes in dramatic combinations, as for example in the liberal use of green and pink in the lozenges and blue in the pilaster capitals. Recent studies of ancient stone sculpture also reveal the use of intense colors, as do surviving examples of painted terracotta figurines.<sup>61</sup> This evidence, and the vagaries of preservation, make it difficult to know whether visitors to the LHSB would have been taken aback by the variety of colors or taken it in stride.

The LHSB upper room's lower, orthostate panels were yellow, red, black, and white; these same colors appeared again in the isodomic block zone. Both yellow and red were made of earths colored by iron oxide; hydrated forms produced yellows and orangey reds, while anhydrous forms produced maroons. The yellow pigment was known as *ochra* (ocher); Vitruvius says that it was first obtained in the Laureion mines in Attica but was soon depleted (7.7.1), though the color's continued use indicates that it was found abundantly in many places. Reds were known as *sinopis* or *sinopia-rubrica*, from the town of Sinope on the Black Sea, which was famed for its red earth. Pliny identifies three shades of *Sinopis*: a light, a dark, and an intermediate (35.13). Other red varieties were also known, but evidence for their use has turned up mostly in pottery and terracottas.<sup>62</sup> Both red and yellow pigments only required grinding before use, and this must have furthered their popularity.

Pliny says that the best black paints were obtained from soot of burned wood, often pine, though some people made it from wine lees (35.25). He adds that the famous Polygnotos and Mikon extracted it from grape skins. White was chalk, a common calcium carbonate. It was called *paraetonium*, after the Egyptian site of Paraetonium near the present-day Marsa Matrûh, located close to the Egyptian–Libyan border, though other known sources were Cyrene and Crete (Pliny 35.18, Vitruvius 7.7.3). Its greasiness allowed it to be worked smoothly, and it was known for its exceptional tenacity in fresco. As alternatives to *paraetonium*, Pliny cites *melinum*, a white marl from Melos, and *cerussa*, a white lead concoction (35.19).

In the LHSB, green, blue, and pink brightened the traditional tetrachrome palette, most noticeably on the cyma moldings above the columns, the recessed areas of the Corinthian capitals, and the diamond-shaped lozeng-

<sup>57</sup> For general overview of ancient pigments in Israel, see Ilani and Porat 1993.

<sup>58</sup> Agora: orthostates, black; main zone, red; Kolophon, house: orthostates, white; main zone, red; Olynthos, chamber tomb: plinth, black; orthostates, white; main zone, red; upper zone, white; Pydna, chamber tomb: plinth, black; orthostates, white; main zone, red; Alexandria, Chatby Necropolis, hypogeum A: orthostates, yellow; main zone, red.

<sup>59</sup> Jackson 2009, fig. 16.

<sup>60</sup> Pergamon: Kawerau and Wiegand 1930, abb. 62; Beirut: Aubert and Eristov 2001, pl. XXXIX, fig. 4. The Tel Kedesh plaster is not yet published.

<sup>61</sup> For some recent examples, see Tiverios and Tsiafakis 2002, Friberg et al. 2004, and Panzanelli 2008.

<sup>62</sup> Madder root was frequently used on vases and small terracottas. For technical studies of these pigments on vases and terracottas, see Caley 1945, Farnsworth 1951, and Scott and Schilling 1991.



es.<sup>63</sup> Green could be produced by several sources, including compounds such as malachite and glauconite, green earths (*terra verde*), and a green chalk, the best of which came from Smyrna, according to Vitruvius (7.7.4). The color called *verdigris* by the Romans was copper oxide, which Vitruvius says could be produced by submerging copper strips in vinegar (7.12.1). Pink, which neither Pliny nor Vitruvius discusses, could have been regarded simply as a lighter shade of *Sinopis* or concocted by mixing red ochre and white.<sup>64</sup> Neither of these accounts for the pink found in the LHSB, however, which chemical analysis shows was something quite different. It is also quite a different color from the rusty reds produced by red ochers. Blues could be among the costliest of pigments. These were usually copper-based, and the famed “Egyptian blue” was a synthesis of materials, including copper and calcium (cuprorivaite). Vitruvius (7.11.1) provides a recipe, and a number of modern studies have focused on recreating the components.<sup>65</sup>

Seven samples from Tel Anafa were tested on a Thermo-Elemental Axiom ICP-mass spectrometer at the University of Missouri Research Reactor.<sup>66</sup> In this process a fragment of each plaster pigment was ablated by a pulsed laser, and the vaporized solid was sent into an inductively coupled plasma (ICP)-mass torch. The torch sustains argon plasma at 8000° C and thus can ionize samples injected into it. The samples were then sent into a magnetic-sector, where they were separated by mass and charge, ultimately determining elemental composition. Table 2 gives the breakdown of each substance from each pigment sample measured in PPM (parts per million). The results show both correlation and differences when compared to ancient sources and fresco analysis from other Greek and Roman sites.

Calcium produced the highest reading in all the samples since it is the signal from the plaster itself. The red and yellow samples show high levels of iron and are thus iron oxides, a result that corresponds to analyses of red plaster pigment from other Levantine sites such as Jerash, ‘Akko-Ptolemais, and Jericho.<sup>67</sup> The black must be carbon-based. The MURR spectrometer does not test for carbon specifically, but other likely candidates for black coloration such as manganese did not produce an appreciable signal and are therefore eliminated. White is clearly the calcium carbonate, or *paraetonium*, discussed earlier. Though all the colored samples had high readings in calcium because of the plaster, the white had the highest. It also had a rather high reading in lead (Pliny’s *cerussa*?), suggesting that it was a mixture of the two.

The green samples from the LHSB produced an extremely high copper signal, indicating *verdigris*, or copper oxide. At both ‘Akko-Ptolemais and Jericho, however, greens were made from green earths (celadonite and glauconite), while at Jerash glass powder composed the green pigment.<sup>68</sup> The liberal use of copper oxide at Tel Anafa is interesting; the closest such natural source was Cyprus.<sup>69</sup> The material’s foreign origin might also suggest that the site’s artisans were foreign as well.

Both pink samples (as well as the red samples) had lead as the dominant component, indicative of a lead base, but were also very high in aluminum. It is possible that kaolin, an aluminum-silicate, was an additional component. At Jericho, analyses have shown that pinks were made by heating kaolinite and goethite (an iron oxide).<sup>70</sup> It should be noted, however, that aluminum levels were high in all the samples tested, which might mean that it was present in the plaster itself or in the soil in which the samples were buried. Another possible clue to the composition of the pink pigments comes from the observation that one of the samples fluoresces rather brightly (fig. 12), a characteristic sometimes said to be an indicant of organic components such as the kermes insect.<sup>71</sup>

While one pink sample showed slight mercury enrichment, the other had higher iron enrichment, suggesting that

<sup>63</sup> Green is also evident on an earlier plaster scheme from the LHSB that was later plastered over.

<sup>64</sup> Béarat (1997, 29) discusses analyses of pink from various Roman-era plaster from Switzerland and Pompeii.

<sup>65</sup> Kakoulli 2009, ch. 6.

<sup>66</sup> I thank Hector Neff, former Senior Research Scientist at the University of Missouri Research Reactor, for his help and suggestions regarding the analysis of the pigments and interpretation of the data. See also Kidd 1999–2001.

<sup>67</sup> Jericho and ‘Akko-Ptolemais: Segal and Porat 1997, 87; Porat and Ilani 1998; Porat and Ilani 2000, 16; Edwards et al. 1999. I thank Jacques Seigne for sharing unpublished results from testing done of Jerash pigments in the early 1990s.

<sup>68</sup> Segal and Porat 1997, 87–89; Porat and Ilani 1998; Porat and Ilani 2000, 16; Rozenberg 1997, 69. At Masada, the costly Egyptian blue was used, which included copper. See Porat 1989, 127. Information on the green pigment from Jerash was provided by Jacques Seigne.

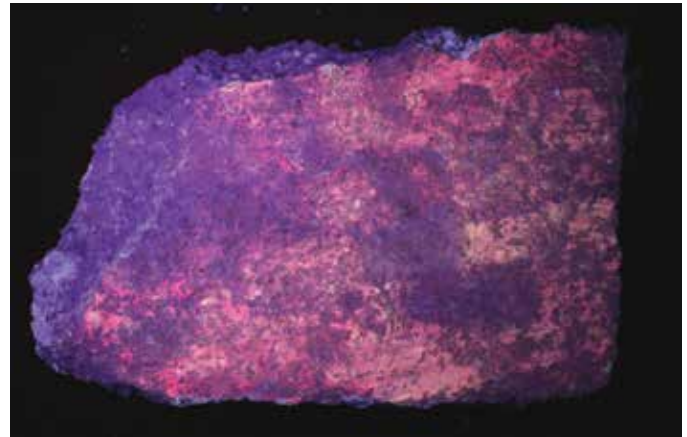
<sup>69</sup> Béarat 1997, 31, cites the use of copper oxide greens in locations outside Palestine.

<sup>70</sup> Rozenberg 1996, 68; Porat and Ilani 1998; Porat and Ilani 2000, 16.

<sup>71</sup> A modern study with the kermes insect could not reproduce the famed scarlet mentioned in ancient texts. The result was a bright rose, almost identical to the pink used at Tel Anafa and in other contexts such as Hellenistic terracottas. See Amar et al. 2005.

Sample of pink pigment fluorescing under UV light.  
The lighter areas show high fluorescence  
(photo: Benton Kidd).

Figure 12



one or the other (both?) of these substances was added as a colorant to a white base color. The mercury is especially interesting since this was also a key component in the gilt used in the LHSB, and, as noted above, mercury is not native to Israel. Prior to these analyses, the first use of mercury attested in Israel was in the red pigments used in Herod's Third Palace at Jericho.<sup>72</sup> Its use at Tel Anafa makes it the earliest use of a mercury-based red in the region. Together with the imported copper oxide, mercury-enriched pigments suggest extensive international connections, perhaps both in materials and artisans.

A recent testing of the Anafa blue at the University of Missouri Research Reactor by X-ray fluorescence confirmed that its most definitive components are copper and calcium. Whether this is actually Egyptian blue cannot be determined at this point. The color as preserved on the pilaster capitals is much lighter than other examples, which were probably meant to imitate lapis lazuli.<sup>73</sup>

<sup>72</sup> Rozenberg 1996, 124; 1997, 66.

<sup>73</sup> Pliny (33.161–163) writes of numerous types of blues, some likely to be knock-offs of the costly Egyptian blue. I thank Michael Glascock, Senior Research Scientist, and Jeff Ferguson, Assistant Research Professor, for these results.



## IV. THE WIDER CONTEXT OF THE WALL DECORATION FROM THE LHSB

The decorated second-floor room from the LHSB is exemplary for its intricacy of design, arresting polychromy, copious gilding, and competent craftsmanship. It represents some of the best-preserved Masonry Style molded plasterwork from the Levant or Egypt during the period of ca. 325–75 BCE, when such decoration was in vogue, and it epitomizes the cosmopolitan spirit of the age, with a remarkable blend of elements representing Greek, Phoenician, Alexandrian, and perhaps Persian motifs. Here I discuss this style's origin, diffusion, and wider context, in order to better situate the remains from the LHSB.

### THE MASONRY STYLE: ITS ORIGINS AND DIFFUSION

“Masonry Style” decoration, meaning molded and painted plaster imitating ashlar, moldings, and the classical orders, began in the Classical period, when we first find evidence for the division of stone walls into five distinct decorated zones of plinth, orthostates, stringcourse, isodomic rows, and attic. A chamber tomb near Olynthos with white stringcourse panels alternating with marbled panels may date to the late fifth century BCE.<sup>74</sup> A marbled stringcourse appears in a house excavated in the 1920s at Kolophon, which the excavators dated perhaps as early as 390 BCE.<sup>75</sup> From beneath the Stoa of Attalos II in the Athenian Agora come fragments of plaster from a later fourth-century BCE building that show imitation of stone walls.<sup>76</sup> The famous House of Many Colors at Olynthos probably had a stringcourse in relief with a painted garland; still other panels show marbling.<sup>77</sup> Perhaps about 320 BCE or so, at the Sanctuary of the Great Gods on the island of Samothrace, the interior walls of the Hieron were plastered to imitate stone; they also carried the earliest known example of an engaged colonnade of molded plaster in an attic zone.<sup>78</sup> By ca. 300 BCE, upper orders in plaster also appeared in the Great Tomb at Leukadia (Ionic pilasters sitting on the stringcourse) and in a villa from Pella (Doric pilasters).<sup>79</sup> There is also decorated plaster from a tomb at Pydna, probably dating to the third century BCE.<sup>80</sup>

The appearance of Masonry Style plastered decoration in so many locations and in such close chronological proximity makes it difficult to pinpoint its precise place of origin. Both Lehmann and Miller have suggested Macedonia as the birthplace, though it is also possible that imitating stone walls in plaster developed simultaneously in different places.<sup>81</sup> No matter where the style began, we can conclude that it spread very rapidly and was already decorating

<sup>74</sup> Robinson 1942, 11: 117–124 and pl. LV; Andreou 1988, 121, n. 148.

<sup>75</sup> Holland 1944, 137–138.

<sup>76</sup> The Agora building: Bruno 1969b, 316–317. An anti-tyranny decree dating to 336, but pulled down probably about 323, was found in the fill with the plaster. What building this plaster decorated is unknown. Bruno quotes Homer Thompson's remarks about the plaster scheme having been inspired by the ashlar of the Classical Propylaea and the Hephaisteion; see also Townsend 1995, 115–116, pl. 22. A house near the Kerameikos, excavated by the German Archaeological Institute beginning in 1919, also produced relief plaster walls with various patterns, some probably imitating alabaster/onyx. The excavators could only conclude that the house was destroyed during Sulla's sack of 86, and that it was probably contemporary with the houses of Delos, at the latest (Wirth 1931, pls. XIV–XV, XVII).

<sup>77</sup> Though the fragments are irrefutable, this does not seem to have been the norm at Olynthos, at least based on what is preserved. See Robinson 1938, color pl. 167.

<sup>78</sup> Lehmann 1964, pl. 3, for the initial publication. Later, in more detail, Lehmann 1969, pl. CVI, with ample discussion in the text. This is almost simultaneous with the appearance of an applied attic order in stone, which is first attested at the temple of Athena Alea at Tegea (Dugas et al. 1924, pls. XVIII–XX and Norman 1984, ill. 8) and soon followed by the L-shaped stoa at the Perachora harbor in 338 BCE (Coulton 1964, 121).

<sup>79</sup> Petsas dated the tomb slightly later than Miller, who argued for a date of ca. 300. See Petsas 1966, 179–182; Miller 1971, 102–104. For the Pella house, see Siganiidou 1982, 31–36; Siganiidou and Lilimpaki-Akamati 1996, 26–27.

<sup>80</sup> While the tomb at Pydna may have a third-century date, its simplified plastered interior clearly shows the influence of the earlier traditions. See Ginouvès et al. 1994, 183.

<sup>81</sup> Miller 1971, 140, where she agrees with Lehmann on Macedonia. Miller marshals together many other ideas about the style's origins, covering everywhere from southern Russia to Asia Minor to Alexandria (pp. 120ff.). See also Ling 1991, ch. 2 for summation of the style's development.

structures throughout the Mediterranean world by the fourth century. At Carthage, a small cache of decorated plaster found sealed under a pavement in an undisturbed context and dated to the fourth century BCE includes drafted margin blocks, molded pilaster fragments, what appear to be engaged columns, and one fragment described as “perhaps the corner of a lozenge-shaped panel.”<sup>82</sup> In modern-day central Bulgaria, Masonry Style walls also adorned the palace of Seuthes III in Seuthopolis, and at Kazanlak, where an extravagant Thracian chieftain’s tomb was plastered about 300.<sup>83</sup> In Alexandria, some of the late fourth-/early third-century BCE tombs in the Chatby Necropolis had plastered walls.<sup>84</sup>

In the third and second centuries BCE Masonry Style decoration remained popular in Greece and Macedonia and also continued to spread throughout the Mediterranean world. From Macedonia comes the richly decorated Tomb of Lyson and Kallikles and the Haliakmon Tomb.<sup>85</sup> Painted plastered walls are also known from private houses, heroa, and public buildings elsewhere on the Greek mainland (Amphipolis,<sup>86</sup> Kalydon [heroon]),<sup>87</sup> Asia Minor (Erythrai,<sup>88</sup> Assos [heroon],<sup>89</sup> Pergamon,<sup>90</sup> Magnesia,<sup>91</sup> Priene,<sup>92</sup> Miletos [heroon],<sup>93</sup> Halikarnassos,<sup>94</sup> and Knidos<sup>95</sup>), and the Aegean (Rhodes<sup>96</sup> and Delos<sup>97</sup>). The remains of the stoa at Priene, perhaps built by King Orophernes of Cilicia ca. 150 BCE, and “Building Z” at Pergamon illustrate that public buildings were similarly decorated.<sup>98</sup>

In western Sicily, the style appears at Morgantina, where by ca. 250 BCE the House of Ganymede had molded, plaster decoration that preserved *in situ* a plinth and part of an orthostate course,<sup>99</sup> and Gela, where the remains of more houses are known.<sup>100</sup> In Apulia similar designs appear in the tombs at Ruvo and Canosa.<sup>101</sup> In Italy, however, over time the arrangement of elements started to differ, and the resulting scheme came to be classified as “First Style.” The plinth became higher, which pushed up the other elements much farther than they would have been on a stone wall. Together with more randomly colored elements, these characteristics diminished the structural integrity of the wall’s appearance, rendering it more like a decorative pattern rather than an imitation of a real wall. The doorway scheme of the atrium of the Samnite House at Herculaneum is a good example of the combination of the high plinth and the more random use of color for the elements.<sup>102</sup>

<sup>82</sup> Berges, Ehrhardt, Laidlaw, and Rakob 1991, 215–228, esp. cat. no. 30c.

<sup>83</sup> Seuthopolis: Dimitrov and Čičikova 1978, 13; Kazanlak: Shivkova 1973, 41–43, for description of the non-figural decoration.

<sup>84</sup> The original excavator, Evaristo Breccia, dated Chatby to Alexandria’s foundation (Breccia 1912, x). Especially relevant are Hypogeum A and B, on which see Venit 2002, 26–34 (for the tombs) and 28ff., n. 233, where she discusses the various dates proposed.

<sup>85</sup> Miller 1973, 109; 1993.

<sup>86</sup> Touchais 1983, 803, and Ginouvès et al. 1994, 103–104, figs. 92–93.

<sup>87</sup> Dyggve, Poulsen, and Rhomaios 1934, 382–383, ill. 104.

<sup>88</sup> Bingöl 1988, 501–522. A rather cursory summation of Masonry Style plaster from Hellenistic Asia Minor is given in Bingöl 1997, 89–110.

<sup>89</sup> The heroon of Kallisthenes and Aristias had the remains of red and yellow plaster. See Clarke, Bacon, and Koldewey 1902, 109–111, fig. 1; 113, fig. 2.

<sup>90</sup> Though it occurred in other buildings of Pergamon, plaster is well known from the royal palace. See Kawerau and Wiegand 1930, 48–52. For Hellenistic houses, see Radt 1986, 428–429, ills. 11–12.

<sup>91</sup> For the plastered prytaneion, see Humann, Kohte, and Watzinger 1904, 138, ill. 149–150.

<sup>92</sup> Wiegand and Schrader 1904, 308–319, 333–364, abb. 333, 337; Raeder 1984, pl. 1, reconstruction of the wall from House 23; Wartke 1977.

<sup>93</sup> For the plaster from Heroon 3, see Weber et al. 1985, abb. 4, taf. 11–12, and Müller-Wiener 1985, 531–534, abb. 5.

<sup>94</sup> Hinks 1933, 8, ills. 4–5. These include two fragments, one of a Lesbian cyma, the other of a faux marble panel, said to be from C. T. Newton’s excavations of 1857 and dated to the second half of the third century BCE.

<sup>95</sup> Mellink 1969, 216–218, pl. 62, figs. 18–19; Love 1970, 152, for the houses east of Stepped Street 7; continues in Love 1972, 65ff. These exceptional panels from Knidos are illustrated in color in Bingöl 1997, pls. 17–21. Further discussion can be found in Bingöl, Pracher, and Pracher 1997.

<sup>96</sup> Kontis 1952, 556, fig. 4, bottom right, for relief panels and orders from the acropolis. Also Konstantinopolou 1986, pls. 30–31, for fragments from figural friezes.

<sup>97</sup> Bezerra de Meneses 1970, 151ff.; 1984, 77–88; Chamonard 1922; 1933, 98–169, among many other publications of these houses.

<sup>98</sup> Based on a fragmentary inscription. See Fredrich and von Gaertringen 1968, no. 204. Whether Orophernes built the stoa or not is irrelevant regarding its decoration. “Building Z,” perhaps a prytaneion: Radt 2005, 84–89.

<sup>99</sup> Bruno 1969, n. 3; Tsakirgis 1984, 87, 322–326.

<sup>100</sup> Adamesteanu 1958, 36; Griffio 1958, 21; and Griffio and von Matt 1968, 189.

<sup>101</sup> Bertocchi 1964, 19–22 (Canosa, Tomb 2) and 33–34 (Ruvo, Tomb 10). The decoration of these tombs is not in five zones, but it is zonal, with painted decoration and applied orders. Steingraber (1991, 1–36) also addresses many of the tombs.

<sup>102</sup> These “eastern” and “western” differences are not always clear-cut, however. For a discussion of the blurring of the distinctions, see Bilde 1993, 151–177.

In addition to the finds mentioned earlier from Carthage,<sup>103</sup> Masonry Style was also popular in Punic Sicily, Sardinia, and elsewhere in North Africa. Excavations at Kerkouane, a Punic city south of Carthage that was destroyed by Regulus in the first Punic War in 256 BCE, have produced remains of plastered walls, columns, pilasters, and moldings.<sup>104</sup> From the sanctuary at Salammbô come Lesbian leaf and egg-and-dart moldings.<sup>105</sup> From Utica there are plaster fragments including eggs, dentils, fleurons or rosettes, and parts of a Lesbian cyma.<sup>106</sup>

#### THE MASONRY STYLE IN ALEXANDRIA AND THE HELLENISTIC LEVANT

Residents of Alexandria were early and enthusiastic adopters of Masonry Style décor, as attested by tombs in the city's Chatby Necropolis, mentioned above. Since they lived in one of the largest and wealthiest cities in the eastern Mediterranean, we may surmise that Alexandrian artisans would have set precedents in interior design and that their stylistic trends and innovations would have spread into the Levant. McKenzie has shown that Alexandrian architectural styles had a pronounced influence on the stone tomb façades of Petra.<sup>107</sup> Direct testimony for the spread of Alexandrian artisans and their designs comes from a papyrus from the Faiyum that details the decoration of the house of the *hypodioiketes* Diotimos of Philadelphia.<sup>108</sup> The writer explains that Diotimos's dining room ceiling was painted "according to a model" by the artist Theophilos of Alexandria. This suggests that such artists traveled with their patterns and stencils and transferred their designs with relative ease.

The sort of ceiling painting attested in the Faiyum papyrus seems to have been an Alexandrian specialty, if we can extrapolate from the tombs where intricate and complex patterns still decorate some of the vaults. On the ceiling of the west tomb at the Sidi Gabr necropolis, documented before rising sea levels engulfed it and dated to the third century BCE, was a complex pattern of *trompe-l'oeil* coffers with multi-banded borders.<sup>109</sup> Dating sometime between the later second and first centuries BCE are the five hypogea in Alexandria's Anfushy Necropolis, all with elaborately painted vaults.<sup>110</sup> The popularity of ceiling painting in Alexandria is relevant to the LHSB's decorated room since its ceiling was also painted.

Alexandrian artisans may also have developed two other aspects of the LHSB's decoration: the imitation of Egyptian stones such as alabaster (or onyx) and breccia, and diamond-shaped lozenge patterns. In Egypt itself we see painted patterns that imitate alabaster or onyx in some of the early cemeteries like Mustafa Pasha as well as in later contexts, such as in Tombs 1 and 5 of the city's Anfushy Necropolis (fig. 13a–13b). Faux Egyptian stone decoration also appears at various Levantine sites as well as outside the region, on Cyprus, at Pergamon, Priene, and Delos, *in situ* in the House of Hermes, House of the Masks, and others.<sup>111</sup> Complex-bordered diamond-shaped lozenges are painted on the vault in Anfushy Tombs 1 and 5 (fig. 13a–b). In a house in the Ptolemaic outpost on Thera, we find a diamond motif with elaborate borders in plaster wall decoration.<sup>112</sup> In stone, diamond shapes regularly appeared on Alexandrian soffits.<sup>113</sup>

It is also possible that the diamond-shaped lozenges have an eastern origin such as Persia. The motif covering the arms of Penthesilea on the Penthesilea Painter's name cup are nearly identical to the patterns from Alexandria and the LHSB. There are also diamond patterns on the tiles from the palace of Darius I at Susa (now in the Louvre). It

<sup>103</sup> For a roundup of Punic houses in Morocco, Algeria, Sicily, and Sardinia, see Fantar 1987, 32–41. Sicily, especially, has a number of sites with plaster decoration. For example, House M at Selinus had red plaster remains (Fougères and Hulot 1910, 208), and at Phoenician Motya an Archaic Doric capital recovered from the "Western Sanctuary" had plaster annuli (Isserlin and du Plat Taylor 1974, 72).

<sup>104</sup> Fantar 1987, 598 and pl. XIV a–b; 2005, 27, 38, 50, etc.

<sup>105</sup> Fantar 1986, pl. XXX. For plaster fragments from earlier excavations at Salammbô, see Carton 1929, pl. 2, no. 4.

<sup>106</sup> Lézine 1959, fig. 58; 1968. Laidlaw (1985, fig. 20) reproduces this diagram; see also her n. 80.

<sup>107</sup> McKenzie 1990. Kirkbride (1960, 78) also connected Nabataean plasterwork to Alexandria. For the suggestion that Alexandrian influence in plasterwork extended well beyond the Levant, see Martin 1982, 249ff.

<sup>108</sup> Edgar 1925–1931, 1940, no. 59445; Nowicka 1969, 147.

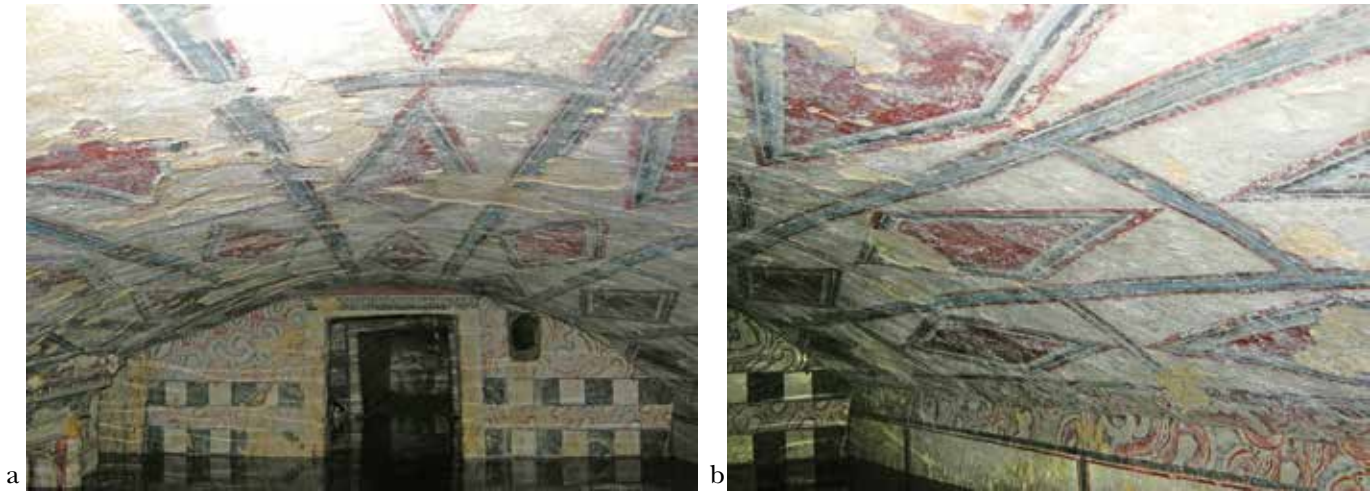
<sup>109</sup> Venit 2002, 38.

<sup>110</sup> Also relevant here is a stone or plaster vault with 3-D octagons and diamonds from Alexandria: McKenzie 1990, fig. 152.

<sup>111</sup> Levant: Jerash, Hellenistic naos: Seigne 2002, 33; Jericho, Herodian Palace: Netzer 1999, abb. 13a–b; Beirut, Hellenistic building on site of the Petit Serail: Aubert 2001–2002, photo 3; Aubert and Eristov 2001, 211–214 and pl. XXXIX.2–4; Cyprus: Paphos, Ammoi: Tomb 1, *in situ*; elsewhere: Priene: house 32, Stefani 2000, fig. 133; Phase IV of the royal palace of Pergamon: Kawerau and Wi<sup>0</sup>egand 1930; Delos, *in situ*.

<sup>112</sup> Von Gaertringen and Wilski 1904, esp. pls. 1.2, 3.4. The dating of the house, however, is a bit murky.

<sup>113</sup> Pensabene 1993, figs. 930, 935–937.



a: Tomb 5, Anfushy Necropolis, Alexandria, decorated with diamond-shaped lozenges; b: detail of diamond-shaped lozenges with multi-banded borders from Tomb 5, Anfushy Necropolis, Alexandria (photos: Benton Kidd).

Figure 13

is quite likely that such motives migrated from context to context, similar to the Greek maeander, which appears on textiles, painted pottery, mosaic floors, and stone moldings.

In the central and southern Levant the earliest examples of Masonry Style plasterwork date to the first half of the second century BCE. It is an open question whether the absence of third-century BCE remains is due to the economic burdens of Ptolemaic rule or simply the accidents of discovery.<sup>114</sup> Second-century occurrences are widespread throughout the region, at sites along the coast—the building on the site of the Petit Serail from Beirut,<sup>115</sup> ‘Akko-Ptolemais,<sup>116</sup> and Gaza<sup>117</sup>—as well as inland—Tel Kedesh,<sup>118</sup> the Hellenistic naos at Jerash (see n. 17 above; fig. 14), Maresha,<sup>119</sup> the Hasmonean Winter Palace at Jericho,<sup>120</sup> and at the Tobiad estate at Araq el-Emir in Jordan, on the so-called plastered building as well as the monument known as the Kasr el ‘Abd.<sup>121</sup> Farther east are the private villas and the “Governor’s Palace” at the site of Jebel Khalid on the Euphrates, today in Syria.<sup>122</sup> The style remained popular through the first century BCE. On the Nabatean temple at Wadi Ramm in southern Jordan there is an engaged lower order combined with diamond lozenges (fig. 15), and even later in Herod’s palace at Jericho.<sup>123</sup> At

<sup>114</sup> Smith 1990, 123–130. Fischer (2003, 31–32) asserts that the majority of securely dated architectural decoration from Palestine is from the mid-second to the mid-first century BCE. In addition to the examples cited here, there are other Palestinian sites such as Mount Gerizim, Yavneh-Yam, and Tel Ya’oz that have produced plaster, but fragments are inadequately studied thus far, and precise dating is unclear. See Erlich 2009, 93. The excavators of Tel Dor also have drafted-margin plaster that is yet unpublished. Thanks to Jessica Nitschke for sharing information on this site.

<sup>115</sup> Aubert 1996, 60–84; 2001–2002, 73–85; Aubert and Eristov 2001, 211–214.

<sup>116</sup> Dothan 1976; 1985; Segal and Porat 1997, 85–91, for pigment analysis; Segal and Porat 2000 for further pigment analysis, largely a republication of the 1997 publication; Ariel and Messika 2007 for the finds from the Hellenistic *favissa*, including fragments of frescos, a plaster-fluted column drum, and various architectural elements. Further details are not given about these elements, nor are they illustrated.

<sup>117</sup> I thank Jean-Baptiste Humbert for sharing information with me about the unpublished Gaza house.

<sup>118</sup> Herbert and Berlin 2003, 36–37 and fig. 19; Berlin and Herbert 2012, 29.

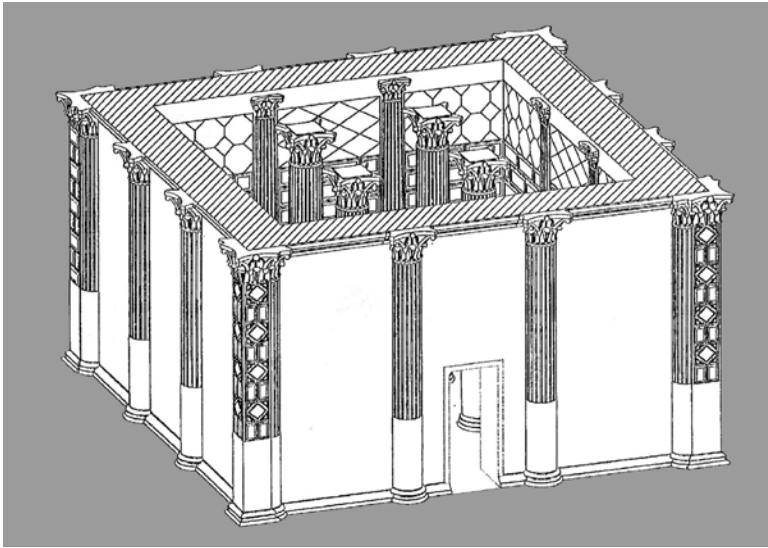
<sup>119</sup> The domestic fragments from Maresha are currently under study (Erlich, 2009, 93 and n. 123). The famous painted tombs are not in the Masonry Style, nor do they exhibit plasterwork (Peters and Thiersch 1905, 22; Jacobson 2007, 16–17).

<sup>120</sup> Rozenberg 2008a; 2008b.

<sup>121</sup> Zayadine 1987, 133–135.

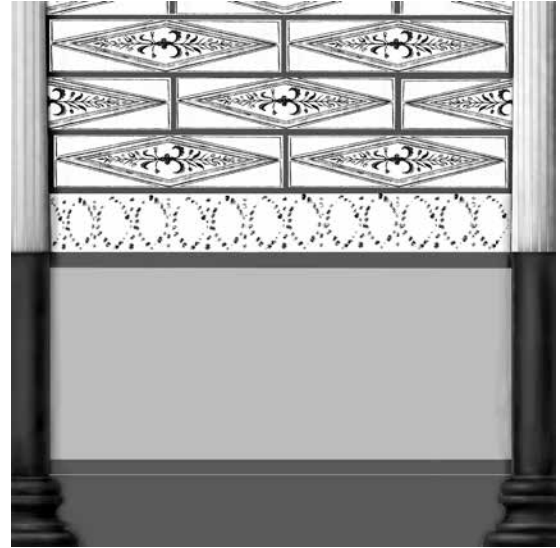
<sup>122</sup> Clarke et al. 2002, 34–43; Jackson 2009. Also in Syria, an elaborate plaster frieze and a two-dimensional painted egg-and-dart survive from Hellenistic Palmyra (Schmidt-Colinet 2005, abb. 137–139).

<sup>123</sup> Wadi Ramm: Savignac and Horsfield 1935, fig. 6; Kirkbride 1960, 78. The plaster first recorded *in situ* by Savignac and Horsfield is now lost. The date is probably contemporary with Tel Anafa or later first century BCE. Jericho: Rozenberg 2000, pl. 3, lower left for a two-dimensional diamond with complex borders and Rozenberg 1996, fig. 22, for remains of egg-and-darts that bordered lozenges similar to those from Tel Anafa.



Axonometric reconstruction of the Hellenistic Naos at Jerash (reconstruction Thierry Morin, Mécénat Technologique et Scientifique EDF). Reproduced with permission.

Figure 14



Reconstruction of Nabatean temple wall plaster at Wadi Ramm, Jordan (after P. Barrois watercolor in Savignac and Horsfield 1935).

Figure 15

Petra, painted plaster appears in houses in the el-Habis area,<sup>124</sup> on a building under the temple known as the Kasr el-Bint,<sup>125</sup> and on the Great Temple.<sup>126</sup>

A survey of these examples shows that, compared to earlier designs at Alexandria or contemporary designs in Hellenistic Greece and Asia Minor, those in the southern Levant became increasingly elaborate, with a wider spectrum of colors, more moldings, and faux stonework imitating marble, breccia, or alabaster/onyx.<sup>127</sup> Within this array, however, two structures stand out for complexity of design, multiple elements, polychromy, and engaged orders: the Nabatean temple at Wadi Ramm and the Hellenistic naos at Jerash. The décor of these buildings offers the closest analogues to the decorated room in the LHSB, notably in their use of the diamond-lozenge motif with complex-banded borders combined with a Corinthian order.<sup>128</sup> What is most striking about this comparison is that, of these three intensively decorated displays, only that of the LHSB belongs to a private residence.

By the later second century BCE, when the LHSB artisans were crafting their designs, plaster specialists were working throughout a very wide region, and inspiration and ideas may have come from many directions, including the west. The aforementioned fourth-century BCE plaster fragments from Carthage invite speculation about influence from Punic North Africa. Evidence shows that Carthage maintained formal connections to the motherland in various ways, and there must have been a regular interchange of people and ideas.<sup>129</sup> Artisans continued to use molded plaster in Carthage, and examples are known from as late as the second century BCE.<sup>130</sup> Plasterwork is also plentiful from Carthaginian foundations or cities that were eventually held by Carthage, such as Kerkouane, Motya,

<sup>124</sup> Zayadine 1987, 133–135.

<sup>125</sup> Zayadine 1987, 136–137. The temple itself probably dates to the late first century BCE, and thus the previous building, which may also have been a temple, should be earlier in that century.

<sup>126</sup> Egan 2002, 350–351. Barbet 1995 mentions a few other Nabataean buildings (see chart on p. 389), but their decoration is only indirectly related to that of the LHSB.

<sup>127</sup> An exception is Jebel Khalid, in northern Syria, where a much more conservative approach to Masonry Style was used, one more similar to Delian/Macedonian styles. See Jackson 2009, 248–249.

<sup>128</sup> Capitals at Wadi Ramm were not preserved, but we assume the order was Corinthian based on preserved shafts and the frequency of Corinthian in Nabataean architecture.

<sup>129</sup> Grainger 1991, 201ff., for some examples of religious, political, and economic interaction.

<sup>130</sup> Berges, Ehrhardt, Laidlaw, and Rakob 1991, ch. 3, 215–228.

Soluntum, and Lilibaeum. Some sites, such as Utica, show elements that are specific to the region but not to the Levant.<sup>131</sup> One element that may have been introduced to the Levant from North Africa is the fluted pilaster; on present evidence these first occur first on the spire of the Punic Mausoleum B at Sabratha, which is dated to the early second century BCE.<sup>132</sup>

#### THE CORINTHIAN ORDER: BACKGROUND AND LEVANTINE CONTEXT

Two aspects of the Corinthian order from the LHSB are notable: the heterodox character of the large capitals, which combine traits known from both Greece and the Hellenistic east (see figs. 3 and 6); and the fact that it was used in both the lower and the attic levels. As with the rest of the room's décor, the design reflects a synthesis of elements typical of the Late Hellenistic Levant along with a few unique features.

The beginnings and evolution of the Corinthian capital in mainland Greece are well known. The first use of the order is in the cella of the temple of Apollo Epikourios at Bassai, said by Pausanias to have been built by Iktinos (7.41.9) and so dated to the later fifth century BCE. This first capital had a tiny row of acanthus at its base, larger leaves that sprang up under the volutes, and helices located on the bottom half of the kalathos.<sup>133</sup> In contrast to the lush abundance of foliage that eventually covered the kalathoi of later capitals, the Bassai capital looked bare and squat. In the fourth century, a Corinthian capital of similar form is known from the tholos at Delphi; it too had leaves that hugged the bottom of the kalathos, helices positioned low on the kalathos, and a central palmette.<sup>134</sup> Though this capital had a more vertical thrust, it still had large voids of space. In the middle of the fourth century BCE, a scheme for a more lush Corinthian capital appeared at Epidauros. The capitals in the Thymele, Temple L, and the North Propylon carried double rows of acanthus leaves that reached much farther up the kalathos, helices that rested on the upper half of the kalathos, and a fleuron that now lay partially upon the abacus.<sup>135</sup> However, other arrangements, roughly contemporary with the Thymele at Epidauros, are also known. The temple of Athena Alea at Tegea had Corinthian capitals without helices but with cauliculi; it is unclear whether the lower portion of these capitals comprised six or four leaves.<sup>136</sup> Similar capitals to those from Tegea were also used in the naos of the temple of Zeus at Nemea and in the Philippeion at Olympia.<sup>137</sup> By the later fourth century BCE, the mainland style of Corinthian capital consisted of the full, elaborate Epidaurian elements plus cauliculi.

This mainland form dominated architecture in Greece and Asia Minor in the third century BCE. It appeared in Athens, in the Asklepieion<sup>138</sup> and the Lysikrates Monument,<sup>139</sup> in the Sanctuary of the Great Gods on Samothrace, in the Arsinoeion<sup>140</sup> and the Propylon of Ptolemy II,<sup>141</sup> and in the mausoleion at Belevi, near Ephesos.<sup>142</sup> In the second century BCE, the architect Cossutius tweaked the design a bit further in his capitals for the Olympieion in Athens.<sup>143</sup>

<sup>131</sup> Simas can be painted differently, a type sometimes known as the "Bügelkymation." See above, nn. 103–106, for bibliography on the North African sites. There are also some significant Hellenistic/Roman plaster pieces remaining in the archaeological museums of Palermo, Motya, and Marsala representing typical Greek architectural vocabulary, such as dentils, Lesbian simas, egg-and-darts, etc. The distinctive diamond-shaped lozenges from Tel Anafa and Jerash are not attested. I thank Agata Villa at the Palermo Archaeological Museum for generously sharing information on these sites with me. A few examples of plaster from Lilibaeum are illustrated in Villa et al. 1984, 107–116. A recent comprehensive look at Hellenistic mural painting in Sicily (and Italy) is covered in La Torre and Torelli 2011.

<sup>132</sup> Di Vita 1976, 273–274, for dating.

<sup>133</sup> Roux 1961, pl. 17.

<sup>134</sup> Charbonneaux and Gottlob 1925, 33–37.

<sup>135</sup> For Temple L and the propylon, see Roux 1961, fig. 78. The Thymele's capital appears in a number of sources, including Bauer 1973, 15.

<sup>136</sup> In the original publication of the sanctuary, the capital was reconstructed with six leaves per row, while an axial leaf rose between the volutes to the height of the abacus; there were no helices. See Dugas, Berchmans, and Clemmensen 1924, pl. 76. Bauer 1973, 11, illustrates the later reconstruction of the capital with four leaves per row.

<sup>137</sup> Nemea: Hill 1966, pl. VIII; Philippeion: Miller 1973, 212–213.

<sup>138</sup> Bauer 1973, 16.

<sup>139</sup> Bauer 1973, 13.

<sup>140</sup> Frazer 1990, fig. 118.

<sup>141</sup> Frazer 1990, pl. LIII.

<sup>142</sup> Frazer 1990, fig. 129; Hoepfner 1993, abb. 13.

<sup>143</sup> *Inter alia*, Abramson 1975, pl. 6, fig. 6.

The Cossutian capitals were extremely lush, filled with a profusion of foliage and decoration that covered the entire kalathos, including helices tangent to the abacus, cauliculi, and a fleuron that now lay upon the abacus completely.

In Alexandria, Corinthian capitals appear in some of the city's earliest buildings. The earlier Epidaurian type, before the addition of cauliculi, is represented in a colossal granite capital known as the "Khartoum Capital" (now set up in Saïd Square), and in pilasters from the Mustafa Pasha necropolis.<sup>144</sup> But Alexandrian architects were *au courant*, as reflected by many examples of the fully developed mainland capital form, known especially from the Ptolemaic sanctuary at Hermopolis Magna and in numerous examples preserved in the Graeco-Roman Museum's collection.<sup>145</sup> The large number of preserved Corinthian capitals from Alexandria indicates that architects here had an affinity for that order, and it was not long before they began creating their own variants; for example, at the Ptolemaic Sarapieion and other locations are a number of Corinthian capitals with helices sheathed in a leaf.<sup>146</sup> Another variation, undoubtedly Alexandrian in origin, has helices sprouting from a single stem; examples are known from Amathus on Cyprus and from the Tobiad Palace at Araq el-Emir.<sup>147</sup>

The designer of the LHSB capitals seems to have freely adopted elements from various sources, and possibly developed some of his own.<sup>148</sup> They are fairly squat in proportion yet delicately modeled, with splayed volutes but (probably) without cauliculi.<sup>149</sup> Capitals with similarly squat proportion and splayed volutes are known from Alexandria,<sup>150</sup> Samaria,<sup>151</sup> Jericho,<sup>152</sup> the Hellenistic naos at Jerash,<sup>153</sup> Petra,<sup>154</sup> several sites in Syria,<sup>155</sup> and on North African Punic sites such as Carthage and Utica.<sup>156</sup> We have mentioned the peculiar LHSB capitals with leaves growing on the volute spine, an attribute that probably originated at Alexandria, where preserved Corinthian capitals occasionally have volutes and helices sheathed in a leaf. This element also appears on the Khazneh at Petra, whose design owed much to Alexandrian influences,<sup>157</sup> and on the capitals from the Temple of Castor and Pollux in Rome.<sup>158</sup> On the other hand, the egg-and-dart on the LHSB capital's abacus was uncommon in Alexandria<sup>159</sup> but is known on other capitals, especially from Asia Minor and farther east.<sup>160</sup>

<sup>144</sup> Though today in a public square on the "Khartoum Monument," it is also illustrated in Ronczewski 1927, fig. 2, McKenzie 1990, pl. 199, E; 2007, fig. 128. The pilasters are *in situ* but illustrated in Adriani 1936, fig. 35. Other similar capitals, both pilasters and otherwise, can be found in Pensabene 1993, cat. nos. 190, 201, 205, 206, etc.

<sup>145</sup> Wace, Megaw, and Skeat 1959, pl. 1, and Graeco-Roman Museum no. 17855, among others. Many more normal Hellenistic Corinthian capitals from the Graeco-Roman Museum's collection, elsewhere in Alexandria, and the surrounding area are illustrated in Pensabene 1993.

<sup>146</sup> On site at the Sarapieion (nos. 209, 219, etc.) and McKenzie 2007, fig. 69. Others with sheathed helices: Pensabene 1993, nos. 190–196, 209, 219, etc.

<sup>147</sup> Pensabene 1993, nos. 276 and 289. The Amathus capital is illustrated in von Hesberg 1978, fig. 132, the capital from Araq el-Emir in fig. 134.

<sup>148</sup> Gordon believed that the small Corinthian capitals represented a free adaptation of Syrian and Asia Minor types (Gordon 1977, 336–338). About nine Corinthian capitals are known from Hellenistic Israel; the scant number makes it difficult to assess stylistic development and influences (see Fischer 1990, 7–11). For another handful of capitals from Syria, see Schlumberger 1933, 287–290.

<sup>149</sup> See discussion of the Corinthian capitals (p. 32 above) and Catalogue, **WP 90**. Small-scale capitals, such as those on grave stelai from the period, sometimes contain cauliculi. A good cross section of these come from the island of Rheneia, many of which are on display in the Mykonos Archaeological Museum. Those examples are all stone, however. Capitals rendered in plaster may have been less detailed.

<sup>150</sup> For engaged capitals, see Pensabene 1993, nos. 200, 201, 205, 242, 289, 292. The majority of the in-the-round capitals illustrated also have heavier proportions, e.g., nos. 228, 249.

<sup>151</sup> Fischer 2003, pl. 2f and pl. 3a.

<sup>152</sup> Fischer 1990, pl. 1, 2a–b.

<sup>153</sup> On display in the Jerash Museum.

<sup>154</sup> McKenzie 1990, pl. 46.

<sup>155</sup> For example, Schlumberger 1933, pls. 28, 34–37.

<sup>156</sup> Lézine 1959, pls. 13–14; 1968, pls. 85–86, for the usual Ionic-Corinthian hybrids that seem to be distinctively Punic.

<sup>157</sup> McKenzie 1990, ch. 5. The date of the Khazneh is disputed, but many have argued for a Late Hellenistic date. See McKenzie 1990, 7, for a roundup of the opinions. See also Guzzo and Schneider 2002, 172, where the capitals from the Khazneh are described as variants of Late Hellenistic Alexandrian varieties.

<sup>158</sup> The leafy volute is barely visible on the battered capitals of the re-erected columns today but is recorded in earlier prints and drawings, such as Vignola's. These capitals also display interlacing helices as on some Alexandrian capitals. For that motif, see also Pensabene 1993, figs. 273, 296, 297, etc.

<sup>159</sup> None are illustrated in Ronczewski's study of those in the Graeco-Roman Museum by 1927 or Pensabene's exhaustive study of 1993.

<sup>160</sup> For example, the temple of Apollo, Didyma; the Mausoleion at Belevi, near Ephesos; and the Hypostyle Hall, Ai Khanoum. Also in the Propylon of Ptolemy II, Samothrace. Didyma: Dinsmoor 1973, fig. 84; Belevi: Frazer 1990, fig. 129, and Hoepfner 1993, abb. 13; Ai Khanoum: Bernard 1967, fig. 5; Samothrace: Frazer 1990, pl. LIII.

The use in the LHSB of Corinthian for both the lower and attic order is unknown from other firmly dated Hellenistic contexts, but we may suggest its prior use in Alexandria. A number of the Corinthian capitals preserved from Alexandria are quite small, suggesting a position in an upper order (either engaged or freestanding). While such a Corinthian upper order need not imply that the lower order was also Corinthian, it seems probable that at least some were since more Corinthian capitals are preserved from Alexandria than any other order, in both stone and plaster. Additional circumstantial evidence comes from the Khazneh at Petra, with its well-documented Alexandrian influences; it was decorated with both a lower and upper Corinthian order. Other examples are the Grand Peristyle of the Palazzo delle Colonne at Ptolemais in Cyrenaica<sup>161</sup> and, regularly, in Roman North Africa.<sup>162</sup>

### THE MASONRY STYLE AFTER THE LHSB

In the mid to later first century BCE, molded wall plaster continued to appear in the southern Levant; notable examples are in the Petra Great Temple and the palaces constructed for King Herod. Increased interaction with Rome and the west brought new fashions and materials, for example the appearance of mercury-enriched reds and imported Egyptian blue in the Northern Palace at Masada.<sup>163</sup> In some places the baroque aesthetic seen at Jerash and in the LHSB remained in favor, as for example in Herod's Third Palace at Jericho, where the ceiling plaster is fashioned into a diamond pattern surrounded by an egg-and-dart and interlocking patterns of diamonds and octagons.<sup>164</sup> Notably, however, the taste for copious amounts of molded elements seems to have diminished in favor of two-dimensional representations akin to Italic Second Style painting.<sup>165</sup>

In closing, it is worth noting how many of the buildings discussed here, both contemporary with the LHSB and later, are palaces, temples, and high-status tombs—buildings whose owners and users occupied an elevated social position. It is worth repeating that the villa at Tel Anafa was a private residence. While it is undoubtedly true that we have lost much of this period's domestic architecture, nonetheless the types of comparisons that we do have are telling. The owners of the LHSB clearly used interior décor to make a dramatic statement, one that displayed their wealth, connections, cosmopolitan aesthetic, and individual sense of style. It seems that they chose well and that they succeeded.

<sup>161</sup> The original date of the house is probably Hellenistic, but it was remodeled in the Early Roman Imperial period. Even if the double-decker Corinthian peristyle of the court postdates the Anafa house, it probably reflects Alexandrian building practice. For discussion of the Palazzo in the context of Alexandrian architecture, see Winter 2006, 177, where he calls it “the best extant illustration for the nature of upper-class houses in Alexandria.” For the peristyle reconstruction, see Pesce 1950, tav. X.

<sup>162</sup> *Inter alia*, on the amphitheater at El-Djem (all three levels), the Arch of Caracalla at Djemila, and the skenai of the theaters of Sabratha and Dougga. We can also find examples elsewhere in the Roman world, i.e., Library of Celsus, but it seems to have been more common in North Africa. Since a double order of Corinthian is unknown in Greek architecture from the mainland and Asia Minor, we can posit that it was inspired in Roman architecture by the now lost architecture of Alexandria and the Levant.

<sup>163</sup> See Porat 1989, 127–128; 1995, 224–225.

<sup>164</sup> Rozenberg 1996, fig. 22; 2010a, figs. 14–15, rooms B88 and B90. We also see a complex pattern of diamonds and octagons on the pteroma ceiling in the “Temple of Bacchus” at Baalbek. Though the temple may postdate the LHSB, the pattern seems to remain popular in the region. These motifs were clearly picked up by Roman artisans, and variants can also be found in the plaster coffers of the tepidarium of the House of the Cryptoporticus in Rome of about 30 BCE (Ling 1991, fig. 43) and other Roman architecture. A third-century CE plastered catacomb vault from Lilibeum, now destroyed but illustrated by an 1886 watercolor, had interlocking diamonds and triangles. See Villa 1984, fig. 112. It is interesting that this is old Punic territory.

<sup>165</sup> Rozenberg (2010b, 369) also makes the point that Masonry Style, though increasingly uncommon, lingered longer in the region than elsewhere. See also Kolb 2001, 442.



## V. CATALOGUE

The catalogue entries are presented in the order discussed in the reconstruction, which is according to their original wall position from bottom to top. Every item carries a WP (Wall Plaster) catalogue number. In addition, some entries also have an original TA WS (= Tel Anafa Wall Stucco) number and/or an IAA (Israel Antiquities Authority) number. Basket and locus numbers indicating find spots are given whenever possible. All measurements are in centimeters.<sup>166</sup>

*Abbreviations:*

P. = preserved; H. = height; R. = radius; L. = length; Th. = thickness;  
max. = maximum; W. = width; D. = diameter; min. = minimum

### ORTHOSTATES, STRINGCOURSE, AND ISODOMIC ZONE (WP 1–20)

**WP 1.** Black orthostate fragment with a red return  
Loc. 2301, basket 2.3.54  
P.H. 10, P. max. L. 8



**WP 3.** Black orthostate panel  
Loc. 5110, basket 5.1.189  
P.H. 10.7, P.L. 11.4

IAA 567747



**WP 2.** Black orthostate panel  
Loc. 5110, basket 5.1.189  
P.H. 7.6, P.L. 9.1

IAA 567749



**WP 4.** Black orthostate panel  
Loc. 5110, basket 5.1.189  
P.H. 6.7, P.L. 4.5

TA WS191



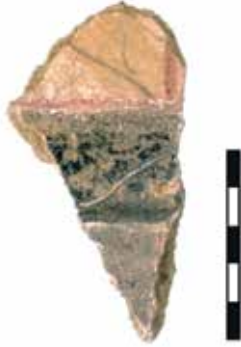
**WP 5.** Black orthostate panel with red border  
Loc. 2014, basket 2.1.95  
P.H. 7, P.L. 4.5, P.W. of black margin 3

TA WS177

Edge of a black orthostate panel with red border and small fragment of adjacent panel. A perpendicular red groove marks the

<sup>166</sup> This catalogue includes fragments pertinent to the reconstruction of this single room of the villa. Many more fragments, most quite small, were recovered in the excavations and are housed in the IAA storerooms.

meeting point with the stringcourse panel, which shows very faint yellow and pink paint surrounded by dark red lines.



**WP 6.** Black orthostate panel with adjacent margin

Loc. 2307, basket 2.3.41  
P.H. 13.4, P.L. 9.4

TA WS180

Step and margin of black orthostate panel and adjacent margin with traces of red and yellow paint.



**WP 7.** Yellow orthostate panel with red borders and small amount of stringcourse

P.H. 31.2, P.L. 34.4

IAA 03-168

Yellow orthostate panel with red borders and adjoining patterned stringcourse.



**WP 8.** Yellow orthostate panel with adjoining red isodome

Loc. 2301, 2304, 2308, 2309, baskets 2.3.27, 2.3.33, 2.3.53, 2.3.57, 2.3.58, 2.3.60

TA WS13

P.W. 44.5, P.L. 22

Yellow orthostate panel with drafted margin and full width of adjoining red isodome. Upper edge of isodome shows red drafted margin.



**WP 9.** Yellow orthostate panel with snaplines and adjoining yellow isodome

P.H. 40.6, P.L. 27.9

IAA 03-243

Orthostate panel with snapline corners marking off two yellow panels with a yellow isodome above.



**WP 10.** Fragment preserving adjacent banded red panels

Loc. 2309, basket 2.3.58

TA WS307

P.H. 5, P.L. 8.2, W. of red border 1.2

Fragment includes corners of two adjacent banded panels with red borders. Above are red outlines of egg-and-dart on yellow

ground with upper band of red. Above this are a pink and a red band.



**WP 12. Yellow isodome**  
 Loc. 2307, baskets 2.3.59, 2.3.26  
 P.H. 17, P.L. 24.5

TA WS170b

Three joining fragments, of which only two appear in the photograph. The upper fragment shows replastering in the same color. The lower fragment shows a tiny trace of adjacent red panel.



**WP 11. Black isodome**  
 Loc. 2303, basket 2.3.36  
 P.H. 14.5, P.L. 20

TA WS170a



**WP 13. Stringcourse panel**  
 Loc. 2303, basket 2.3.28  
 P.H. 9.3, P.W. 11

TA WS183

Stringcourse panel showing yellow, green, red, and veins of dark red on pink ground, possibly an imitation of conglomerate stone such as breccia. Traces of replastering in darker colors.



**WP 14.** Stringcourse panel  
 Loc. 2303, basket 2.3.24 and surface  
 P.H. 8.8, P.L. 8.5

Stringcourse panel showing yellow, green, red, and veins of dark red on pink ground, possibly an imitation of conglomerate stone such as breccia.



TA WS184

pink ground, possibly an imitation of conglomerate stone such as breccia.



**WP 15.** Stringcourse panel  
 Loc. 2303, basket 2.3.34  
 P.H. 16, P.W. 9

Stringcourse panel attached to black orthostate panel. Faint traces of red and yellow paint remain on the stringcourse panel.



TA WS179

**WP 17.** Stringcourse panel  
 Basket lost  
 P.H. 3.3, P.L. 5.1

Stringcourse fragment with red and green wavy lines on a white background, probably imitating alabaster or onyx.



IAA 03-369

**WP 18.** Stringcourse fragment  
 Loc. 2309, baskets 2.3.58, 2.3.59  
 P.H. 9.6, P. L. 12

Stringcourse fragment with green and black lattice pattern, later replastered red.



TA WS194

**WP 16.** Stringcourse panel  
 Basket 2.3.36, Locus 2303  
 P.H. 5.9, P.L. 5.2, preserved relief 0.5

Side portion of stringcourse panel with trace of margin in same design. Green, yellow, and red forms with dark red outlines on

TA WS187



**WP 19.** Stringcourse border?

Basket lost  
P.H. 7.6, P.L. 6.1

IAA 03-180

Pink fillet above a painted black egg-and-dart on white ground.



**WP 20.** Two isodome fragments?

Loc. 2020, 2301, 2304, baskets 2.1.94, 2.3.27, 2.3.48, 2.3.53, 2.3.59  
P.H. 17, P.L. 31

TA WS96

Six joining fragments preserve edge of a white panel with a preserved margin of a yellow panel.



somewhat discolored. The arrises that meet the wall at either side are painted red. This was the largest preserved and therefore the most informative of the fluted shaft fragments.



LARGE CORINTHIAN ORDER

*WHITE FLUTED SHAFTS (WP 21–26)*

**WP 21.** Portion of quarter-column shaft

Loc. 2301, 2303, baskets 2.3.24, 2.3.59  
P.H. 54, R. at bottom left 15.5, R. at bottom right 17.5

TA WS72

This fragment shows a complete cross section of the quarter-column. The column was slightly thicker toward the left side. The back surfaces are well preserved. Limestone inclusions are evident at the broken ends. The six flutes are not uniform in width or depth and are skewed slightly. Column and flutes diminish in size toward one end (the top). The white surface is

**WP 22.** Fragment from top of a quarter-column shaft

Surface find  
P.H. 9.5, P.W. 6, W. of flute 3

TA WS75

A small fragment with one flute that is constricted, the finishing stucco forming a sulcus at its top. The decorated surface is broken off here, and the preliminary fluting of the core is left exposed above the sulcus. At the right edge (arris) there are traces of red paint, and the wall surface slants back behind this. Part of a second flute is preserved at left. This piece clearly shows how the finishing stucco was added over the rough fluting of the core. It is the only piece preserving the fluting where it meets

the astragal. The fluting is markedly narrow. While a few other fragments have narrower fluting, most are wider, suggesting this piece occupied a position rather low on the shaft.



**WP 23.** Fragment of white fluting  
Loc. 5203A, basket 5.2.38  
P.H. 6.3, P.W. 5.1, Th. 2.1, W. of flute (with arris) 3.6  
TA WS77  
Portion of one flute and part of another, broken all around. The back is flat and nearly parallel to the decorated face (slightly thicker at left).



**WP 24.** Fragments of white fluting  
Loc. 2015, basket 2.1.84  
P.H. 5, Th. top 2.3, Th. bottom 2.8, W. flute (with arris) 3.2  
TA WS79  
Broken through vertically at the arris, where the layered construction is clearly seen. The orientation and position of the back surfaces of these pieces show that they were attached to a running wall surface. The flute widths correspond to those of the upper parts of the quarter-columns. The lack of other evidence for these side columns is explained by the thinness of these examples. They were not half-columns but rather like narrowly cut chords from the surface of a column, showing perhaps as few as six flutes in relatively low relief. They were thus much more fragile than the quarter-columns and left far fewer traces.



**WP 25.** Fragment of white fluted engaged column  
Loc. 2020, basket 2.1.94  
P.H. 23.5, P.W. 13.9, est. D. 33

White engaged Corinthian column shaft from the corner of a room.



**WP 26.** Fragment of white fluted engaged column  
Loc. 2303, basket 2.3.38  
P.H. 21.4, P.W. 15.1, est. D. 33

White engaged Corinthian column shaft from the corner of a room.



#### SMOOTH RED LOWER SHAFTS AND PLUGS (WP 27–30)

**WP 27.** Portion of unfluted red lower third of quarter-column  
Loc. 2303, baskets 2.3.28, 2.3.30, 2.3.38  
TA WS81  
P.H. 26, arc 28

This fragment comes from the stucco dump and is the best-preserved piece of the red lower third of the quarter-columns. The core and the surface of the bottom part of the shaft are nearly complete. The wall juncture at left is marked by a projecting lip. The horizontal curvature is somewhat flattened. The form at the bottom illustrates the transition to the base. The construction there suggests that the base had a separate solid core.

At the bottom, the core ends in a slightly slanted horizontal surface, while the finished face extends below this surface and splays outward before it is broken off.



**WP 28.** Surface section of red lower third of quarter-column  
Loc. 2301, 2006, 2010, baskets 2.1.45, 2.1.49, 2.1.63, 2.3.8  
TA WS67  
P.H. 17.2, est. D. 40, arc 28

The pieces of **WP 28** come from the south side of the collapse debris and from the disturbed soil on top of the stucco dump. This piece is similar to **WP 27** above, also from the bottom of a shaft, but none of the core is preserved. The projecting lips at the side edges and the splayed surface at the foot are clearly seen. The diameter is illusory. As with **WS 81**, the horizontal arc is not a quarter-circle but flattened. **WP 27** and **WP 28** must be the bottom portions of two separate shafts.



**WP 29.** Fragment of red lower third of column  
Loc. 2425, basket 2.4.247  
TA WS21  
P.H. 10, P.W. 10, P. Th. 5, P. W. flute 3, depth of arris 0.3, depth of flute 1.6

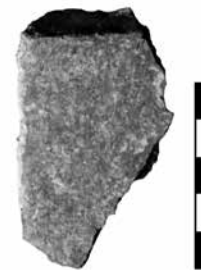
This piece has a curved surface like that of the other red column fragments. Fluting of the same size as on the bottom parts

of the white fluted shafts (**WP 21**) is seen embedded in the plaster a short distance behind the finished surface.



**WP 30.** Red plug  
Loc. 2301, basket 2.3.54  
TA WS64  
P.H. 6, D. 3.3, Th. 1.4, Th. of flange 0.2

This small hemi-cylindrical plaster form is smooth but not decorated on its curved side, while the flat side and one semicircular end are painted red. The side edges continue out from the flat face in thin flanges, which are broken off. The bottom end is broken off also.



Other red plug fragments:  
TA WS65: D. 2.8, Th. 1.7  
TA WS82: D. 2.6, Th. 1.2

#### *BASES OF LARGE COLUMNS (WP 31–33)*

**WP 31.** Fragment, torus and fillet  
Loc. 5113, basket 5.1.105  
TA WS68  
P.H. 8, P.W. 11, H. fillet face 1.0, H. torus 5, vertical curve, right 33

A fragment of limestone, one side cut in a convex profile and with a thin stucco facing, painted red. Only small portions of the finished stucco face are preserved. Where the stucco is missing, the limestone surface shows the general form of plan and profile. This consists of a torus element with an adjacent fillet and a receding element beyond the fillet (apophyge or the beginning of a scotia). The two elements meet in a deep groove. If this groove is taken as a rough horizontal, the fillet appears to project farther than the torus. Clearly this was part of a rough-cut limestone base

that was covered with a thin coating (0.2–0.3 cm) of fine plaster to form a smooth regular surface (see reconstruction in fig. 4a, p. 13 above). The extrapolated radius of the torus (25 cm) matches the lower radius of the red column fragments (20–21 cm); and the red color matches also.



**WP 32.** Fragment, torus of red column base  
Loc. 5203B, 5203C, baskets 5.2.48; 5.2.42 *tris* TA WS84  
P.L. edge 11, P.H. 8.5, Th. lip 0.3

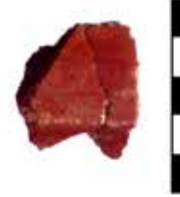
Four joining fragments form a thin layer of red painted plaster with no core attached, the surface slightly convex in both vertical and horizontal directions. A projecting lip edge is preserved that follows the direction of lesser curvature. The red paint is well preserved, the surface rough and slightly uneven. The vertical and horizontal curves are the proper size for a torus of the large quarter-columns. The back of the fragment has a bubbly surface as expected if the plaster was applied over a rough stone face. The change in thickness from top to bottom shows that the profile of the stone surface was altered by the stucco, making the torus larger and extending it farther away from the preserved lip (whether up or down cannot be determined). See reconstruction in fig. 4a, p. 13 above.



**WP 33.** Fragment of red fillet  
Loc. 5203A, 5203B, baskets 4.2.31, 4.2.43 TA WS85  
P.H. face 2.4, P.H. receding surface 0.8, P.L. edge 2.5, recession 1.5

Two small joining fillet fragments with a receding surface (apophyge) at one end and broken at the other edges, covered with a thin stucco layer. The front surface is slightly convex in

one direction (horizontal), parallel to the preserved corner edge; straight in the direction perpendicular to the corner edge. The receding face extends straight back from the face, then swings away to form a concave surface. Clearly this is a fillet element from a member that was circular in plan, probably these quarter-column bases. Like **WP 32**, the back surface is smooth and bubbly. See reconstruction in fig. 4a, p. 13 above.



#### ASTRAGALS (WP 34–37)

**WP 34.** Astragal fragment  
Loc. 2014, basket 2.1.82 TA WS41  
P.H. 3.4, H. astragal 0.8, W. flute 3.4, P.L. flute 4.4, depth flute 1.2, projection 1.6

The astragal fragment filled a rounded depression (flute form). The faceted astragal itself projects forward from this. Below the astragal, the decorated surface recedes into a sulcus to form the top of the finished flute. The flat top of the astragal is decorated with a red stripe that ends in a rising lip across the opening of the molded back. The remaining back portion of the top face was undecorated, apparently covered by the corona decoration.



**WP 35.** Astragal fragment  
Loc. 2425, basket 2.4.258 TA WS42  
P.H. 3.7, P. L. astragal 4.5, W. flute 3.4, projection 1.4

Similar to **WP 34**, but the reduced relief and a stripe of red paint down the arris at the right side indicate that this astragal met the wall here.



**WP 36.** Two-flute astragal fragment  
Loc. 2014, 2303, baskets 2.1.82, 2.3.34 TA WS43  
P. H. 3.6, H. astragal 0.8, right curvature 15, P.L. 8.6, W. flutes 3.4, Th. 3.4, projection 1.9.



Two joining pieces. Little of the flute tops is preserved, and the front surface is broken off at right. This fragment is good evidence that the horizontal curvature of the astragal and profile of the flutes are the same size as the upper parts of the shafts (WP 22) and the rough fluting behind the capital fragments (WP 38 and WP 45), meaning that the fluting, astragals, and capital parts all fit together.



**WP 37.** Astragal fragment

Loc. 5122, 5206, basket 5.1.172  
P.H. 1.6, P.L. 3.1, P. Th. 1.5

TA WS78

Similar to WP 34 and WP 35, but the astragal profile is squarer and slightly smaller, more like a fillet than an astragal. The return at the top is slightly concave, slanting upward. The front face of the astragal is painted yellow, and blobs of yellow paint appear where they fell on the top surface, on the red stripe. The flute is not preserved. If this piece belongs to this series, as it seems to, then it gives some further information. It is possible that the other astragal faces were painted yellow (and gilded). The drops of yellow paint would have fallen from the corona leaves of the associated capital (WP 45).



The volute is trapezoidal in section, the front face narrowing slightly from bottom to top. The outer (left) side is painted white and recedes directly back to the wall; the angled right side is painted red and forms part of the triangular depression between the abacus and the volutes. The molded front face of the corner volute resembles a shallow flute with two arrises along the edge and is covered with very thin gilded plastic decoration in the form of an acanthus rib with leaflets spilling over into the flute-like sulcus all up and down the face of the tendril. This foliage consists of lobed leaflets with rounded tips alternating with lentoid "buds" each of which is punctuated with a row of holes. Where these did not cover the molded surface, there are traces of red paint in the sulcus.

There is a close correspondence between the design of the capital and the quarter-column construction. The rear of this fragment covered three complete flute sections, which is half the profile of a six-fluted quarter-column core. The rear flute impressions are slightly narrower than those of the fluted quarter-column fragments. They fit a circle with an outside radius of 14 to 15 cm, which is slightly less than that of the uppermost fluted quarter-column fragments, as would be expected.

Although the construction of the capitals and their decoration were clearly given close attention, this particular piece can hardly be called a masterpiece. The painting is sloppy and the highlighted acanthus is very poorly finished with thick blobs of plaster, which do not clearly define or differentiate the leaf parts. Other volute fragments were much better finished.



**LARGE CORINTHIAN CAPITALS (WP 38–53)**

**WP 38.** Left corner volute and central helix

Loc. 2303, 2014, baskets 2.3.36, 2.1.82  
P.H. 13.5, P.H. central volute 8, P.W. 14.7, W. of flutes 3.7–4.0, D. of flutes 0.8

TA WS19

The corner volute is composed of two joined molded plaster forms with added plastic details. On the back at left is a flat surface (the wall, behind) and continuous with this (at right, back) are impressions of three roughly formed flutes. Together, these are the impressions of the wall and rough column surface to which the molded forms were attached. The piece is thin at bottom and at right where both volute and helix were close to the rough-formed core surface, much thicker at upper left where the volute sprang away from the core toward the adjacent wall surface. The central helix is complete from the top to the point where it met the kalathos.

**WP 39.** Right corner volute

Loc. 2301, basket 2.3.51  
P.L. 11.5, Th. right bottom 6.7, Th. right top 5.3, W. face bottom 3.0

TA WS47

The full stalk is preserved, but the arch and the eye are missing. The piece is broken at top and bottom. It is trapezoidal in section. No decoration was attached to the outside of the stalk, as the surface is smooth and unbroken from top to bottom. The left side is painted red and slants up left at a 45° angle, forming part of the decorated recession between this and the lost central volute. The molded front surface, again in the form of a flute with arris edges, slants up right toward the wall surface and narrows toward the top. The left (inner) arris of the front face is covered by an applique acanthus rib, whose leaflets and buds extend to the right into the flute-like sulcus. Two leaflets, three buds, and parts of two more leaflets at top and bottom are preserved, all, like the rib, painted yellow and originally gilded.

This piece is essentially the mirror image of the corner volute of **WP 38** above, but the acanthus is finished in a different style, or perhaps one should say with some style, since the acanthus of **WP 38** lacks style altogether. Here there is the same basic pattern, but a deep longitudinal V-cut in each lobe and deeper holes in the "buds" give a crisper effect. The leaf structure is clearer, the leaflets more prominent and the buds subordinate.



**WP 40.** Right corner volute

Loc. 2303, basket 2.3.38

TA WS48

P.H. 6.7, D. left front 4.0. W. face at top 3.1, W. face at bottom 3.4

Like **WP 39**, but only the middle portion is preserved. The right-hand (outside) receding face is painted pink, and two acanthus leaflets are preserved. In addition, a spur at the left side preserves the cupped back end of the recess between this and the (presumed) central helix.



**WP 41.** Left corner volute

Loc. 2417, basket 2.4.214

TA WS49

P.L. 6.8, W. front at top 2.5, W. front at bottom 3.1, Th. at top 4.6, Th. at bottom 5.8.

The left-hand counterpart of **WP 40**, but this fragment represents the upper part of a tendril. The same structure is preserved as in the other examples, but the color is lost except for a little yellow on the one preserved applied leaflet. The left outer arris swings out in a stronger curve (toward the arch of the tendril), and the front face narrows much more noticeably

at the top. The workmanship of this acanthus is of better quality than the other examples. Deep grooves define the structures of the leaflet, and there are touch-up strokes that enliven the contour of the leaf edge.



**WP 42.** Eye of right corner volute

Loc. 2303, basket 2.3.34

TA WS46

P.L. 9.5, W. spiral face at center 0.6, W. spiral face outside 1.2, max spiral span 5.8.

The badly worn surface of this piece was originally the flat face of the spiral with a deep spiral groove cut into the face, all finished with fine plaster and painted pink. These traits are fairly well preserved at the center (two complete turns of the spiral) but nearly lost at the outer edges (another three-quarter turn). The front face was slightly canted to the wall surface at the back.



**WP 43.** Left corner of abacus

Loc. 2303, 2301, baskets 2.3.36, 2.3.53

TA WS44

H. 3.8, D. at end 4.5, P.L. 8.5, H. ovolo 2.1

The actual corner is preserved with its core, while the second part preserves a thick surface layer, without the core, with surface decoration extending to the right. The top of the abacus face is decorated with a molded, gilded egg-and-dart ovolo crown with a fillet at the very top. The ovolo is well molded in high relief at the front but flattened at the left end, where it was difficult to apply by the wall, after the block was attached. It was clearly molded separately and applied to the top of the flat vertical face of the abacus. Below this are uniform painted stripes of (top to bottom) bright red, pink, and white. The bottom edge and the underside

were decorated in red. All this decoration continues left around the corner to the wall juncture. The gilding and paint are very well preserved. On the underside, the decoration ends some distance from the left end. Very close to the right front edge the decoration forms a kind of projecting lip, seemingly the ghost of the helix attachment, which comes near to but not at the corner.



**WP 44.** Fragment from right half of abacus  
Loc. 2303, baskets 2.3.26, 2.3.36  
P.H. 70, P.L. 90, H. abacus 3.5, H. kalathos rim 1.0  
TA WS45

This piece is the portion of the abacus that fits over the space between the corner volute and the central volute. Decoration and construction are as **WP 43**. The kalathos rim is clearly indicated. This shows attention to a detail in the design that might not be expected in plaster work.



**WP 45.** Center of gilded acanthus leaf  
Loc. 2301, basket 2.3.48  
P.H. 4.0, P.W. 4.2, Th. 2.5, W. flute back 3.6  
TA WS20

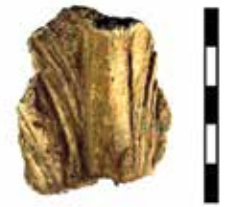
This leaf has a half-round back, showing that it was modeled on a rough flute like the astragals **WP 34–37** and the corner volute and helix of **WP 38**. On the face, left of center, is a vertical, beveled acanthus rib, still gilded. At left the lightly modeled surface of a leaflet slants very slightly back away from the rib. The right-hand surface starts from the back of the rib and slants a little forward right. The folds fan out from the bottom of the rib, upward and to the right. The middle element in the fan ends in a discoid red surface on the right-hand side of the fragment (the

space between leaflets). All the other edges are broken away and most of the yellow paint and gold from the leaflet is lost.



**WP 46.** Central portion of gilded acanthus leaf  
Loc. 2303, basket 2.3.30  
P.H. 4.0, P.W. at front 2.1–2.5, P.W. at back 4.0  
TA WS287

The faceted main rib curves forward, while the leaf surfaces on either side are folded backward like wings. Deep grooves mark the lateral limits of the rib. The folds on either side of the rib are rilled. At left bottom, an additional rib has three crescent-shaped transverse gouges. At the top, more projecting folds begin from the rib at either side. The leaf is broken all around.



**WP 47.** Central portion of gilded acanthus leaf  
Loc. 2309, basket 2.3.58  
P.H. 5.5, P.W. right 2.6, P.W. across back 4.0  
TA WS286

Similar to **WP 46**, but only a rough surface is left on the left side. On the same kind of rough flat surface at right, a very thin layer of stucco forms the leaf surface. A heavy projecting fold is punctuated with a series of six holes. The first three at the bottom near the rib are only pin holes; the second set of three, as the fold grows larger and swings out to the right edge, are larger triangular cuts with traces of yellow and green. At the tip, this fold ends in a red surface at right. Subsidiary folds flank this one. The thin main rib (still gilded) runs up the edge of the rough form, separated from the folds by a groove and curving away to the left. On the back of the fragment finger impressions show that the rough form was modeled. The edges, top, and bottom are broken off. This fragment is from the left-hand end of a corona cut off by the adjacent walls.



**WP 48.** Upper central portion of gilded acanthus leaf

Loc. 2303, basket 2.3.26

TA WS288

P.H. 1.9, P.W. at left front 2.2, P.W. at right front 1.2

A smaller fragment with smaller folds, like **WP 47**, but with decoration preserved only on the left side. At right, a lip signals the abrupt end of the decoration. Two broad projecting folds swing up and away left from the grooved edge of the narrow rib. The lower one has a series of four pin holes, the upper smaller one only two holes. Two thin sharp-edged folds intervene between these. This should be read as from near the tip of a larger acanthus leaf. This fragment is from the right-hand end of a corona cut off by the adjacent walls.

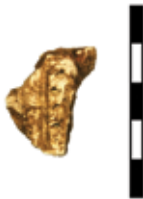
**WP 49.** Fold of gilded acanthus leaf

Loc. 2307, basket 2.3.41

TA WS289

P.L. 2.3, P.W. 1.8

A bulbous projecting fold from a right-hand leaf, with traces of ancillary folds preserved at left, and a series of four holes. The holes are filled with bright light blue paint. The end surface of the fold is painted red. This should be read as from near the tip of a larger acanthus leaf, as **WP 48**.

**WP 50.** Top of gilded acanthus leaf

Loc. 2303, basket 2.3.26

TA WS284

P.H. 3.6, P.W. back 2.9, Th. tip 2.7. Tip projects 1.1 in front of rib.

The tip of the leaf forms a triangular projection like a three-cornered hat atop the rib, which is very thin at the bottom of the fragment and thickens rapidly to support the tip. Two cone-like folds flank the rib and end just below the back corners of the tip, with pink paint on their recessed ends. The whole piece is triangular in cross section, with a flat back.

**WP 51.** Top of gilded acanthus leaf

Loc. 2301, basket 2.3.48

TA WS285

P.H. 5.0, P.W. back 2.7

Like the preceding **WP 50**, but less carefully made, with a longer portion of the rib preserved. The front of the tip is flattened. The rib and leaf folds are barely differentiated by very slight modeling (as on **WP 45**). The depressions at either side under the back corners of the tip are painted red. In both **WP 50** and **WP 51** the rib projects forward, while the leaf surfaces recede back to left and right (as **WP 46-48**).

**WP 52.** Upper part of gilded acanthus leaf

Loc. 2303, basket 2.3.30

TA WS282

P.H. 4.5, P.W. 3.3, Th. top 1.2, Th. bottom 0.6. Tip projects 1.1 from face.

The decorated surface is relatively flat except for the projecting leaf tip. The rib and tip are like **WP 50**, but here the whole top of the leaf is modeled in one plane. At left, two leaflets are preserved and against their tips, at the left edge, one vertical fold of an adjacent leaf that touched their ends. The ends of the bulbous folds (two at left, one at right) are marked by deep triangular indentations. The lightly modeled finer folds fan out on either side of the rib. Only traces of yellow paint remain. The back is flat and nearly parallel to the front face.

With its flat back, this leaf could have been part of a continuous decorative band or an embellishment, perhaps for the neck of a pilaster (although there is little evidence to suggest that such a band existed here that this piece could fit). In scale and the arrangement of the forms, this fragment is very similar to the preceding ones, and in the position of the adjoining leaf, it follows the same scheme as **WP 53**. A flat leaf top would suit the relatively flat lower portion represented by **WP 45** rather well, or, since the side columns were molded in lower relief, this flat leaf may have instead fit there.

**WP 53.** Part of two acanthus leaves

Loc. 21309, 21300, 21305, 21313, 21311, basket 2.13.83 TA WS283

P.H. 5.0, P.W. 4.6, Th. 1.6





The central part of the top of one leaf is preserved. Its surface is badly abraded and the leaf tip broken off. The outline of the tip at right and grooves outlining the rib and leaflets to right and left of the rib are visible. The face of this leaf is relatively flat. Above and to the right of the tip are the folds of a second leaf, which swing up behind the tip of the first. The surface of this second leaf is canted to the first, receding at top and to the back. The back of this fragment is convex but gives no indication of fluting. At the top, centered in the matrix, the end of a rod or strip made of lead is visible. The upper leaf at least was formed around the lead strut for support. This is the only example of an armature in the stucco found at the site.



## THE CORINTHIAN ENTABLATURE

### DRIP MOLDING (WP 54–55)

#### WP 54. Fragment of drip molding

Loc. 2303, 2304, 2420, baskets 2.3.32, 2.3.33, 2.4.204 TA WS166  
P.L. 33.7, P.H. 8.6, relief 6.9, P.Th. 8.1

A very long piece of the drip molding, with the complete return, foreshortened as on WP 68. The back of the piece shows impressions and trace lines of two earlier complex profiles all along its length. On this fragment only the bottom of the cyma reversa is still attached to the cornice face. The trace lines on the back could represent two stages of construction (tidying up the profile where two molded portions did not meet correctly) but more likely indicate two distinct phases of decoration since the profiles of the earlier and later moldings differ in size.



#### WP 55. Fragment of drip molding

Loc. 2303, basket 2.3.36 TA WS167  
P.L. 36, P.H. face 7.3, P.Th. 17.4

As on WP 54, the bottom of the cyma reversa and the complete drip profile are preserved. As on WP 68, the unfinished return is preserved extending straight back from the finished part, and above this the reed impressions. The profile is better formed, like that of WP 67, with a longer, straighter return than on the other two fragments. Earlier phases of the profile are not vis-

ible here, but the constructional join between this and the sima form is clear on the top surface.



### DENTIL FRIEZE (WP 56–60)

#### WP 56. Set of six large dentils

Loc. 2303, baskets 2.3.8, 2.3.28, 2.3.36 TA WS161  
P.L. 38.5, P.H. 8.8, P.Th. 10.0, H. dentils 6.2, W. dentils 4.2–4.4,  
W. interstices 1.8–2.0, H. roundel 2.0

The front and bottom faces of the dentils are white, the interstices red. Portions of the molding immediately above the dentils (a roundel with fillets) are preserved. Immediately below the dentils, a bit of the receding wall surface is preserved, with traces of gray paint (originally blue?).



#### WP 57. Set of three large dentils

Loc. 2303, basket 2.3.38 TA WS162  
P.L. 19, P.H. 14, W. dentils 4.5, W. interstices 2.1

Front and bottom faces white, interstices red. A segment of the roundel above the dentils is preserved. A mass of plaster projects above the level of the roundel.



**WP 58.** Large dentil with corner spacing

Loc. 2303, basket 2.3.13

TA WS165

P.L. 12.5, P.H. 8.8, Th. 5.5, H. dentil 6.2, W. dentil 4.2–4.4, W. spacing at bottom 4.1.

The spacing to the left of this single dentil spreads wide at its bottom end. From this to the left end of the fragment, where the face of a second dentil is expected, the surface is broken. The molding above the dentil is missing. This inside corner fragment corresponds to **WP 66**, the corner pieces of the sima molding.



The bottom surfaces of the dentils have no smooth finishing coat but instead show construction marks running in lines from dentil to dentil along the frieze.

This fragment and a few others like it could of course represent a different dentil frieze from the others. These dentils are, however, just the size of the core dentils of the other fragments. In other words, these could be the dentils of the earlier phase that were elsewhere resurfaced to become the dentils of the later phase. In this case and a few others, it seems that the dentils were not changed. It is possible, but unlikely, that all traces of the resurfacing have vanished. Perhaps these dentils occupied an inconspicuous part of the room, where refinishing was considered unnecessary.

**WP 59.** Set of two large dentils

Loc. 2301, basket 2.3.53

TA WS164

P.L. 15, H. dentils 5.7, W. dentils 4.6, W. interstices 2.4.

Two white dentils with a red interstice and the roundel molding above them. Top surface flat. A corner of the left-hand dentil is broken off, revealing the surface of the core dentil. The dentils here are a bit shorter and wider than those of the other examples listed above, and the interstices are also wider.

**SIMA (WP 61–68)****WP 61.** Fragments of large sima molding

Loc. 2303, 2309, baskets 2.3.32, 2.3.58

TA WS269

P.L. 45, H. 12, P. depth at top 18.5

This is the largest fragment of the sima, preserving a complete profile down to the flat face of the cornice, below the small cyma reversa (geison crown). The geison crown itself, with its fillet, was molded so that its lower end is canted forward in relation to the vertical established by the main sima molding. At a depth of 2.5 to 3 cm behind these moldings, an earlier, embedded molding can be seen at the ends of the fragment. The top surface of that molding is seen farther back, 1–2 cm below the top of the later molding and tilted down in relation to the latter. Farther back, inside the earlier molding, are impressions of bundles of reeds on which the cornice was molded to reduce its weight. The top of the sima is finished only a short distance back, above the top fillet, but the rough-finished surface here continues back far behind the face. At the back of this top surface are traces of red and black paint that dripped onto it from above.

**WP 60.** Set of four large unpainted dentils

Loc. 2303, baskets 2.3.34, 2.3.38

TA WS163

P.L. 25, H. dentils 5.4–5.5, W. dentils 4.0–4.1, W. interstices 2.4

These dentils are noticeably smaller than the rest, with yet wider interstices. Except for a spot of red on the far left dentil and some smudges, there is no evidence that paint was applied to any part of this piece. A bit of the roundel molding remains.





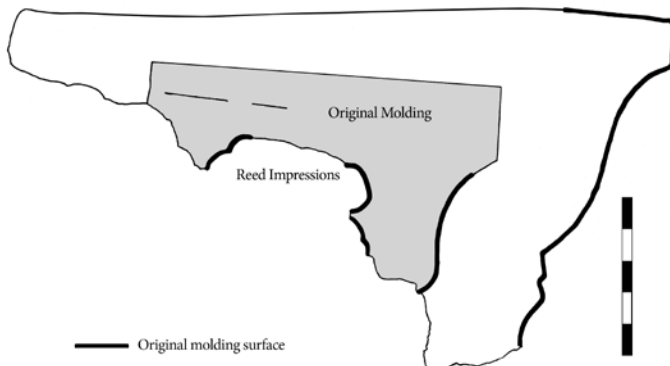
**WP 62.** Fragments of large sima molding  
 Loc. 2303, 2307, baskets 2.3.34, 2.3.74 TA WS270a, b  
 P.L. 38, H. 12.5, P. depth at top 14.7

Like **WP 61**, but the joint to the drip molding is not clear. There are drops of pink and red paint on the top surface.



**WP 63.** Fragment of large sima molding  
 Loc. 2309, basket 2.3.60 TA WS271  
 P.L. 30.4, P.H. 11.5, P. depth top 15

Similar, but the lower end of the small geison crown is not preserved. The earlier embedded sima molding is visible at the right end. Traces of red and yellow paint dripped on the rear end of the top surface.



**WP 64.** Fragment of large sima molding  
 Loc. 2303, 2301, baskets 2.3.21, 2.3.34, 2.3.36, 2.3.51 TA WS273  
 P.L. 17.8, H. 12.5

A nearly complete profile. An earlier phase of the cyma reversa geison crown is visible where the plaster of the last phase broke off. There are traces of red paint on the top surface.



**WP 65.** Fragment, two phases of sima molding  
 Loc. 21300, basket 2.13.87 TA WS272  
 P.L. first phase 11.3, P.L. second phase 10.4, P.H. 9.5, P. depth at top 19.0

Only the cyma recta of the profile is preserved. The face of the concave portion of the earlier sima molding is exposed over half the length of the fragment. On this are traces of a finishing coat of white. This piece was found under the last course of wall 21301 (dated ROM 1A–C); it was clearly trampled underfoot before the walls of the last Hellenistic architectural phase were built. This is the only piece on which the face of the embedded sima molding can be seen.



**WP 66.** Corner pieces of large sima molding  
 Loc. 2304, 2303, baskets 2.3.27, 2.3.13 TA WS275  
 Side one (2.3.27) P.L. 22.0, P.H. 11, P. depth at top 11  
 Side two (2.3.13) P.L. 10.0, P.H. 8.5, P. depth at top 11

Two fragments that seem to join at a right angle (the photo shows only the single long front piece). Together they demonstrate that the sima molding ran around the corners of the room. The longer piece (left) has the complete profile. The upper part of its right end is deeply cut by the impressed form of a similar molding, which it abutted at a right angle. The shorter piece preserves only the cyma recta of the profile. This fits the impressed form at the right end of the first piece. The left-hand part of the face of the second piece has a puckered surface where it was covered by the first, and this space ends in a curving lip where the two profiles met. To the right of this line, the surface is smoothly finished.



**WP 67.** Cornice fragment

Loc. 2309, 2307, baskets 2.3.59, 2.3.74  
P.H. face 11, P.L. 16.8, relief 7.6

TA WS168

The preserved profile includes (from the top) a bit of the cyma recta, the fillet and small cyma reversa, the bottom of which forms a pointed projection; the vertical face of the cornice, the drip molding and part of the return behind it. This is a relatively thin fragment, which broke off approximately at the face of the earlier molding. The impression of the lower, convex portion of the earlier sima forms the back of this piece, behind the cyma reversa of the later molding (Th. 2.4), while the back behind the cornice face preserves the impression of a cavetto, at a greater depth.

**WP 68.** Cornice fragment

Loc. 2303, baskets 2.3.38, 2.3.40  
P.H. face 12, P.W. 22, finished relief 8.2, P. Th. 17.2

TA WS169

Like **WP 67** but thicker; at the top there is a bit more of the bottom of the recta, as well as the top and full return or the drip molding at the bottom. The latter ends in a lip, but the unfinished return continues straight back from it. The fillet is abnormally tall here, shortening the cyma reversa. The return is foreshortened and bowed. The trace lines of two earlier phases (cavetto moldings) are visible immediately behind the cyma reversa, which continue downward behind the cornice face in a further cavetto and apparently the face of the earlier cornice, reaching to the return. On the back, above the unfinished return, a bit of soft plaster preserves the impressions of the reeds that formed the core of the sima-cornice molding.

THE DORIC FRIEZE (**WP 69–70**)**WP 69.** Doric frieze fragment

Basket lost

TA WS213

P.H. 8.7, P.L. 11.4, P.H. triglyph 7, P.H. metope 4.5, P.L. metope 7

White Doric frieze preserving triglyph, metope taenia, and guttae.

**WP 70.** Doric frieze fragment

Basket lost

IAA 03-177

P.H. 12.4, P.L. 36.8

White Doric frieze preserving triglyphs, metopes, and a portion of the cornice above.



## ATTIC ZONE

**PILASTERS (WP 71–78)****WP 71.** Pilaster base

Loc. 2303, baskets 2.3.32, 2.3.34, 2.3.38

TA WS7

P.H. front 13, P.L. 23.2, P.H. plinth 4.2, P.L. plinth 22.2. H. front moldings 6, P.L. side 17.3, P.H. side 6.2

This L-shaped form comprises two sides of a pilaster base, as attached to a projecting corner. The open interior area has fluting impressions on both sides where the molded pilaster shaft continued down behind the base forms, which were attached to it. One side of the base (here called the front) is nearly complete, together with a plinth below the base molding and a slab of unfinished plaster below the plinth. Molding and plinth return at left to a wall and the plinth returns at right. Here the right side recedes far behind the front face. This side consists of two badly worn pieces, which show the complete base-molding profile. Thus, the front plinth is complete end-to-end. The front base molding is complete at its left end and is completed at right by the trace of the right-side profile.



Although both shaping and painting are uneven, the following pattern can be discerned: the bottom of the plinth spreads out in a lip, showing that it stood on a surface that projected farther than itself, in all directions. The plinth is rough-finished, painted black except along its top quarter, where a bright red band takes over. A vertical fascia about one-third the height of the plinth is set back slightly atop the plinth, where the red color continues. Above this, the base molding proper (both front and right side) consists of a broad flattish cyma recta profile with small fillets above and below, and a slanted return at the top (toward the shaft). This part is all golden yellow (ocher) and is slightly taller than the plinth. The impressions on the interior show, at left, a flat wall surface parallel to the front of the base, with a relief portion at extreme left (with a trace of dark red paint and a diagonal groove impression, i.e., the corner of a molded triangle) to which the left end of the base returns. The rest of the interior impressions consists of six flutes behind the front and six flutes at the side with a projecting squared corner between, diagonally behind the right-hand corner of the base. At the rear end of the right side, the fragment breaks off after the sixth flute, giving no indication how the form ended or continued there.



top view



angle view

**WP 72.** Corner fragment of pilaster shaft  
Loc. 2303, basket 2.3.38 TA WS2  
P.H. 11.0, P.W. of side with V-shaped flutes 5.6, P.W. of side with rounded flutes 8.8.

The corner fragment of a white, fluted pilaster with three flutes preserved at either side is still attached to a fragment of a limestone ashlar block. Surface formed of mostly fine plaster upon which fluting was applied and shaped. Variations in the size and shape of flutes indicate that there was not just one profile tem-

plate for the whole pilaster. The flutes on one side are rounded with peaked joints; on the other side, V-shaped. A flat form was used to even out the projections and simultaneously to shape the squared corner.



**WP 73.** Fragment of pilaster shaft with redecorated border  
Loc. 2301, basket 2.3.54 TA WS63  
P.H. 7.4, P.W. 7.2

This segment shows four flutes of a pilaster shaft with two additional successive flat borders. The flutes are rounded, arrises flattened. The earlier border shows a white band next to the pilaster, then a white groove, and a pink band. Over this a thin coat of fine plaster was added up to the first flute of the pilaster. This was painted red, darkened to purple, as far as preserved.



**WP 74.** Flat surface and pilaster molding attached to limestone block

Loc. 2006, 2010, basket 2.1.178 TA WS69  
H. of block 43, P.H. of fine surface 37, P.W. of fine surface 47

A rough-chiseled rectangular block with a fine plaster surface covering most of one broad face (here called the front). A trace of a pilaster molding borders one end (two arrises parallel to one end, 5.5 cm from it); at the other end a straight lip projects where the plaster ends abruptly. All other edges of this surface are broken off. The end face of the block is partly covered with hard coarse plaster that forms an even, unpainted surface on a line parallel to the lip and the pilaster molding. The fine plaster

surface on the broad face has spotty traces of a thick sooty black layer with a powdery light blue material on top. The pilaster molding was left white.

The pilaster fluting here matches that found on **WP 91** and also occupies the same position on the block. Here, the opposite end of the block also has a plaster surface, which was hardened by weathering as if it had covered an exterior surface. It seems that three sides of the block were exposed: the two ends and one broad side. This is best explained by assuming that this block was part of the jamb for an opening in the wall. The pilaster would flank the opening on the inside, the broad surface would mark the aperture, the rough surface would form part of the exterior face of the wall. The pilaster is small, which would suggest that the opening was for a window rather than a door.

The unplastered space on the broad side near the rough-plastered end of the block seems to belong to the exterior end of a window aperture. Fragments of cut stone grillwork have been found in the vicinity of the main stucco deposit. The thickness of the grillework conforms to the space between the decorated surface and the rough-plastered end. It would be reasonable to presume that such grillework was set against this part of the block, filling the exterior end of a window aperture. Aside from neatly explaining the disposition of the decoration, block, and grillework, this theory may explain the blue surface of the block.



**WP 75.** Pilaster shaft with adjacent red surface  
Loc. 5108/5110, baskets 5.1.62, 5.1.50  
P.H. 9, P.W. 8.4

TA WS3

Two joining fragments of molded white pilaster fluting meet a plain surface with orange-red paint. Part of four flutes and four arrises are preserved. The red paint extends up to the first ridge of the fluting.



**WP 76.** Pilaster shaft with adjacent green surface Not illustrated  
Basket 2.1.49, Locus 2006  
P.H. 5, P.W. 5

TA WS6

White molded fluted pilaster shaft with three flutes preserved. The adjacent wall surface is painted green.

**WP 77.** Pilaster capital with gilded ovolo  
Baskets 2.3.28, 2.3.63, Loci 2303, 2310  
P.L. top 15.8, P.H. 6.4, Th. 5.0

TA WS23

A molded, gilded ovolo, with four eggs and three darts preserved, has a light blue cavetto of the same size above it and a white fillet at the top; the recess below the ovolo has a dark red band, then a projecting yellow fillet (astragal) and a flat, light blue surface, broken off at bottom and sides. At the break is a lip, the ghost of some lost appliqué decoration on the blue surface. At left, the ovolo is replaced by a lightly molded gilded leaf. This covers a corner where the molding returns to the flat wall surface. The top is unfinished behind the top fillet. The piece is broken off at right and bottom.



from  
bottom



**WP 78.** Pilaster capital with gilded ovolo  
Loc. 2303, baskets 2.3.36, 2.3.38  
P.L. top 15.3, P.H. 5.5, Th. 5

TA WS32

This fragment is identical to **WP 77**, except that the cavetto is bright pink. This piece is broken off at the dark red line below the ovolo.



### COLONNETTES (WP 79–90)

**WP 79.** Left half of plinth, lower torus, and scotia of colonnette base

Loc. 2010, baskets 2.1.187, 2.1.189  
P.H. 7.3, P.W. 9, Th. of plinth 6.5

TA WS276

The plinth is poorly formed, splayed at the bottom, with traces of red, yellow, and black paint on front, left side, and top. The base is red. The uneven profile comprises a lower torus, a fillet above this, and the beginning of a scotia. On the back, a series of angular flute impressions runs to the bottom of the plinth.



**WP 80.** Left half of plinth of engaged colonnette  
Loc. 2303, basket 2.3.30  
H. 6.0, P.W. 9.5, Th. 7.5

TA WS290

On the top of this rectangular piece, an unfinished quarter-circle extends from a center at the rear right corner almost to the opposite edges. At the outer edge of this arc is an upturned lip; here and running down the front and left end black paint covers an earlier yellow painted surface. There are traces of red paint on the top. Below the painted area, at the bottom of the front face is an unpainted white band and a projecting lip. Under the plinth is a slab of plaster, broken all around. This slab corresponds to that under the pilaster base **WP 71**.



**WP 81.** Upper torus and apophyge of engaged colonnette base  
Loc. 2304, 2301, baskets 2.3.27, 2.3.48  
P.H. 4.8, P.L. 13.5, Th. 2.7

TA WS277

The profile is clear but uneven in execution. From the bit of the wall surface preserved on the back of the right-hand end, most of the arc appears preserved, with only a little of the left-hand end lost. Between these points, on the back, the impressions of six rounded flutes (variable widths, pointed arrises) arch forward from the wall-line just behind the base molding. The last flute at right is divided by an indentation close to the wall-line, the hint of a last arris crowded in at the corner, making the last flute narrower than the others. There is room at the left end to restore another flute and arris of this sort, for a total of seven flutes, eight arrises. The top of the fragment is not broken; the straight, slanting apophyge projects forward at a low angle from the top of the flute impressions. Since the outer form of the base has a less splayed horizontal curvature than the fluting profile, the apophyge is constricted near the wall-line. The apophyge is separated from the torus by a short fascia; a fillet below the torus projects at least as far as the torus itself. The top of the scotia is preserved, and the piece is broken off roughly horizontally at the deepest recession of the scotia. The whole outer surface is painted red (two coats); there are traces of yellow overpaint on the apophyge and spots of white and green on the front surfaces.



**WP 82.** Portion of lower torus and scotia of colonnette base

Loc. 2303, basket 2.3.34  
P.H. 4.0, P.W. 6.4

TA WS278

This small piece shows the complete torus profile with a short fascia and the bottom of the scotia above it. At the bottom, the decoration breaks off at a projecting lip. The flat bottom is unfinished, the front surface red, otherwise broken all around.





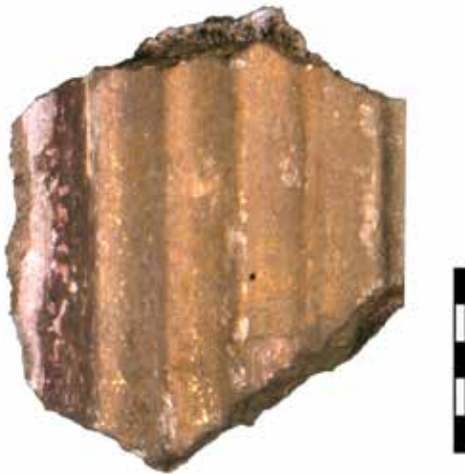
Though they cannot be joined, **WP 80–82** could have been parts of one and the same colonnette. All are of the same size and proportions, and all came from the stucco dump.

**WP 83.** Portion of gilded shaft of engaged colonnette

Loc. 2303, basket 2.3.34  
P.H. 10.2, P.W. 11

TA WS58

The piece is broken all around, but judging from the wall face preserved at one side, most of the profile is preserved, including six and one-half flutes that form an arc of about one-third circle. There is no clear break in the plaster in front of and behind the wall-line. The flutes are shallow, the arrises rounded. The whole shaft is gilded over a yellow-ocher substratum. The wall face alongside the shaft (but not the shaft itself) shows re-decoration. The earlier phase of the border is pink. On this, a thin layer of stucco runs up to the last arris, obscuring it. The overpainting of the border is purple.



**WP 84.** Portion of gilded shaft of engaged colonnette

Loc. 2303, basket 2.3.36  
P.H. 7.5, P.W. 7.8

TA WS279

Similar to **WP 83** in form, color, and preservation but of reduced scale. The profile of the flutes is jagged, again including most of an arc of about one-third circle. Five prominent flutes give way to a sixth in sharply reduced relief next to the wall surface (preserved at one side). The border is purple. The back surface is relatively flat. All shaft fragments are gilded, including one that seems to show the transition to the astragal at the top.



P.H. 9.6, P.H. abacus 4.0, P.W. abacus 9.2, P.H. volutes 2.4

Preserves most of abacus and left-hand volute zone, upper half of central helix. Missing: abacus corners, the uppermost portion and bottom of the volute, and the upper right-hand portion of the fleuron. The back surface reveals a vertical offset in the wall behind the left side of the capital, making the left end of the capital thicker than the rest. The left-hand corner of the abacus is disengaged from the wall. A lip rising at the back of the unfinished top surface (on the return) is yellow and may once have been gilded.

The abacus consists of a flat pink face with a tiny projecting crown molding and fillet at the top, the crown gilded. Preserved of the modeled, gilded fleuron are the base, two petals slanting out at left with tips folded over, and the outline of the opposite petals at right. These all fan out from the bottom of the abacus just between the central helices. The petals at left fold over and out just below the crown molding.

Below the abacus, tall slender volutes spring up. The corner volute and central helix begin parallel and slant outward from the sinuous fleuron stem. The volutes and stem were hand-finished in relief. The projecting front surfaces of the corner volutes are flat and relatively uniform in width (1.2–1.0 cm) up to the arch; the central helices and fleuron stem are rounded, each of uniform width—the central helices half as wide as the corner volutes, the central fleuron stem half again as wide. All five are gilded. The recessed surfaces between these elements and outside the corner volutes were painted a pinkish red.

There is hand-finished, molded, gilded foliage at the base of the left-hand volute. This appears to be a leaf tip covering the base of the central helix and part of the corner volute. To the left of this, a rough surface on the left side of the corner volute shows that something (probably more foliage) was applied from this point almost halfway up the outer side of the volute (the corner of the capital), well above the base of the volutes.



front view



side view

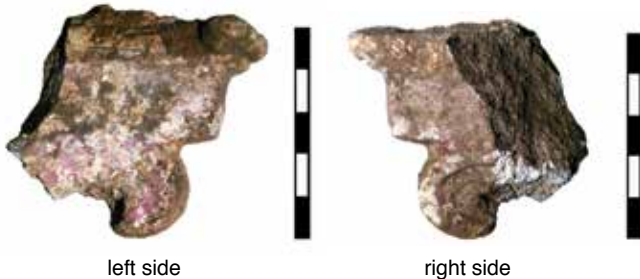
**WP 85.** Upper half of small engaged Corinthian capital

Baskets 2.3.30, 2.3.40, Locus 2303

TA WS326/IAA 02-3527

**WP 86.** Right corner of abacus and corner volute of small engaged Corinthian capital  
 Loc. 2303, 2309, baskets 2.3.28, 2.3.60 TA WS36  
 P.H. 5.0, abacus H. 2.2

A basically square abacus corner and right volute, finished on both back and front, with a gilded crown molding with a knob on the front corner. The rising top of volute narrows to the abacus corner. The face of both abacus and volute is pink, except for the top (outer) edge, which is gilded. This is the right-hand counterpart of the disengaged abacus corner on **WP 85**, but the profile of the volute is concave, and the outer edge of the helix projects beyond the bottom edge.



**WP 87.** Eye of left volute of engaged Corinthian colonnette  
 Not illustrated  
 Loc. 2304, basket 2.3.27 TA WS37  
 Th. 1.3, P.D. 2

Cylindrical fragment broken on two sides. The outside circumference is gilded. The flat front face is pink, with traces of red and yellow paint applied at the center.

**WP 88.** Upper left quarter of engaged Corinthian capital  
 Loc. 2303, basket 2.3.36 TA WS38  
 P.H. 5.9, H. abacus 2.4

Most of the upper left quarter of the capital, including nearly all the left half of the abacus, corner volute, and left helix are preserved. The tip of the abacus corner is broken off; the back was not finished. The crown molding, center volute, and the end of the corner helix are gilded. The recessed areas are pink.



**WP 89.** Bottom of corner volute and central helix of small Corinthian capital  
 Surface find TA WS35  
 P.H. 4.7, P.W. 2.2

Only the very bottom of the central helix and the bottom half of the corner volute are preserved. The profile of the corner volute consists of two sulci and a central rib, both originally white,

then gilded. At its base, the gilded central helix widens, the left side being cut off diagonally by the corner volute. At bottom, a ruffled lip runs straight across the left half of the corner volute. The recessed areas, as on the other fragments, are pink.



**WP 90.** Gilded acanthus leaves (calyces of a cauliculus?) of small Corinthian capital  
 Loc. 2303, Basket 2.3.40 TA WS328  
 P.H. 3.7, W. 3.5, Th. 2.5

Modeled, gilded appliqué acanthus leaves. A lower, smaller leaf extends from a narrow base up left, and a larger, wider one up right. From behind the smaller leaf, a flat-faced element (broken top and left) extends upward; it is white with traces of gilding. To the right, behind the broken top of the right-hand leaf, is a receding area painted pink. Both leaves have prominent ribs bowed outward at the two sides of the fragment, so that the two leaves together form a cup-shaped element. The leaflets converge over the flat vertical element, leaving a triangular opening between them over its bottom right corner.

This fragment probably belongs to the bottom right side of capital **WP 85**, but the joining surfaces on both were apparently crushed during or after excavation. The orientation is not exactly clear, but it seems that this part was slanted toward the wall surface at right, so that the receding pink surface and right leaf came close to the wall. This fragment might prove that the leaves found on those two fragments were calyces from cauliculi, not corona leaves.



#### THE LOZENGE AND TRIANGLE DESIGN (WP 91–112)

**WP 91.** Molded triangular panels attached to white pilaster on a limestone block  
 Loc. 2024, baskets 2.1.104, 2.1.110 TA WS1  
 Limestone block H. 64, W. 43, Th. 19. Decoration P.L. 30, P.W. 51

Stucco adheres to most of one broad side of a roughly squared limestone block. Decoration is preserved toward one end of that



surface. A bit of molded fluting running parallel to the shorter side near the edge of the block must be part of a small pilaster. At the outer edge, this decoration is broken off. At its inner edge, the fluting is bordered by a dark red band with a median groove. Similar bands with grooves extending diagonally from the pilaster enclose remains of two isosceles-triangle panels with molded borders. The narrow bases of these are backed against the pilaster, while their peaks are to be sought near the opposite end of the block. Between these triangles, its apex approaching the pilaster, is a congruent form with molded, gilded ovolo border preserved along one side. As the base of this form is not preserved, it could be a triangle like the others or a larger form.

The fluting and the surfaces of the panels, except for the borders, are done in relief, the ovolo border applied in molded sections. The fluting of simple zigzag profile was finished in pure white stucco. The grooved margins were painted dark red. The ovolo was painted yellow and gilded over the paint. This element actually rises in slightly higher relief than the central surfaces of the panels. The molded margins of the bands are lost from one, but the better-preserved triangle has narrow bands of black and pink on the molded step, then another band from which the color is gone. The central portion of this triangle is yellow, while that of the other is pink. Similar banding is found on the upper surface of the intervening panel, inside the ovolo border: black, red, deep pink, pale pink, and the central section green. Another fragment, not catalogued, seems to show a pink center for a lozenge (TA WS215).



**WP 92.** Molded triangle on basalt boulder  
Loc. 5110, basket 5.1.67, TA WS71  
H. boulder face 1.43, W. boulder 30. Decoration P.L. 15, P.W. 10  
This basalt boulder was split or cracked to produce one flat side. On that flat side, at one end, there remains a stucco corner of a molded triangular form and the corner of an adjacent triangular form (angle of molded corner  $73^\circ$ ). At the extreme corner of the latter, half of a molded, gilded finial appliqué is attached. The appliqué comprised a bladelike leaf pointing to the corner, with ancillary thin leaves curved back, forming a fleur-de-lis design. The rest of the relief decoration is lost, leaving an irregular ghost of its edge. There are traces of gilding on

this, dark red paint in the border between the forms, and traces of pink on the molded triangle.

This is a smaller piece of the same configuration as that found on the limestone block **WP 91**. The gilded corner points horizontally, and the extreme corner of this panel (not preserved) would reach just beyond the end of the stone. The edge of the molded triangle (perpendicular to the finial corner) would then mark the end of the design, the point at which a pilaster appears on **WP 91**. Note that the block ends near the end of the design.



**WP 93.** Gilded ovolo corner, obtuse angle  
Loc. 2309, basket 2.3.58, TA WS55  
P.L. 49, P.W. 4.2. Relief 0.4

Obtuse angle corner of a molded, gilded egg-and-dart border of a lozenge panel, with two eggs and parts of three darts. The outer margin is not preserved. One of the eggs of the ovolo is placed approximately at the corner. Inside the angle run one black and one pink band (as on other examples). The corner angle is  $145^\circ \pm 5^\circ$ , which is very nearly twice the  $73^\circ$  found on the base angles of the triangles of **WP 91** and **WP 92**. In other words, within the limits of accuracy of our measurements (and the original construction techniques), this is definitely the corner of a lozenge of the same proportions, form, and decoration as those found on the preceding examples. This fragment constitutes proof that at least some of the forms with the gilded ovolo border were in fact lozenges.



**WP 94.** Gilded ovolo corner, sharp acute angle

Loc. 2303, basket 2.3.26 (30?), TA WS54  
 P.L. 10.0, P.W. 8.5. Decoration P.L. 8.0, P.W. 6.8. Relief 0.6, angle  $20^{\circ}$ – $22^{\circ}$

Sharp acute angle corner of a molded, gilded egg-and-dart border of a lozenge panel. The border is preserved on one side, lost from the other. Banding starts from the latter side toward the former in bands of black, pink, and other colors now lost. The margin below the preserved ovolo was never painted.

**WP 96.** Gilded ovolo border, obtuse angles

Context lost TA WS50  
 P.L. 6.5, P.W. 3.5, relief 0.9, angle  $130^{\circ} \pm 5^{\circ}$

Obtuse angle corner of a molded, gilded egg-and-dart border of a lozenge panel, with two eggs and parts of three darts. There is a purple margin below and black band above. An egg is placed at the corner. An earlier phase of decoration with light blue paint is visible under the margin, below a thin layer of stucco.

**WP 95.** Gilded ovolo corner, sharp acute angle

Loc. 2303, basket 2.3.26 tris TA WS56  
 P.L. 8.8, P.W. 4.9, angle  $22^{\circ}$

Sharp acute angle corner of a molded, gilded egg-and-dart border of a lozenge panel. Along one side, both the ovolo and the margin went unpainted. Parallel to the opposite side are a purple margin below, the ovolo and bands inside the angle of black, pink, and further colors lost.

**WP 97.** Gilded ovolo border, acute angle

Loc. 2309, basket 2.3.59 TA WS51  
 P.L. 9.9, sides 8.1 and 6.1, relief 0.5, angle  $52^{\circ}$

Acute angle corner of a molded, gilded egg-and-dart border of a lozenge panel. Large fragment with purple margins preserved to the grooved edge on both sides. Inside are parallel bands of black, pink, and red.



The angles on **WP 94**, **WP 95**, and other similar uncatalogued fragments are so acute that they cannot conform to the pieces previously described. They would fit a set of triangles and lozenges with angles of split apex  $22^{\circ}$ , apex  $44^{\circ}$ , base  $68^{\circ}$ , and obtuse angle  $136^{\circ}$ . In fact, these angles can be read as half of an apex angle. Such an angle would appear where a lozenge was split lengthwise when the design was cut off horizontally at top or bottom. Apparently these pieces came from forms at the edge of a pattern, as indicated by the fact that the border on one side was left unfinished. Thus these fragments probably came from the bottom of the lozenge design. The fact that the one margin on each and even the adjacent ovolo on **WP 95** went unpainted shows that this edge of the design was not visible. It was surely hidden by the projecting molding immediately below, which supported the pilasters and colonnettes of the lozenge zone.

**WP 96** and **WP 97** must represent another set of forms in the same series, with angles of approximately: split apex  $25^{\circ}$ , apex  $50^{\circ}$ , base angle  $65^{\circ}$ , and obtuse angle  $130^{\circ}$ .

**WP 98.** Gilded ovolo border, obtuse angle  
Loc. 2303, basket 2.3.34  
P.L. 5.8, P.W. 5.6, angle  $122^\circ \pm 5^\circ$

TA WS53

Obtuse angle corner of a molded, gilded egg-and-dart border of a lozenge panel. Preserved are two eggs and two darts, a bit of purple border outside, and a black and a red band inside.



other side). Inside the border are bands of black, red, and pink. The broad central area is painted green.



**WP 99.** Gilded ovolo border, acute angle  
Loc. 2303, basket 2.3.38  
P.L. 7.3, P.W. 6.5, relief 0.6, angle  $55^\circ \pm 5^\circ$

TA WS52

Acute angle corner of a molded, gilded egg-and-dart border of a lozenge panel. Two molded eggs are preserved along either side. Center banded in black, dark red, and pink. A bit of purple margin is preserved.



**WP 101.** Sharp acute angle corner of lozenge panel with gilded ovolo border

Loc. 5114, basket 5.1.117,  
P.L. (border) 6.5, P.W. 7.4

TA WS223

The molded ovolo border is preserved at one side (the margin below it was rough-finished and left unpainted), while the banding runs parallel to the (lost) other side. Inside colors: traces of pink and black banding, and a triangular area next to the ovolo is yellow (not ochre). Comparable to **WP 94** and **WP 95** above, this must be from a top or bottom panel (a lozenge split lengthwise).



**WP 98** and **WP 99** represent the acute and obtuse angles of lozenges. These angles approach  $60^\circ$  and  $120^\circ$ , which would yield the broadest triangles and lozenges in this series. Since  $60^\circ$  would be the base angle as well as the apex angle of the triangle, the gilded ovolo borders could belong to triangles rather than lozenges. It is worth noting, however, that we have positive evidence for the obtuse angle ovolo border but not for the complementary molded border. No ovolo corner angle falls between  $120^\circ$  and  $60^\circ$ .

**WP 100.** Acute angle corner of panel with gilded ovolo border  
Loc. 2303, basket 2.3.26  
P.H. 8.4, P.L. 9.5

TA WS222

Acute angle corner of a molded, gilded egg-and-dart border of a lozenge panel. The outer margin is not preserved on either side, the molded ovolo on only one side (a trace is left on the

**WP 102.** Finial, acute angle corner of lozenge panel

Loc. 2303, basket 2.3.26

TA WS231

P.L. grooves 8.7, 4.7, P.L. finial 4.2, P.W. fragment 7

Grooves marking the edges of a panel approach each other at an acute angle. Between these, one margin is painted purple, the other left unfinished. Centrally placed between the grooves is the ghost of the ovolo borders (broken off), then the modeled finial (painted yellow, surely gilded) consisting of two circular flat forms, two thin leaves curved back along the circular



forms, and a thin corner spike (the last broken off). These are arranged along the midline between the grooves.



**WP 103.** Gilded finial  
Loc. 2303, basket 2.3.28  
P.L. 36, P.W. 2.5, W. spike 0.7

TA WS234

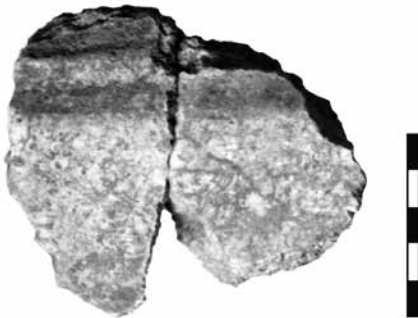
A tiny fragment preserving the tip of a gilded finial on a purple surface. The form consists of a spike (or straight thin leaf) with a median groove: at its base, a pair of thin leaves circle back from either side.



**WP 104.** Side portion of molded banded panel  
Loc. 5110, baskets 5.1.189, 5.1.190  
P.L. edge 7.3, P.W. 7.5, W. margin 0.2–0.6

TA WS232

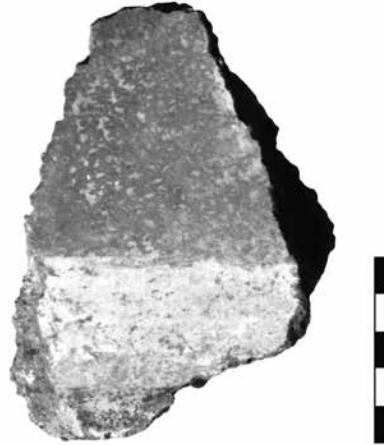
The outer border is purple, very narrow, and ends in a projecting lip. The relief step is banded black and red. The adjacent (outer) edge of the central area is painted with a bright pink band. Beyond this, the largest portion of the fragment, as far as the opposite, broken edge, is covered with a thick layer of sky blue paint.



**WP 105.** Side portion of molded banded panel  
Loc. 2303, basket 2.3.34,  
P.L. edge 5.7, P.W. 10.5

TA WS233

The outer margin is not preserved. The step is banded black (below) and pink (above). The color of the banding at the outer edge of the panel itself is lost. Beyond the ghost of this paint, the rest of the fragment is painted yellow.



**WP 106.** Wide-angle corner of molded banded triangular panel  
Loc. 2303, basket 2.3.28,  
P.L. 10.0, P.W. 5.2, P.L. step 3.2

TA WS227

Only a portion of the central surface and the upper part of the step at one side are preserved. The latter portion is red. The surface has a broad pink band along two sides forming an oblique angle and a light blue central area between the pink bands.



**WP 107.** Sharp-angle corner of molded banded triangular panel  
Not illustrated  
Loc. 2303, basket 2.3.30  
P.L. edge 6.8, P.W. 8.0

TA WS224

Only the upper surface and the upper part of the step to one side are preserved. The step is pink. The surface has pink bands along two sides. Yellow paint is added over the innermost portion of the pink bands to form an inner yellow border. Within this, the central portion is pink.

**WP 108.** Re-entrant corner of molded, banded panel or corner of recessed panel

Not illustrated

Loc. 2303, basket 2.3.40

TA WS217

P.L. 4.2, P.W. 3.5

This small piece would correspond to the right-angle corner of a panel whose margins were raised in relief, with the central portion sunken back. Only a small piece is preserved, showing that the step is banded black (inner) and red (outer portion), and the relieved surface pink. The color of the recessed (central?) surface is not preserved.

The pattern on this fragment does not conform to the main pattern seen on the other fragments (**WP 91**, **WP 104–107**). The color scheme corresponds precisely, but the relief is reversed. This fragment shows either that the triangles somewhere had re-entrant corners or that there was a separate series of relief forms with the same color scheme, of which only this tiny fragment survived. We prefer the former interpretation. A right-angle corner would only occur on one of the normal triangle panels if it occurred at the end of a series in a corner of a wall segment covered by the lozenge-and-triangle design. At that point, the design might be interrupted by an adjacent decorative element such as the capital or base of a pilaster or colonnette, which would require a re-entrant angle.

**WP 109.** Wide-angle corner of molded triangular panel

Loc. 2303, basket 2.3.30

TA WS218

P.L. greater margin 6.9, P.L. lesser margin 2.0, W. 2.0

The full width of one purple border is preserved, with a projecting lip at its outer edge. The molded margin is banded black and red, the raised corner of the panel proper, pink. Since it borders the base angle of the triangle, this lip must have run down (not across) the outer edge of a lozenge-design segment. From **WP 91** we can see that this was not the way the border was prepared next to a pilaster. The colonnettes probably also required a grooved border. Their shafts usually broke in such a way that they show a more complex juncture than this simple lip. Thus this piece and **WP 104** probably represent the end of a lozenge-design segment where it reached a corner of the room.



**WP 110.** Fragment of gilded ovolo border with earlier surface exposed

Loc. 2303, basket 2.3.30

TA WS61

P.L. groove 3.8, relief 0.5, ovolo 2.0, P.W. 7.7

This fragment gives a small section of the edges between two panels, from a (lozenge) panel with gilded ovolo border across to the margin of an adjacent triangular panel. The upper surface of the fragment represents a pattern like that of the other lozenge fragments: one egg and the adjacent darts of a molded, gilded ovolo border are preserved. The raised portion next to this is painted with a black band and then a pink section. The recessed portion below the ovolo is the margin of this and the adjacent panel, both purple, with an impressed groove dividing them. This decoration was applied to a thin coat of fine plaster (1 mm thick over the margin), which was added over a previous design, visible along one side of the fragment. In the earlier phase, the part under the ovolo was broken away, leaving a jagged "ghost" with traces of red paint along its edge. From there across the margin, the earlier surface was painted in narrow bands of: deep gray-blue, medium strength gray-blue, dilute gray-blue, pink, violet, and purple.



**WP 111.** Gilded finial with earlier surface exposed

Loc. 2303, basket 2.3.28

TA WS59

P.L. groove 5.2, ovolo 4.0, P.W. 5.8

One side of the base of the gilded finial with the adjacent purple margin is preserved. Two "eggs" joined back-to-back where the two borders meet form a gilded swirl to which one round flat leaf of the finial is still attached. A groove between this panel and the adjacent one touches the leaf's edge. As with the previous example, the earlier phase of decoration under the ovolo is simply the ghost of something removed. The earlier margin, buried just 1 mm below the later one, is banded (starting from the ovolo): dark grayish blue, medium gray-blue, dilute gray-blue, unpainted divider groove, pink, violet, purple, then traces of yellow and the broken-edge ghost of a raised panel or design.



**WP 112.** Corner of flat triangular lozenge  
 Loc. 2303, 2307, baskets 2.3.36, 2.3.40, 2.3.41 TA WS294  
 P.H. 13, P.L. 14.1

Corner of flat green triangular lozenge with banded borders. Color and grooves at corner give orientation of other adjacent panels. Side bands: yellow, pink (2 cm), red (0.9 cm), black (1 cm), red. On oblique groove faint yellow groove, pink (2 cm), red groove (1 cm), black groove (1 cm), faint red.



Small cyma reversa molding with painted Lesbian leaf design above a red painted border.



**WP 115.** Cyma reversa molding  
 Loc. 2303, baskets 2.3.25, 2.3.30, 2.3.32 TA WS265  
 P.H. 9.1, P.L. 28.5

Small cyma reversa molding with painted Lesbian leaf design above a red painted border.



#### THE ATTIC MOLDINGS AND FRIEZE (WP 113–123)

**WP 113.** Cyma reversa molding with portion of frieze  
 Loc. 2303, basket 2.3.40 TA WS253  
 P.H. 9.4, P.L. 11.7, H. fillet 1, H. cyma 2.8, H. flat face 3.9  
 Small cyma reversa molding with painted Lesbian leaf design above a portion of painted frieze.



**WP 116.** Cyma reversa molding with portion of frieze  
 Loc. 2303, basket 2.3.36 IAA 02-3159  
 P.H. 8.6, P.L. 11.4

Small cyma reversa molding with painted Lesbian leaf design, trace of gilding on leaf, above a border showing faint traces of scallop design in green.



**WP 114.** Cyma reversa molding  
 Loc. 2303, baskets 2.3.30, 2.3.37 TA WS258  
 P.H. 6.5, P.L. 17.6



**WP 117.** Cyma reversa molding  
Basket lost  
P.H. 11.2, P.L. 21.3

IAA 03-174

Small cyma reversa molding with painted Lesbian leaf design above a red painted border.



**WP 118.** Cyma reversa molding with portion of frieze  
Loc. 2303, basket 2.3.38  
P.H. 8.7, P.L. 17.5

TA WS250

Small cyma reversa molding with traces of Lesbian leaf above a painted frieze of green triangles, scallops in varying shades of green, and a red "eye" with shading on the lower left side.



**WP 119.** Frieze (?) section  
Basket lost  
P.H. 6.6, P.L. 7.6

IAA 03-204

Flat fragment painted with light green and yellow-green scallop design on a green ground with a border of triangles at the top.



**WP 120.** Frieze (?) section  
Basket lost  
P.H. 3, P.L. 3.6

IAA 564581

Flat fragment painted with light green and yellow-green scallop design on a green ground.



**WP 121.** Small gilded dentils

Loc. 2303, 2310, baskets 2.3.34, 2.3.63

TA WS25

P.H. 5.2, P.W. 4.9, W. dentils 1.8, W. interstice 0.9-1.2

The front face and bottom of the dentils and the band below them are gilded; the sides of the dentils and the recess between them are painted pink. The unfinished surface behind slants back from the top of the dentils.



**WP 122.** Small gilded dentil

Loc. 2303, basket 2.3.36

TA WS26

P.H. 4.1, P.L. 3.1, W. dentil 1.3

Small gilded dentil, missing extreme top edge, with pink interstices.



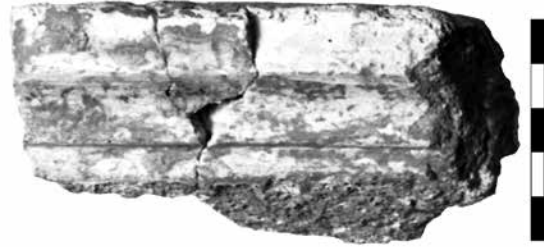
**WP 123.** Small slanting gilded dentil  
Basket lost  
W. 1.2, P.H. 1.5

TA WS28

Only the lower part of the dentil is preserved. The bottom surface slants down right. Like **WP 121** but narrower and projecting more.



broken off horizontally at a line from which a straight unfinished surface slants down and back.



*MISCELLANEOUS FRAGMENTS PROBABLY FROM THE ATTIC ZONE (WP 124–129)*

A few fragments from the main stucco deposit with gilding or dark red and/or purple paint cannot be attributed to the elements already discussed. In colors and scale, all of these fragments (except **WP 124**) could fit into the attic as a raking cornice (crown molding). It is also possible that the crown molding fragments (**WP 125** and **WP 126**) were parts of pilaster capitals.

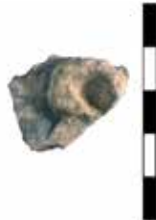
**WP 124.** Yellow appliqué loop on light blue background

Loc. 2303, basket 2.3.26

TA WS240

P.L. 2.8, P.W. 1.9

Most of one small loop and the ghost of another tangential to it are preserved. The flat, light blue surface extends around these on two sides. The depression in the center of the better-preserved loop is also painted light blue. This appears to be part of a rosette, and the unusual light blue background matches that of blue pilaster capital **WP 77**. This is the only fragment found that might be part of the decoration on the blue band under that capital or another of its ilk. No other association seems likely.



**WP 126.** Top of gilded crown molding

Loc. 2303, basket 2.3.36

TA WS247

P.H. 7, P.H. face 3.2, P.L. 11.3

Like **WP 125** but missing the half-round at the top. The unfinished receding surface at the bottom is concave rather than straight in profile.



**WP 125.** Top of gilded crown molding

Loc. 2309, basket 2.3.59

TA WS246

P.H. 5.0, H. fillet 1.2, P.L. 8.3, cavetto 1.5

A dark red cavetto molding with a fillet above and a small half-round (astragal) attached to the top half of this fillet. The fillet and astragal are gilded, except along the top of the astragal, where a strip of red appears. A tiny fillet below the cavetto is

**WP 127.** Skewed, molded gilded ovolo

Loc. 2309, basket 2.3.60

TA WS249

P.L. astragal 1.3, P.H. astragal 0.8

Two eggs and two darts slant back and slightly to the right relative to a dark red strip above it. Immediately below the ovolo, a short segment of a half-round (astragal) has dark red paint on the upper surface and traces of gilding on the lower part. The back is an even, unfinished surface, convex from top to bottom.



**WP 128.** Upper portion of small cyma reversa with molded gilded Lesbian leaf  
 Loc. 2303, basket 2.3.36  
 P.L. 5, P.H. red fillet 0.7

TA WS236

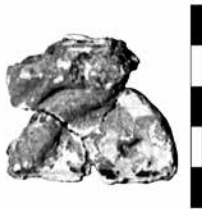
One and one-half units of the pattern are preserved, except for the lower part of the stems. A strip of dark red surface runs along the top of the molding. The back surface is smooth, unfinished and convex from top to bottom.



**WP 129.** Lower portion of small cyma reversa with molded gilded Lesbian leaf  
 Loc. 2303, basket 2.3.30  
 P.L. 4.7, P.H. molding 2.2

TA WS237

One unit of the pattern extends along the bottom of the molding. Below this, a flat black surface is broken off at two curves, which arch up under the kymation. The top of the molding is not preserved.



#### REPLASTERED ELEMENTS (WP 130–132)

(see also WP 110)

**WP 130.** Stringcourse fragment?  
 Loc. 2304, basket 2.3.31  
 P.H. 7.4, P.L. 8.1

TA WS202

Harlequin-like pattern with small squares painted various colors. One white square replastered as red.



**WP 131.** Stringcourse fragment?  
 Loc. 2304, basket 2.3.33  
 P.H. 8.8, P.L. 9.4

TA WS203

Harlequin-like pattern with small squares painted various colors. One white square replastered as red.



**WP 132.** Cyma reversa molding  
 Loc. 2303, basket 2.3.30,  
 P.H. 8.8, P.L. 10.4

TA WS266

White cyma reversa molding replastered as red.





## APPENDIX: LIMESTONE ARCHITECTURAL ELEMENTS

**Corinthian capital, limestone**

Loc. 3403, basket 3.4.124

TA70 A6

P.H. 75, P.W. 14, H. abacus 10, P.H. leaves 11

This Corinthian capital was found built into a Roman wall (3409) of the LHSB; we do not know its original context. It is a rather rudimentary interpretation of the style, with two squat rows of thick-ribbed leaves with heavy overfalls and a central leaf (rather than helices) from which the stem of the abacus fleuron springs. The fleuron is broken away, and its remains are barely visible on the face of the abacus. Volute helices are preserved along with volute ribs. A calyx leaf rises under the volute rib and was once tangent to the volute. The abacus is separated into two bands, the top of which may have carried a painted design, perhaps an egg-and-dart. Overall proportions are extremely squat. It is very close to a capital from Hellenistic Jericho and also similar to examples from Syria, especially from the Hauran region.<sup>167</sup> Compared to the plaster capitals from the LHSB, however, this limestone capital is markedly different, crude and heavy, and it is difficult to imagine where it came from in the building.

**Anta/pilaster capital, limestone**

Loc. 2904

TA70 A7

P.H. 21, P.W. 14.5

This capital preserves a portion of the abacus and the end of the left volute. A dowel hole, running lengthwise, is in the bottom.



<sup>167</sup> Gordon 1977, 333, citing Schlumberger 1933, pl. 28.3, from the temple at Soueida in Syria. For further discussion of both the Tel Anafa stone capital and the one from Jericho, see Fischer 1990, 8, pl. 1.1, and Fischer 2003, 1, pl. 2A.

## CONTEXT CONCORDANCE

Loc. no.	Basket no.	Cat. no.	Inv. no.
2006	2.1.49	<b>WP076</b>	WS006
2006, 2010	2.1.178	<b>WP074</b>	WS069
2010	2.1.187, 189	<b>WP079</b>	WS276
2014	2.1.95	<b>WP005</b>	WS177
2014	2.1.82	<b>WP034</b>	WS041
2014, 2303	2.1.82, 2.3.34	<b>WP036</b>	WS043
2015	2.1.84	<b>WP024</b>	WS079
2020	2.1.94	<b>WP025</b>	
2020, 2301, 2304	2.1.94, 2.3.27, 48, 53, 59	<b>WP020</b>	WS096
2024	2.1.104, 110	<b>WP091</b>	WS001
2301	2.3.54	<b>WP001</b>	
2301	2.3.54	<b>WP030</b>	WS064
2301	2.3.51	<b>WP039</b>	WS047
2301	2.3.48	<b>WP045</b>	WS020
2301	2.3.48	<b>WP051</b>	WS285
2301	2.3.53	<b>WP059</b>	WS164
2301	2.3.54	<b>WP073</b>	WS063
2301, 2006, 2010	2.1.45, 49, 63, 2.3.8	<b>WP028</b>	WS067
2301, 2303	2.3.24, 59	<b>WP021</b>	WS072
2301, 2303	2.3.21, 34, 36, 51	<b>WP064</b>	WS273
2301, 2304, 2308, 2309	2.3.27, 33, 53, 57, 58, 60	<b>WP008</b>	WS013
2303	2.3.36	<b>WP011</b>	WS170a
2303	2.3.28	<b>WP013</b>	WS183
2303	2.3.24, surface find	<b>WP014</b>	WS184
2303	2.3.34	<b>WP015</b>	WS179
2303	2.3.36	<b>WP016</b>	WS187
2303	2.3.38	<b>WP026</b>	
2303	2.3.28, 30, 38	<b>WP027</b>	WS081
2303	2.3.38	<b>WP040</b>	WS048
2303	2.3.34	<b>WP042</b>	WS046
2303	2.3.26, 36	<b>WP044</b>	WS045
2303	2.3.30	<b>WP046</b>	WS287
2303	2.3.26	<b>WP048</b>	WS288
2303	2.3.26	<b>WP050</b>	WS284

Loc. no.	Basket no.	Cat. no.	Inv. no.
2303	2.3.30	<b>WP052</b>	WS282
2303	2.3.36	<b>WP055</b>	WS167
2303	2.3.8, 28, 36	<b>WP056</b>	WS161
2303	2.3.38	<b>WP057</b>	WS162
2303	2.3.13	<b>WP058</b>	WS165
2303	2.3.34, 38	<b>WP060</b>	WS163
2303	2.3.38, 40	<b>WP068</b>	WS169
2303	2.3.32, 34, 38	<b>WP071</b>	WS007
2303	2.3.38	<b>WP072</b>	WS002
2303	2.3.36, 38	<b>WP078</b>	WS032
2303	2.3.30	<b>WP080</b>	WS290
2303	2.3.34	<b>WP082</b>	WS278
2303	2.3.34	<b>WP083</b>	WS058
2303	2.3.36	<b>WP084</b>	WS279
2303	2.3.30, 40	<b>WP085</b>	WS326/IAA 02-3527
2303	2.3.36	<b>WP088</b>	WS038
2303	2.3.40	<b>WP090</b>	WS328
2303	2.3.26 (30?)	<b>WP094</b>	WS054
2303	2.3.26	<b>WP095</b>	WS056
2303	2.3.34	<b>WP098</b>	WS053
2303	2.3.38	<b>WP099</b>	WS052
2303	2.3.26	<b>WP100</b>	WS222
2303	2.3.26	<b>WP102</b>	WS231
2303	2.3.28	<b>WP103</b>	WS234
2303	2.3.34	<b>WP105</b>	WS233
2303	2.3.28	<b>WP106</b>	WS227
2303	2.3.30	<b>WP107</b>	WS224
2303	2.3.40	<b>WP108</b>	WS217
2303	2.3.30	<b>WP109</b>	WS218
2303	2.3.30	<b>WP110</b>	WS061
2303	2.3.28	<b>WP111</b>	WS059
2303	2.3.40	<b>WP113</b>	WS253
2303	2.3.30, 37	<b>WP114</b>	WS258
2303	2.3.25, 30, 32	<b>WP115</b>	WS265
2303	2.3.36	<b>WP116</b>	IAA 02-3159
2303	2.3.38	<b>WP118</b>	WS250
2303	2.3.36	<b>WP122</b>	WS026



Loc. no.	Basket no.	Cat. no.	Inv. no.
2303	2.3.26	<b>WP124</b>	WS240
2303	2.3.36	<b>WP126</b>	WS247
2303	2.3.36	<b>WP128</b>	WS236
2303	2.3.30	<b>WP129</b>	WS237
2303	2.3.30	<b>WP132</b>	WS266
2303, 2014	2.3.36, 2.1.82	<b>WP038</b>	WS019
2303, 2301	2.3.36, 53	<b>WP043</b>	WS044
2303, 2304	2.3.13, 27	<b>WP066</b>	WS275
2303, 2304, 2420	2.3.32, 33, 2.4.204	<b>WP054</b>	TWS166
2303, 2307	2.3.34, 74	<b>WP062</b>	WS270a, b.
2303, 2307	2.3.36, 40, 41	<b>WP112</b>	WS294
2303, 2309	2.3.32, 58	<b>WP061</b>	WS269
2303, 2309	2.3.28, 60	<b>WP086</b>	WS036
2303, 2310	2.3.28, 63	<b>WP077</b>	WS023
2303, 2310	2.3.34, 63	<b>WP121</b>	WS025
2304	2.3.27	<b>WP087</b>	WS037
2304	2.3.31	<b>WP130</b>	WS202
2304	2.3.33	<b>WP131</b>	WS203
2304, 2301	2.3.27, 48	<b>WP081</b>	WS277
2307	2.3.41	<b>WP006</b>	WS180
2307	2.3.59, 2.3.26	<b>WP012</b>	WS170b
2307	2.3.41	<b>WP049</b>	WS289
2309	2.3.58	<b>WP010</b>	WS307
2309	2.3.58, 59	<b>WP018</b>	WS194
2309	2.3.58	<b>WP047</b>	WS286
2309	2.3.60	<b>WP063</b>	WS271
2309	2.3.58	<b>WP093</b>	WS055
2309	2.3.59	<b>WP097</b>	WS051
2309	2.3.59	<b>WP125</b>	WS246
2309	2.3.60	<b>WP127</b>	WS249
2309, 2307	2.3.59, 74	<b>WP067</b>	WS168
2417	2.4.214	<b>WP041</b>	WS049
2425	2.4.247	<b>WP029</b>	TWS021
2425	2.4.258	<b>WP035</b>	WS042

Loc. no.	Basket no.	Cat. no.	Inv. no.
2904		<b>App. 2</b>	TA70 A7
3403	3.4.124	<b>App. 1</b>	TA70 A6
5108/5110	5.1.50, 62	<b>WP075</b>	WS003
5110	5.1.189	<b>WP002</b>	IAA 567749
5110	5.1.189	<b>WP003</b>	IAA 567747
5110	5.1.189	<b>WP004</b>	WS191
5110	5.1.67	<b>WP092</b>	WS071
5110	5.1.189, 190	<b>WP104</b>	WS232
5113	5.1.105	<b>WP031</b>	WS068
5114	5.1.117	<b>WP101</b>	WS223
5122, 5206	5.1.172	<b>WP037</b>	WS078
5203A	5.2.38	<b>WP023</b>	WS077
5203A, 5203B	5.2.42, 48	<b>WP032</b>	WS084
5203B, 5203C	5.2.31, 43	<b>WP033</b>	WS085
21300, 21305, 21309, 21311, 21313	2.13.87	<b>WP065</b>	WS272
21309, 21399, 21313, 21311	2.13.83	<b>WP053</b>	WS283
		<b>WP007</b>	IAA 03-168
		<b>WP009</b>	IAA 03-243
	context lost	<b>WP017</b>	IAA 03-369
	context lost	<b>WP019</b>	IAA 03-180
	surface find	<b>WP022</b>	WS075
	context lost	<b>WP069</b>	WS213
	context lost	<b>WP070</b>	IAA 03-177
	surface find	<b>WP089</b>	WS035
	context lost	<b>WP096</b>	WS050
	context lost	<b>WP117</b>	IAA 03-174
	context lost	<b>WP119</b>	IAA 03-204
	context lost	<b>WP120</b>	IAA 564581
	context lost	<b>WP123</b>	WS028

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## **2. PERSONAL ADORNMENT: GLASS, STONE, BONE, AND SHELL**

**by Katherine A. Larson<sup>1</sup>**

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## CONTENTS

I	Introduction	83
	Site Distribution	85
	Materials	86
	Glass and Faience	86
	Stone	88
	Bone and Shell	89
II	Catalogue	90
	Bronze Age	90
	Beads	91
	Faience ( <b>BD 1</b> )	91
	Stone ( <b>BD 2</b> )	92
	Bone and Shell ( <b>BD 3–4</b> )	92
	Cylinder Seal ( <b>BD 5</b> )	92
	Scarab ( <b>BD 6</b> )	93
	Stamp Seal ( <b>BD 7</b> )	94
	Persian Period ( <b>BD 8</b> )	95
	Late Hellenistic/Early Roman Period	95
	Beads	97
	Glass	97
	Monochrome	97
	Spherical ( <b>BD 9–21</b> )	99
	Barrel-shaped ( <b>BD 22–25</b> )	100
	Cylindrical ( <b>BD 26–29</b> )	100
	Conical ( <b>BD 30–31</b> )	101
	Biconical ( <b>BD 32–33</b> )	101
	Lozenge-shaped ( <b>BD 34</b> )	102
	Melon-shaped ( <b>BD 35–38</b> )	103
	Decorated	103
	Eye Beads ( <b>BD 39–44</b> )	103
	Trail Decorated Beads	105
	Simple Trail Decorated ( <b>BD 45–51</b> )	106
	Complex Trail Decorated ( <b>BD 52–55</b> )	107
	Stone	109
	Spherical ( <b>BD 56–59</b> )	110
	Spherical, Truncated ( <b>BD 60–62</b> )	110

Elliptical ( <b>BD 63–65</b> ) . . . . .	110
Cylindrical ( <b>BD 66–68</b> ) . . . . .	110
Biconical ( <b>BD 69–71</b> ) . . . . .	110
Melon ( <b>BD 72–73</b> ) . . . . .	111
Disc ( <b>BD 74</b> ) . . . . .	111
Short Barrel ( <b>BD 75</b> ) . . . . .	111
Bone and Shell ( <b>BD 76–84</b> ) . . . . .	111
Pendants . . . . .	112
Glass . . . . .	113
Flattened Triangle ( <b>BD 85–86</b> ) . . . . .	113
Aryballos-shaped ( <b>BD 87–88</b> ) . . . . .	114
African Head ( <b>BD 89</b> ) . . . . .	114
Phallus ( <b>BD 90</b> ) . . . . .	116
Twisted Cane ( <b>BD 91–92</b> ) . . . . .	117
Stone ( <b>BD 93</b> ) . . . . .	118
Bone and Shell ( <b>BD 94–98</b> ) . . . . .	118
Bracelets ( <b>BD 99–100</b> ) . . . . .	119
Arab Period . . . . .	119
Beads . . . . .	119
Glass ( <b>BD 101</b> ) . . . . .	119
Stone ( <b>BD 102</b> ) . . . . .	120
Shell ( <b>BD 103</b> ) . . . . .	120
Bracelet ( <b>BD 104</b> ) . . . . .	121
Context Concordance . . . . .	122
Bibliography . . . . .	124
Plates . . . . .	130

## I. INTRODUCTION

The non-metal jewelry finds from Tel Anafa include beads, pendants, and bracelet fragments in media of glass, stone, bone, and shell (table 1). Glass is the most dominant material, comprising 67 percent of objects inventoried, a level of dominance that corresponds to the increased occurrence of small glass in the Late Hellenistic eastern Mediterranean.<sup>2</sup> Stone is the second most common material for beads and pendants, with 17 percent of all objects. Twelve bone (7 percent) and thirteen shell (7 percent) objects complete the assemblage. The relative composition of bead materials closely resembles that of Jebel Khalid, a Late Hellenistic residential site on the Euphrates, where two-thirds of beads recovered are glass or faience, followed in frequency by stone (primarily agate) and a small handful of bone and shell.<sup>3</sup>

	Glass	Stone	Bone	Shell	Faience	Totals
<b>Beads</b>	100	29	9	9	1	148
<b>Pendants</b>	13	1	1	4		19
<b>Bracelets</b>	3		2			5
<b>Total</b>	116	30	12	13	1	172

Beads and Pendants at Tel Anafa, by material.<sup>4</sup>

Table 1

Dating of catalogued objects is based on (1) stratigraphic data and (2) typological comparanda. The vast majority of bead and pendant finds belong to the Hellenistic–Roman phases at Tel Anafa (table 2). Although there is a half-century gap between occupation of the Late Hellenistic Stuccoed Building (hereafter LHSB, ca. 125–75 BCE) and the Roman settlement (ca. late first century BCE–mid-first century CE),<sup>5</sup> no beads from Roman strata need date later than second–first centuries BCE. While some beads likely belong to the Roman occupation phase, they are indistinguishable from the Hellenistic material. A smaller proportion of beads and pendants belong to pre-Hellenistic and Arab phases at Anafa.

	Glass	Stone	Bone	Shell	Faience	Totals
<b>Pre-Hellenistic</b>		5	1	1	1	8
<b>Hellenistic/Roman</b>	64	24	9	5		102
<b>Arab</b>	14	1		7		22
<b>Total</b>	78	30	10	13	1	132

Beads and Pendants at Tel Anafa, by period.

Table 2

<sup>2</sup> See Spaer 2001, 30–31. In beads from Hellenistic and Roman-period Samaria, glass dominates, with only a few carnelian and agate pieces (Crowfoot 1957, 389). By contrast, at Bronze–Iron Age Sarepta, glass comprises only 16 percent of excavated beads (Pritchard 1988, 92).

<sup>3</sup> O’Hea 2002, 261.

<sup>4</sup> This table includes inventory information for beads from the second series of excavation, which are not included in the catalogue. Glass beads from the second excavation series, 1978–1981, have been lost in the twenty-five years since their excavation. Inventory cards kept at the Kelsey Museum provide information on quantities, find spots, and descriptive details for this material, which has been incorporated into the footnotes of this chapter wherever possible. However, without drawings or photographs of the missing pieces, they cannot be fully and properly catalogued and published. Based on the known inventory information, should the material reemerge, it will fit neatly into the scheme established here and not substantively change any conclusions or interpretations of this material.

<sup>5</sup> See Herbert TA I, i, 14–22. This chapter follows Herbert’s occupation and dating sequence summarized at TA I, i, 26, and page viii, this volume.



In interpreting stratum dates for the material, it is important to remember that at Tel Anafa, the dates assigned to loci are based on the latest datable material, typically ceramic or a coin, or, more commonly, stratigraphic position. Individual finds or even the majority of material found within the locus often date significantly earlier. Beads in particular are notoriously difficult to date even when found in a closed context with a narrow chronological range of material. First, such a dating is of last *use* or, more specifically, of loss or abandonment and not production. Even today, jewelry is often passed from generation to generation as heirloom pieces. Luxury items found in domestic areas such as Tel Anafa, where they were kept and worn, may have been produced and used for a generation or more before their eventual loss. Expensive imported pieces such as **BD 52** and amuletic pieces such as eye beads **BD 39** and **BD 44** are particularly vulnerable to this phenomenon. At Anafa, the dating of the locus can do no more than provide a *terminus ante quem* for the origin of the object in question and offers no information about the period of use or conditions of abandonment. Second, the small, lightweight nature of beads renders them more susceptible to moving through soil layers than other categories of material culture. Cracks in surfaces and walls, irregularly packed fills, and plant and animal activity can all contribute to the eventual find spot of a small bead in an area above or below its original stratigraphic deposit.

Typologically, beads can be even more difficult to date. Small, plain, monochrome beads in all materials are ubiquitous across space and time and, at present, provide little typological insight. Studies in the early twentieth century aimed to establish rough chronological typologies for decorative eye and melon beads based on size, shape, and decoration, but scholars struggled to make sense of incongruities and were ultimately unsuccessful in establishing a clear sequence.<sup>6</sup> Subsequent finds and refinements of typographic sequences for pottery, glass, and other types of material culture have led to a general abandonment of the perception of beads and small jewelry as inherently datable objects. However, recent focus on production methods has shed light on a few important transition periods for the production of glass jewelry, such as the increased skill in drawing glass that led to the development of drawn glass beads in the fourth century BCE, and gold glass and mosaic beads in the third.<sup>7</sup> While there are gold glass and mosaic beads from the Hellenistic period, they do not become prevalent until the Early Roman period. Whether the lack of rapid widespread distribution is due to taste, expense, or difficulty of production is unclear.<sup>8</sup> Examples of both techniques were found at the third-century BCE production site on Rhodes, though in smaller quantities than more popular Hellenistic types.<sup>9</sup> The late second-/early first-century workshops on Delos offered only two simple mosaic beads and no gold glass.<sup>10</sup> Neither type is represented in the Anafa material.

Aside from minor changes in tools and implements brought by modern technology, fundamental techniques of glass- and stone-working have remained unchanged for several thousand years, and ascertaining the production method of an individual bead rarely identifies its time or place of origin. From the Hellenistic period on, minor variations in glass manufacturing techniques, such as wound or folded around a rod, seem to represent a preferred production style, and not a particularly significant or traceable one at that, rather than an evolution or development.<sup>11</sup> Beads of all sorts have thus often been relegated to simplistic and incomplete cataloguing or altogether neglected in the publication of sites, thereby exacerbating the problem of insufficient data and study of these small finds.

Yet beads are still able to contribute valuable information to the interpretation of archaeological sites. While a preponderance of single beads may never reach the “holy grail” of typology by being intrinsically datable, entire assemblages of material can present sets of characteristics specific to places and times. An individual eye bead such

<sup>6</sup> See Beck 1928; Eisen 1916, 1930. For example, in his study of eye beads Eisen encounters difficulties when he attempts to compare stratified eye beads from Egypt, primarily of the eighth and seventh centuries BCE, with similar Italian objects from fifth-century BCE tombs (1916, 14–16). The issue is further confused when he cites similar stratified eye beads as “intrusions” in necklaces and tombs from the third through fifth centuries CE (19–20).

<sup>7</sup> On general developments in Hellenistic and Roman glass technology, Spaer 2001, 30–31; on mosaic beads, *idem*, 30, 118–122; on gold glass, *idem*, 130–135.

<sup>8</sup> The missing mosaic glass is not limited to beads or to Tel Anafa. At Beirut, only three small fragments of mosaic vessel glass from the Late Hellenistic period have been identified throughout the city, despite lengths of fabricated mosaic cane being found at the production center BEY 002 (Foy 2005, 14–16).

<sup>9</sup> G. Weinberg 1969, 146.

<sup>10</sup> Nenna 1999, 145.

<sup>11</sup> Francis 2007, 253, also emphasizes this point.

as **BD 42**, badly weathered and belonging to a type of no particular distinction, offers little by way of interpretive evidence. But placed alongside the remainder of the Anafa material, it is a member of a characteristically Hellenistic assemblage in which traditional eye beads appear but are less common than fancy trail-decorated beads influenced by cosmopolitan, international areas such as Delos. Assemblages, studied and interpreted as such, can help form a cohesive picture of the status, lifestyles, and trade relationships of the inhabitants through the gradual change of trends over time. The enterprising work of scholars such as Spaer on the small glass collections of the Israel Museum offer holistic views of the history of bead and pendant styles and techniques by diligently assigning individual pieces to their proper place within this schema; surveying the pages of chronologically arranged plates grants general impressions not possible from an individual piece.<sup>12</sup> At Anafa, the majority of chronological legwork has been done, so it is hoped the finds from the site may work conversely to help solidify the general impression and interpretations of Late Hellenistic jewelry in the eastern Mediterranean.

Throughout this chapter, “local” refers to the area within one day’s easy journey of Tel Anafa, generally the Hula Valley and northern shores of the Sea of Galilee. “Regional” is the next level of distance, trade, and influence, comprising the coastal areas of Tyre and Sarepta and as far south as Samaria. “International” encompasses the islands of the eastern Mediterranean, Egypt, Jerusalem, and Jebel Khalid on the Euphrates.

## SITE DISTRIBUTION

Beads and pendants were found in almost every trench at Tel Anafa, with particular concentrations in the West Annex and in the wing of rooms south of the LHSB central court (fig. 1). The majority of recovered beads from squares 1.2 and 1.3, in the northwest quadrant of the tel, come from burials in the ARAB 2 cemetery,<sup>13</sup> and are represented in the catalogue by **BD 101a–m**, **BD 102**, and **BD 103a–g**.

The Late Hellenistic/Early Roman-period figure of bead and pendant find spots illustrates some intriguing patterns of distribution (fig. 2). The greatest concentration comes from the area of the South Annex of the LHSB, in trenches 2.3 and 2.4. Locus 2437, a layer of ashy fill in a HELL 2C (98–75 BCE) deposit,<sup>14</sup> yielded eight elaborate glass beads (**BD 1**, **BD 44**, **BD 52a–e**, and **BD 53**), which may have been part of one necklace. This density of high-quality finds, among the most luxurious at the site, may indicate that these rooms served as women’s quarters. Alternatively, they could have been intentionally discarded along with other miscellaneous Hellenistic debris,<sup>15</sup> although the quality of beads, particularly **BD 52a–e**, makes this less likely.

Square 1.3 yielded four glass pendants (**BD 85**, **BD 87**, **BD 89**, and **BD 90**), three elaborate glass beads (**BD 25**, **BD 54**, and **BD 55**), one carnelian bead (**BD 62**), and two bone beads (**BD 81** and **BD 83**).<sup>16</sup> This area of the West Annex, identified by Herbert as an industrial-service quarter, included several tanurs and a dense concentration of stone implements used for baking.<sup>17</sup> The density and presence of so many relatively fine and expensive jewelry objects here seems oddly incongruous. Were these objects, many of which could be amuletic, intentionally discarded or destroyed? Was Anafa’s servile class more cultic in their wearable adornment than the LHSB owners? Or, due to the complex stratigraphy in the area, were more small finds recovered simply as an effect of slower excavation?

<sup>12</sup> Spaer 2001, 334–365.

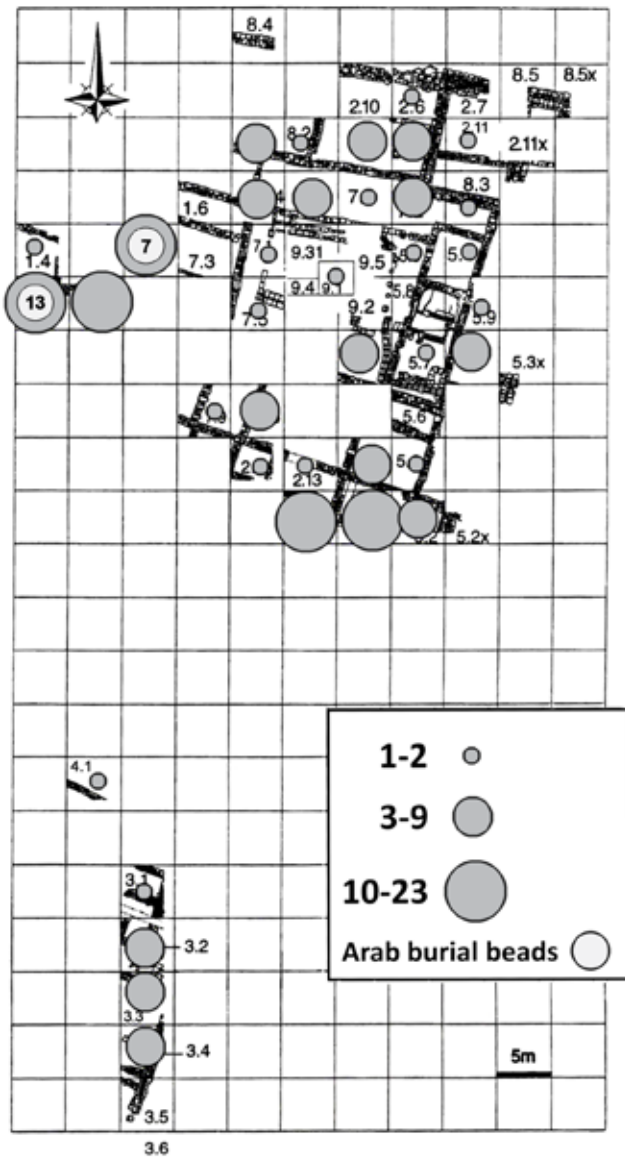
<sup>13</sup> See Herbert TA I, i, 147–148.

<sup>14</sup> Herbert TA I, i, 89–90; I, ii, 46.

<sup>15</sup> Herbert TA I, i, 83.

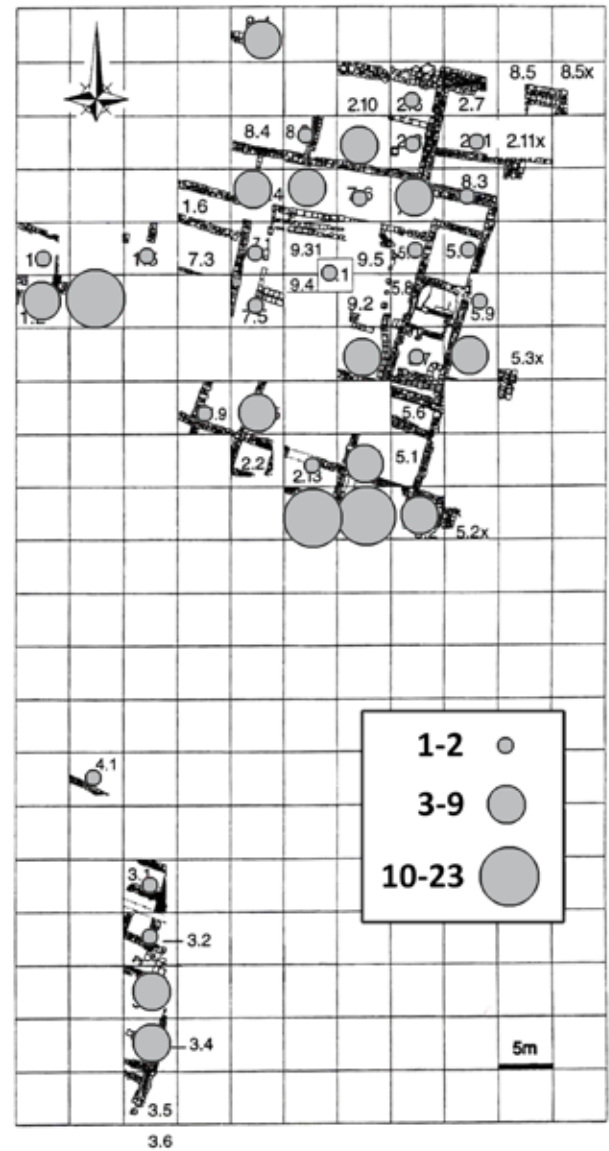
<sup>16</sup> This set of finds, excluding the carnelian bead, was previously published in S. Weinberg 1972, 15, fig 10. S. Weinberg there identifies the deposit as dating to the late second century, but Herbert’s interpretation of the area expands the sequence to two distinct phases of construction and use, HELL 2A/B (125–98 BCE) and HELL 2B/C (98–75 BCE) (TA I, i, 95–100). The implication is that these artifacts were not all from a single deposit, and thus they are extremely unlikely to belong to the same necklace or to have been abandoned at the same time. The objects in S. Weinberg’s publication helped date the workshop at Delos (Nenna 1993, 21) and various Israel Museum objects (Spaer 2001, 162, 186).

<sup>17</sup> Herbert TA I, i, 95; see also Wells et al. TA II, ii, 302.



Find spots of all inventoried beads and pendants, by trench.

Figure 1



Find spots of all inventoried Hellenistic/Roman-period beads and pendants, by trench.<sup>18</sup>

Figure 2

## MATERIALS

### GLASS AND FAIENCE

The glass jewelry from Tel Anafa consists of sixty-nine beads, eight pendants, and one bracelet fragment, primarily from Hellenistic, Roman, and Modern (topsoil) strata. The published assemblage is representative of the lifestyle and identity of the LHSB occupants and their Roman successors. Only two catalogue entries, bead necklace **BD 101** and bracelet **BD 104**, certainly belong to the Arab phase of occupation at Tel Anafa; no other material need date later

<sup>18</sup>This figure includes all inventoried objects listed in the catalogue, as well as the glass beads from the 1978–1983 excavation series that came from loci dated to the Hellenistic or Roman periods of site occupation. These finds do not appear in the catalogue (see above, n. 4).

than the second–first centuries BCE. The single faience bead, **BD 1**, a large melon bead, was worn by the Late Hellenistic inhabitants of the tel, although it appears to have been manufactured several centuries before. The remainder of catalogued beads, including those found in modern loci, likely originate from the main phases of Late Hellenistic/Early Roman occupation and have been so documented.

Glass, as the largest single material for beads present at Anafa, particularly demonstrates the Anafa residents' participation in the Late Hellenistic cultural *koine* of the eastern Mediterranean. The closest parallels of glass bead types come from assemblages at Delos, Jebel Khalid, Samaria, and Rhodes. Most Anafa objects, particularly monochrome and eye beads, appear to have been produced by local or regional craftsmen. Though they worked nearby for a more local customer base, these glassworkers created shapes and styles popular throughout the rest of the eastern Mediterranean, demonstrating either their or their consumers' general familiarity with and desire to follow the latest international trends. This small local or regional industry also generated several unparalleled products of its own creative flair, including blue cylindrical beads with two white trail lines (**BD 45–47**) and pendants made from twisted glass canes (**BD 91–92**). A few select beads, specifically the elaborate feather beads (**BD 51a–e**) and some sculpted pendants (**BD 85–84**), may have been imported from production centers in the eastern Mediterranean islands, such as those known at Delos and Rhodes.<sup>19</sup> Beirut, a possible source for many glass vessels found at Anafa, should also be added to this list.<sup>20</sup> The paucity of identifiably imported, and presumably more expensive, glass beads suggests that great quantities of elaborate imported beads were not owned by the people of Tel Anafa. Instead they mainly wore local copies and variants on popular international trends. While the most valuable items were likely taken along with the owners when they abandoned the site, sporadic find spots of almost all pieces point to accidental loss rather than intentional abandonment. Assuming that even expensive items are occasionally lost or broken, the virtual absence of gold, gemstones, and imported beads suggests such objects were never present at the site, or only present in small quantities.

An interesting question is the extent to which glassworkers who made the beads from Anafa were aware of and participated actively in the general cultural styles and techniques evolving in the eastern Mediterranean world in this period. Glassblowing would be invented in the decades immediately following the abandonment of the LHSB; the technique spread rapidly, appearing almost simultaneously in Rome and the Levant.<sup>21</sup> This swift spread must have been stimulated by a brisk trade in the objects themselves, generating a market for blown glass pieces, or by a closely associated network of craftsmen, who themselves traveled throughout the Graeco-Roman world, setting up workshops and practicing new techniques in new locales. It is not hard to imagine a glass artisan from a traditional glassworking center, such as Egypt or the Syro-Palestinian coast, traveling to the Black Sea, Delos, Rome, or any other number of markets with a burgeoning population, promising the latest styles from Alexandria but catering pieces to the tastes of local clientele. While evidence of glassblowing is easily traced and commonly studied, makers of all types of glass products would have been similarly transient in the preceding years, though their movements would be less traceable. The diffusion of glassworkers in the Hellenistic and Roman periods has been noted by glass scholars, including Grose and Harden;<sup>22</sup> Triantafyllides postulates that glass found at Kos, Greece, was traded with Syro-Palestine or made in Kos by "itinerant glassmakers from the east."<sup>23</sup> Glass bead makers, who were perhaps the same individuals who crafted vessels, appear to have been just as mobile. Pieces such as **BD 89**, an African head pendant, and **BD 45–47**, cylindrical blue beads with white trailed lines, belong to common types found in diverse locations throughout the eastern Mediterranean islands, Levant, and as far west as the Euphrates River. However, individual specimens show greater variability among regions than would be expected from one or two major workshops generating all pieces, suggesting that most production took place on a more regional, or even local, level. An excellent example of this phenomenon is the African head pendant from Jebel Khalid,

<sup>19</sup> See Nenna 1999; G. Weinberg 1969; 1983. The household glass production centers at Delos are almost certainly contemporary with the main LHSB occupation phase at Anafa. The excavations at Rhodes have not been fully published, and dating and phasing at the site remain somewhat unclear.

<sup>20</sup> Foy 2005; Grose TA II, ii, 29. Although evidence of glass bead manufacture has yet to be identified at Beirut, vessels and beads are known to have been produced at the same centers, including Delos and Jerusalem, rendering bead production at or near BEY 002 a distinct possibility.

<sup>21</sup> Grose 1977, 29. The earliest known evidence of blown glass manufacture comes from a context in Jerusalem dated by coins to the middle of the first century BCE (Israeli and Katsnelson 2005).

<sup>22</sup> Grose 1977, 29; Harden 1969, 44.

<sup>23</sup> Triantafyllidis 2006, 156.

which, unlike all other known pendants of this type including **BD 89**, wears a Phrygian cap.<sup>24</sup> The Tel Anafa beads **BD 45–47** are similarly an otherwise unique variation on a more common blue bead with one white trailed line around the circumference,<sup>25</sup> suggesting awareness of the type but deviation from it.

This cross-pollination of workers may also account for the great variability in bead-making techniques, even within one workshop, as craftsmen introduced different skills, such as folding plaques or mosaic cane drawing, to extant workshops. Certain of these methods were better suited to mass production, as glass beads increased in availability and affordability, and were adopted into the repertoire of workshops. While trade in beads, particularly more elaborate and expensive styles, certainly occurred, comparative evidence from the Anafa beads indicates that it was the glassworkers themselves who moved, spreading styles, trends, and new techniques throughout the *oikumene*.

A note about nomenclature of manufacturing techniques for glass beads: various terminologies exist to describe the practice of wrapping molten glass around a core to form a bead. This confusion perhaps arises from the application of terms used to describe glass vessel manufacture to beads. For vessels, “rod formed” indicates that the glass was applied to a stiff rod, while “core formed” describes a shape constructed by building out a more complex shape in clay or sand from a solid centerpiece.<sup>26</sup> In beads, however, the internal structure used to create the bead’s hole is always essentially the same shape, although sometimes the central implement tapered, resulting in a conical perforation (as is the case for **BD 34**). Spaer states that the very few small glass objects that are identifiably core, and not rod, formed are limited to beads with unusually large perforations, thereby requiring excess material to expand the interior space.<sup>27</sup> For beads, unlike vessels, the essential method of manipulating the glass was the same regardless of the material used to form the center. Following G. Weinberg,<sup>28</sup> I have described methods of manufacture as wound, folded, molded, drawn, or pierced to explain the manner of the forming and shaping of the glass itself.

### STONE

The types of identified stone<sup>29</sup> represented by the jewelry at Tel Anafa include chalcedony, carnelian, agate, onyx, amethyst, garnet, as well as alabaster, limestone, steatite, and marble, all of which appear at other archaeological sites in the region over a long period of time. Most of these were imported from other regions of the Hellenistic world: chalcedony was available from Asia Minor and Egypt; carnelian, a variety of chalcedony, from the Sinai and Egypt or Mesopotamia. Onyx and agate, also types of chalcedony, came from Egypt and India; the latter was also from northern Asia Minor, Cyprus, and Sri Lanka. Amethyst was known in Greece, Syria, Egypt, India, and Southeast Asia, and garnet from Egypt, north of the Euphrates, India, and Sri Lanka. Alabaster had many sources in the Mediterranean, including Egypt and along the Red Sea coast, as well as in Asia Minor and Mesopotamia, and white marble was available from Egypt and Greece.<sup>30</sup> Limestone, the only stone that could have been locally sourced, is one of the dominant stones in the Hula Basin.<sup>31</sup>

Of the twenty-seven stone beads found at the site (including Bronze Age bead **BD 2**), 48 percent are made of carnelian. This particular stone was commonly used to create beads in the Near East in all time periods, as early as the eighth millennium BCE, due to its red-orange color, its hardness, its ability to be easily worked, and its easy availability. The internal minute crystalline structure of the stone creates a translucent, often mottled appearance, which was utilized to create decorative patterns.<sup>32</sup> At the City of David, carnelian beads appear in strata from Middle Bronze Age II up to the Persian period.<sup>33</sup> Other identified materials of stone beads at Tel Anafa are black agate and onyx. Agate

<sup>24</sup> O’Hea 2002, 264, fig 7.3.

<sup>25</sup> Nenna 1999, E66; G. Weinberg 1969, pl. 78d.

<sup>26</sup> See Grose TA II, ii, 85–89, for a glossary of glassworking terms.

<sup>27</sup> Spaer 2001, 306–307.

<sup>28</sup> G. Weinberg 1969, 144.

<sup>29</sup> Stone beads from Tel Anafa have not been studied by a gemologist. Identification of stone type in the catalogue is based upon original inventory information.

<sup>30</sup> On availability and supply of gemstones in antiquity: Ogden 1982, 91–114; Zuckerman 1996, 277; Forbes 1963, fig. 36; Theunissen et al. 2000, 102; Aston et al. 2000, 22.

<sup>31</sup> Farrand TA I, i, 268.

<sup>32</sup> Zuckerman 1996, 280.

<sup>33</sup> Zuckerman 1996, table 1.

was popular due to its concentric banding, and onyx even more so for its even more sharply defined bands. The remaining stones represent a range of colors: cream, yellow, and light gray to green and reddish browns and dark gray.

#### *BONE AND SHELL*

Eighteen beads, five pendants, and two bracelets constitute the bone and shell objects from Anafa categorized as personal adornment. The bones are all mammalian and range from moderately worked, such as the simple cylindrical beads that have been hollowed on the inside and lightly polished on the exterior (**BD 76–80**), to extensively carved, in the case of **BD 81–83**, intricately fashioned into the shape of human fists and palm trees. The shell adornments, by contrast, are only minimally altered by the creation of a perforation to allow for stringing, suggesting that they were aesthetically and/or symbolically significant in their own right. Their association with the sea, 30 km to the west over the Naftali Mountains, may have heightened their value. Several glass objects of adornment (**BD 28**, **BD 91**, and **BD 92**) are skeuomorphs—intentional or not—of bone and shell beads.



## II. CATALOGUE

This catalogue is organized by chronological period, as determined either by excavated strata and/or stylistic dating of objects, followed by object type (bead, pendant, cylinder seal, etc.), then by material: glass, stone, bone, and shell. Readers should consult the introduction for general comments on the use of glass and stone. There are good reasons to keep the material of the bead somewhat distinct from more subjective categories like shape. Glass and stone beads would have been manufactured by different craftsmen in different workshops using different raw materials and techniques. Since much of the catalogue discussion refers to autopsy of the physical remains for details regarding their manufacturing technique and potential locale of manufacture, I have decided to maintain this categorical distinction among materials, while providing as much cross-referencing among material types and synthetic discussion of personal adornment at Tel Anafa as possible. Although no intact jewelry objects were found at Anafa, on the basis of other Hellenistic parallels, glass and stone were likely to have been worn together and perhaps viewed as interchangeable, as illustrated by a set of earrings found in a tomb on Rhodes.<sup>34</sup> Glass beads may well have imitated their stone counterparts (or vice versa).<sup>35</sup> Additionally, for the utility of this chapter for reference and comparanda, material is a more identifiable category in the field than the technical distinction between, for example, a barrel-shaped and an elliptical bead. Within object and material type, objects are subsequently arranged by decoration, shape, and color.

Terms and descriptions of shape are based roughly on Beck's nomenclature for beads, which, though flawed, still offers the most standardized vocabulary for describing bead forms.<sup>36</sup> In most cases, each object has an individual catalogue number; the notable exceptions are three sets of beads found and originally inventoried together because they likely belonged to the same jewelry unit (**BD 52a–e**, **BD 101a–m**, and **BD 103a–g**). Catalogue descriptions include: color (original, weathered), decoration, shape, manufacture technique, preservation, dimensions, and comparanda. Diameter is defined as widest point perpendicular to perforation; length is the longest dimension parallel to perforation. A second measurement, representing the smallest dimension along an axis, is given if significantly different from the largest. All measurements are in centimeters. Discussion sections immediately before the corresponding catalogue entries situate individual pieces within the Anafa jewelry assemblage and in the broader context of Late Hellenistic personal adornment. As in the overview, I use "local" for any site within the Hula Valley or Upper Galilee, "regional" to signify coastal areas and the Lower Galilee, and "international" for the eastern Mediterranean islands, Egypt, and Judea.

### BRONZE AGE

The seven pre-Hellenistic personal adornment objects from Tel Anafa are primarily stone, with single pieces of faience and bone. Only two pieces (**BD 2** and **BD 3**) were found in pre-Hellenistic contexts. Most come from Hellenistic and Roman strata, likely disturbed from their earlier contexts during construction of the LHSB.<sup>37</sup> Cylinder seal **BD 5** and faience melon bead **BD 1** appear to have been reused in the Late Hellenistic period for their amuletic properties, and the possibility that other pieces found in later contexts were similarly adopted cannot be ruled out.

The Bronze Age jewelry, represented by three beads (**BD 1–4**), two seals (**BD 5** and **BD 7**), and one scarab (**BD 6**), demonstrates cultural and economic associations among the Anafa residents and the trade network of the northern Galilee, typified by Hazor, Dan, and Megiddo. As such, it complements the evidence of pre-Hellenistic imported wares, which show strong connections to Syria throughout the Bronze Age, with the addition of imports from Cyprus and Mycenae in the Late Bronze Age. The Bronze Age stone jewelry from Tel Anafa is represented by one bead (**BD**

<sup>34</sup> See below, p. 98.

<sup>35</sup> E.g., Spaer 2001, 101.

<sup>36</sup> Beck 1928. For commentary on Beck's nomenclature, Spaer 2001, 16.

<sup>37</sup> Herbert TA I, i, 148.

2), one cylinder seal (**BD 5**), one scarab (**BD 6**), and one stamp seal (**BD 7**). These few artifacts are significant in that they provide evidence for interaction between the inhabitants of the site and the surrounding region prior to the main occupation of the site in the Late Hellenistic period. The presence of seal **BD 7** and scarab **BD 6**, if imported from Syria and Egypt respectively, complements that of the imported wares in the pre-Hellenistic pottery assemblage from the site. Tel Anafa's close proximity to Hazor and Dan as well as to several trade routes offered the site the opportunity to participate in the larger trade network of the northern Galilee, which included trade with Syria and Egypt. If **BD 6** and **BD 7** are products of regional workshops, then their presence at the site corresponds to the local wares present in the pre-Hellenistic pottery assemblage.<sup>38</sup>

## BEADS

### Faïence (**BD 1**)

**BD 1**, the single faïence bead from Tel Anafa, is likely also the only pre-Hellenistic bead of vitreous material. Although there are Bronze and Iron Age strata and cultural material at Tel Anafa,<sup>39</sup> and glass beads from these periods are known from Egypt, the Aegean, and the Near East,<sup>40</sup> no recognizable exempla from this period were found at Tel Anafa at any level. Faïence, a precursor to glass made by grinding quartz crystals and forming them into a paste, was more common than glass as a material for beads until the Hellenistic period.<sup>41</sup> Relatively easy and inexpensive to make with readily found materials, faïence products often imitate more expensive glass, metal, and stone. The popular blue-green color, of which **BD 1** is an example, may have been intended to mimic turquoise, as in Bronze Age Egypt.<sup>42</sup>

**BD 1** is a turquoise melon bead of a popular type. Examples of this shape, color, and material occur in Bronze Age and Persian contexts in Egypt, Turkey, and the Near East, with comparanda found in early strata at Samaria, Sardis, and Sarepta.<sup>43</sup> Eisen cites the presence of similar beads in fifth-century BCE tombs in Italy.<sup>44</sup> Additional examples of turquoise melon beads in faïence have been found in first-century BCE occupation contexts in the cemetery at Jericho, the Jewish Quarter of the Old City in Jerusalem, and Ashdod.<sup>45</sup> Like Anafa, these sites also have well-recorded Bronze and Iron Age occupations from which their faïence melon beads may have originated, either churned up and immediately redeposited or found and subsequently worn as valued items. An example from Jericho, which was found in a burial loculus with Herodian lamps, seems to be an example of the latter.<sup>46</sup>

**BD 1**, found in a HELL 2C deposit in the South Annex, may have been disturbed from the lower levels of Bronze Age occupation in the vicinity.<sup>47</sup> However, this locus also yielded seven luxurious Hellenistic beads (**BD 44**, **BD 52a–e**, and **BD 53**). As a low-quality material and common shape, **BD 1** initially does not appear to correspond to the richly decorated, imported specimens found with it. Given the perceived amuletic properties of the melon shape and the penchant for reuse of ancient jewelry,<sup>48</sup> **BD 1** thus seems likely to be a pre-Hellenistic bead reused by the Hellenistic occupants of the LHSB, much like cylinder seal **BD 5**. While faïence melon beads were probably continuously produced from the Bronze Age well into the Roman period, the uniqueness of the material at Anafa and its context among the most opulent beads from the site suggest that it carried a status value to the LHSB occupants.

<sup>38</sup> Regarding the Bronze Age occupation and pottery from Tel Anafa, see Herbert TA I, i, 148–155 and Dever and Harrison, this volume.

<sup>39</sup> See Herbert TA I, i, 148–160; Dever and Harrison, this volume.

<sup>40</sup> For an overview of the styles of Bronze–Iron Age beads, Spaer 2001, 24–29.

<sup>41</sup> At the predominately Bronze and Iron Age site of Sarepta, for example, 64 percent of beads were faïence, followed by glass at 16 percent, clay at 6 percent, and carnelian at 4 percent (Pritchard 1988, 92). Spaer remarks on the increased ratio of glass to faïence in the Hellenistic period in Egypt (2001, 30).

<sup>42</sup> Platt 2003, 198.

<sup>43</sup> Crowfoot 1957, fig. 92.55; von Saldern 1980, cat. 840; Pritchard 1988, cat. 43.

<sup>44</sup> Eisen 1930, 21.

<sup>45</sup> Hachlili 1999, cat. 29; Nenner-Soriano 2006, pl. 15.1.8; Dothan 1971, pl. xxiv.13.

<sup>46</sup> Hachlili 1999, 140–141, cat. 29.

<sup>47</sup> Herbert TA I, i, 89–90.

<sup>48</sup> Eisen 1930, 38. Eisen specifically cites melon beads as subject to the phenomenon of later use on account of their value as heirlooms and amulets and suggests that they were often the focal pieces of a necklace “even when the condition of the beads was much inferior to the rest of the units.”

<b>BD 1</b> Loc. 2437	TA70 G86	Pl. 1 HELL 2C	Parallels: Chéhab 1986, pl. XXXIV.1; Crowfoot 1957, fig. 92.55; Dothan 1971, pl. xxiv.13; Hachlili 1999, cat. 29; Nenner-Soriano 2006, pl. 15.1.8; von Saldern 1980, cat. 840; Pritchard 1988, cat 43.
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Faience. Turquoise underlay with tan weathering. Spherical, with 14 evenly spaced lobes. Ends have very low profile collars, perhaps imitating metal. D 2.2, L 2.0.

#### Stone (**BD 2**)

One stone bead, **BD 2**, was found in a Middle Bronze level below the LHSB. The disc shape of the bead has a Late Bronze parallel from Megiddo.

<b>BD 2</b> Loc. 23106	TA73 S101	Pl. 1 MB
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Stone. Mottled light gray and red-brown. Disc-shaped with convex sides. Roughly cut ends. D 1.1, L 0.7.  
Parallels: Loud 1948, pl. 213.65.

#### Bone and Shell (**BD 3–4**)

**BD 3** comes from the Early–Middle Bronze Age flint knapping area on the northeast slope of the tel, in a stratum later disturbed by construction of the Iron Age enclosure wall.<sup>49</sup> Made by boring a flat piece of bone, it could date to either the Bronze or Iron Age period of occupation at Anafa. A similarly sized and shaped bead from Iron Age Lachish suggests a later dating,<sup>50</sup> but the style is so basic and the data set so small, no precise determination may be made. **BD 4** is from a fill that contained pottery dated no later than the Middle Bronze but may have remained open for some time before the HELL 1 structures in the area were built; a parallel from Megiddo suggests it does indeed date to the Bronze Age.

<b>BD 3</b> Loc. 21417	TA73 B11	Pl. 1 MB or EB contam.	<b>BD 4</b> Loc. 2474	TA73 B15	Pl. 1 MB
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Bone. Rectangular disc, perforation along short axis. Heavily weathered. D 1.3, L 1.7.  
Parallel: Tufnell 1953, pl. 66.11.

Shell. Mottled ivory to light brown; long plaque with rounded ends and two holes pierced near ends for attachment. L 2.2, W 1.1.  
Parallel: Loud 1948, pl. 284, no. 9.

#### CYLINDER SEAL (**BD 5**)

When rolled across clay material, cylinder seals marked ownership of property and physically secured various documents, such as financial transactions and treaties, as well as letters. Cylinder seals functioned in this manner for the most part only in regions that used clay tablets instead of papyrus, such as in Mesopotamia and the Levant before the end of the Late Bronze Age.<sup>51</sup> Cylinder seals were worn on the body in a variety of ways, and thus also provided personal protection as well by functioning as amulets.<sup>52</sup> One limestone cylinder seal, **BD 5**, was found at Tel Anafa in a section of mud plaster floor dated to the HELL 2A–C period, which lay beneath a stone pavement in the north forecourt of the LHSB.<sup>53</sup> Represented on the seal is a row of horned animals, possibly gazelles, with their heads turned

<sup>49</sup> See Herbert TA I, i, 148–149.

<sup>50</sup> Tufnell 1953, pl. 66.11.

<sup>51</sup> Buchanan and Moorey 1988, xii–xiii. Stamp seals, including scarabs, were otherwise used.

<sup>52</sup> If pierced, such as is the example from Tel Anafa, cylinder seals could be worn on toggle pins, fitting on a finger ring, or strung in order to hang from a fibula or a necklace (Collon 1987, 113, 118).

<sup>53</sup> Loc. 2810, Pottery Bucket no. 2.8.42. This particular bucket was located below the stone pavement, whereas other areas of the paving were disturbed by HELL 2C building activities (inventory information) (Herbert TA I, i, 76).

back in the same direction. The animals are separated by vertical divisions consisting of two vertical lines bordering diagonal hatch marks. A row of animals, or an animal file, was a popular subject on cylinder seals since their early production in Uruk ca. 3000 BCE and continued to appear on Mittanian, Syrian, and then Palestinian seals.<sup>54</sup> The particular style of the seal from Tel Anafa with regard to its iconography, modeling of the animals, drill work of the eye, and horizontal linear borders, has close parallels with seals rendered in the Mittanian “common style,” dated to ca. 1450–1365 BCE.<sup>55</sup> Based on parallels with similar seals produced in this style in Syria,<sup>56</sup> **BD 5** may have been the product of a foreign workshop.

The seal has a striking parallel, however, with a seal produced at the Beth Shean workshop, a mass producer of cylinder seals in the fifteenth and fourteenth centuries BCE. This workshop utilized the Mittanian common style and specialized in horned animals often placed in a row. The distinctive modeling of the horns and body of two animals on seal no. 120 from level V at Beth Shean is extremely similar to that of the seal from Tel Anafa. The ladder-pattern borders in between the animals are identical, as is the size of the seal and drillwork detail.<sup>57</sup> The only marked dissimilarity between the two seals is that the seal from Beth Shean is made of faience, as are the majority of seals from this site in this period, and **BD 5** is made of limestone, an almost obsolete material for this type of artifact.<sup>58</sup> The similarities convincingly suggest that the Anafa seal is a product of this regional workshop. **BD 5** also has parallels with faience cylinder seals recovered from Late Bronze Age levels at Hazor; the seal size, linear borders, and rendering of the horned animal files are extremely similar, suggesting the workshop at Beth Shean may have supplied Hazor.<sup>59</sup> The stratigraphic context of the seal from Tel Anafa, sealed below a paving, suggests that it was reused in the Late Hellenistic period, but its production and initial use derive from the Late Bronze Age.<sup>60</sup>

**BD 5**                      TA70 S31    Pl. 1  
 Loc. 2810    HELL 2A–C contam?

Limestone. Intact, except for chip at one end. Cylindrical. Figures of two gazelles (?) with rows of slanting lines between. Perforation slightly off-center. D 1.0, L 2.1.

### SCARAB (**BD 6**)

Scarabs—one stone example of which was recovered by excavators from the site, **BD 6**—are amulets that represent the scarab beetle held sacred by ancient Egyptians.<sup>61</sup> The bottom surface of scarabs, traditionally elliptical in shape, was carved in intaglio (a negative relief) in either an ornamental pattern or hieroglyphics, and thus scarabs also functioned as stamp seals (see below, **BD 7**). Primarily functioning as jewelry, scarabs were often pierced longitudinally in order to be threaded with a string or wire to be secured on garments, fingers, and necklaces; they were also mounted as swivels on metal rings.<sup>62</sup> If not pierced, as is the example from Tel Anafa, the scarab could have been enclosed in a metal frame, which was then mounted as a swivel on a ring, as is an example from Megiddo.<sup>63</sup>

<sup>54</sup> Collon 1987, 187.

<sup>55</sup> Theissier 1984, 65.

<sup>56</sup> Theissier 1984, nos. 302, 555.

<sup>57</sup> Collon 1987, 66. Parker identifies the animals as goats. This level is dated to the time of Ramses III (ca. twelfth century BCE) (Parker 1949, 28). I have not yet come across another seal with horns modeled in this way, nor a row of animals separated by this almost exact same ladder pattern.

<sup>58</sup> Very early Uruk seals are made of limestone. Later examples occur but are rare (Collon 1987, 100–102).

<sup>59</sup> Yadin 1989, pls. CCCXIX.3, CCCXX.1,2,3.

<sup>60</sup> Cylinder seals were also no longer produced in any noticeable quantity in Palestine, especially in an older, more traditional style, after ca. the fifth century BCE (Collon 1987, 76).

<sup>61</sup> Newberry 1906, 61.

<sup>62</sup> Newberry 1906, 66.

<sup>63</sup> Loud 1948, pl. 157.135.

**BD 6** was recovered from a ROM 1A robbing trench of a Late Hellenistic wall.<sup>64</sup> It is made of a soft stone, tentatively identified as steatite. The scarab features an early Egyptian-style striding sphinx, as identified by its lion's body, pharaonic headdress, and lack of wings, surrounded by stylistically rendered hieroglyphic symbols. Before the sphinx is a crudely rendered *nefer* sign (symbolizing good luck, happiness, and beauty), behind the sphinx is an ankh, below it is a classic uraeus, and above it is a schematic uraeus.<sup>65</sup> The modeling and detail of the beetle's back and the iconographic detail of the engraving have very close parallels with Hyksos-period scarabs (ca. 1570–1293 BCE) produced in Egypt.<sup>66</sup> **BD 6** also has close parallels, however, with Hyksos-period scarabs produced in the Levant, such as no. 301 from Tell el-Ajjul<sup>67</sup> and scarabs from Megiddo and Lachish.<sup>68</sup> Original production of scarabs began in Egypt, but by the Middle Bronze Age they were independently produced at workshops in the Levant.<sup>69</sup> By the mid-thirteenth century BCE, scarabs were a common possession in the Levant. Often made of steatite, these local scarabs often closely resemble Egyptian scarabs.<sup>70</sup>

**BD 6** TA70 S1 Pl. 1  
 Loc. 2433 ROM 1A  
 Steatite or other soft stone. One chip out of bottom. L 1.95,  
 H 0.9.

#### STAMP SEAL (**BD 7**)

One rectangular steatite stamp seal, **BD 7**, recovered from a ROM 1B robbing trench of a Late Hellenistic wall,<sup>71</sup> dates to the Late Bronze Age or, perhaps, the Iron Age phase of occupation. The use of stamp seals superseded the cylinder seal in Palestine by the end of the Late Bronze Age (ca. 1300–1200 BCE), when parchment began to replace clay tablets. Stamp seals fulfilled the same functions as cylinder seals and were used to seal clay tags to rolls of papyrus.<sup>72</sup> **BD 7** is pierced lengthwise and was probably worn as a pendant. Represented on one broad side of the seal is a standing man facing one direction to the side, with one arm by his side and the other raised up in front of his face. His palm is raised as well and faces the same direction as he does. An unintelligible symbol lies in front of his torso. On the other broad side of the seal a striding winged sphinx is represented. The pose of the man is that of the “worshipper” type, common on stamp seals from the Levant in the late eighth and seventh centuries BCE.<sup>73</sup> The elongated, stylized form (especially the limbs) and pose of the man have parallels with two Late Bronze Age scarabs: one from Lachish, the other from Tell Abu Zureiq.<sup>74</sup> The style and form of the sphinx have parallels with a rectangular steatite seal “plaque” from Lachish, also pierced lengthwise, dated to the Late Bronze II period at the site,<sup>75</sup> as well as a steatite seal from Megiddo dated to the Late Bronze I period.<sup>76</sup> On the basis of these parallels, it seems likely that this stamp seal derives from the Late Bronze Age period at Tel Anafa.

**BD 7** TA70 S12 Pl. 1  
 Loc. 2326 ROM 1B  
 Steatite? Rectangular with two broad sides, two narrow sides.  
 Pierced from end to end. On broad sides: winged animal, standing man. L 1.2, W 1.2, Th. 0.8.

<sup>64</sup> Herbert TA I, i, 84.

<sup>65</sup> A scarab dating to the Ramesside period recovered from Tell Gerisa displays some of these symbols surrounding a sitting mythical animal (Giveon 1988, no. 78).

<sup>66</sup> Newberry 1906, pl. XXV, no. 7.

<sup>67</sup> Rowe 1936, 78.

<sup>68</sup> Tufnell et al. 1940, 55, pl. XXXIII A, B; Loud 1948, pl. 151.127.

<sup>69</sup> Keel 1995, 99.

<sup>70</sup> Keel 1995, 101.

<sup>71</sup> Herbert TA I, i, 122.

<sup>72</sup> Buchanan and Moorey 1988, xiii.

<sup>73</sup> Buchanan and Moorey 1988, 49.

<sup>74</sup> Tufnell 1958, no. 236; Giveon 1988, 22 no. 4.

<sup>75</sup> Tufnell 1953, pl. 45.136, from tomb 218. This seal was first used in LBII and adapted for reuse in the Iron Age, ca. 900 BCE.

<sup>76</sup> Lamon and Shipton 1939, 182ff., pl. 95.34.

PERSIAN PERIOD (**BD 8**)

A single agate bead, **BD 8**, provides additional evidence for Persian-period activity at Tel Anafa, along with the lamps, pottery, and Group 1 core-form glass vessels.<sup>77</sup> It was found in the fill below HELL 1B wall 1380 with bronze fibula **M 172**, which is tentatively dated by Merker to the Persian period at Tel Anafa on the basis of its Achaemenid parallels.<sup>78</sup> Beads were hung from fibulae as pendants from a chain by means of prongs or a wire inserted through its lengthwise axis perforation.

On the basis of this parallel and the context association with the fibula, **BD 8** is here dated to the Persian period at the site. The correlation of the bronze fibula and bead, based on its Achaemenid parallels, provides further testimony to interaction with a Persian presence in the region. The Persian-period administrative center now identified at Tel Kedesh, the regional center for the Tyrian interior and the upper Galilee,<sup>79</sup> is a potential source of this interaction.

<b>BD 8</b>	TA78 S2	Pl. 2
Loc. 13103		HELL 1B

Black agate. Highly polished. Broken at both ends of the length, About three-quarters preserved. Pierced lengthways. P L 2.7, H 1.4, Th 0.7.

## LATE HELLENISTIC/EARLY ROMAN PERIOD

Like the corresponding metal finds, described by Merker as “the modest jewelry of ordinary people,”<sup>80</sup> the Late Hellenistic/Early Roman beads and pendants from Tel Anafa are also common types, primarily locally or regionally produced and of moderate expense and quality. As similarly demonstrated in studies of the stone implements and weaving tools from the site,<sup>81</sup> the small jewelry finds suggest that Late Hellenistic Tel Anafa was not the luxury villa retreat of wealthy people but a working residence and production center for members of a rural middle class with some urban connections.

Occupants of the LHSB likely took their most extravagant and valued jewelry objects when they abandoned the site in the early second quarter of the first century BCE,<sup>82</sup> generating a bias in the material record toward plainer pieces that would have been less valued. Still, a few elaborate beads and pendants were recovered from Hellenistic deposits. A couple of pieces, notably the set of feathered beads **BD 52a–e** and several of the glass pendants including **BD 87**, **BD 88**, and **BD 90**, appear to have been imported from large glass production centers such as Delos. They represent styles relatively rare in the inland Levant, with the closest parallels from stratified contexts coming from the Mediterranean islands and coastal sites. These objects, a small proportion of the overall number of beads, would have been high-status items and belong to the same class of objects as imported luxury glass bowls, amphoras, and other ceramics that indicate an “influx of imported luxury products to Tel Anafa” in the occupation phases of the LHSB.<sup>83</sup>

By contrast, the overwhelming majority of beads were likely produced more locally, copying shapes and styles with a wider, international distribution. Relative ease of manufacture for traditional glass monochrome and eye beads, as well as the greater ubiquity of these types throughout the Levant at sites such as Sarepta, Samaria, and the City of David, suggests a local or regional source for these items, possibly at the glass center now identified at Beirut, from which many glass vessels are thought to originate.<sup>84</sup> Although household glass production centers have been identified at Hellenistic

<sup>77</sup> On the Persian period at Tel Anafa, see Herbert TA I, i, 156–168 (stratigraphy and architecture), Berlin TA II, i, 17–18 (coarse ware pottery), Grose TA II, ii, 19 (glass), Dobbins TA II, ii, 117–118 (lamps), and Dever and Harrison, this volume (Attic pottery).

<sup>78</sup> Merker TA II, ii, 252.

<sup>79</sup> Herbert and Berlin 2003, 47.

<sup>80</sup> Merker TA II, ii, 249.

<sup>81</sup> Wells et al. TA II, ii, 330–333; Larson and Erdman, this volume.

<sup>82</sup> Herbert TA I, i, 19. In the absence of an obvious destruction layer, the reasons for the abandonment of the LHSB are unknown.

<sup>83</sup> Herbert TA I, i, 16.

<sup>84</sup> Foy 2005; Grose TA II, ii, 29. No direct evidence for glass bead production has been identified at Beirut site BEY 002, but glass vessels and beads were produced in the same or nearby workshops at both Delos and Jerusalem, and likely Rhodes.



Delos and Late Roman Alexandria,<sup>85</sup> and Anafa was a working residence, no tools, wasters, drawn rods, nor any other evidence of a small-scale glass or bead workshop was found at Anafa.

In her study of the plain ware ceramics from Anafa, Berlin notes that while several items are imported and indicative of a wealthy and cosmopolitan people, the majority of household pottery was locally produced, suggestive of the “local industry’s vigor, productivity, and inventiveness.”<sup>86</sup> This same homegrown zeal may be seen particularly in the glass beads and pendants, the largest category of material. Many pieces copy popular second- and first-century BCE styles, but several classes of glass beads so far unique to Anafa appear to have been produced and distributed narrowly by coastal or local glassworkers. **BD 45**, **BD 46**, and **BD 47** are cylindrical beads with a blue matrix and two white trailed lines running perpendicular to the axis of perforation. Found in diverse areas throughout the site, the earliest having a HELL 2C date, these beads are a local emendation of similar cylindrical beads with one white trailed line known from Delos and Rhodes. Completely without comparanda are two twisted cane pendants, **BD 91** and **BD 92**, also from HELL 2C levels. Relatively easy to produce with basic glassworking equipment and knowledge, the twisted cane pendants demonstrate the creativity and innovation of regional craftsman. Another variant on established manufacturing techniques and regional style is a small conical type with two examples, **BD 30** and **BD 31**. While biconical beads are common in the Hellenistic and Roman Levant, the conical shape is unique to Anafa. A fourth style, represented by **BD 53**, is only paralleled by an unpublished bead from the nearby site of Kedesh;<sup>87</sup> both pieces likely originate from the same production source.

Significantly, although minor variations in color, shape, and manufacturing technique point to more local production and consumption over importation from farther afield, the aesthetic features of Anafa beads are remarkably similar to assemblages from throughout the eastern Mediterranean and as far east as Jebel Khalid on the Euphrates. Residents of the LHSB clearly participated in a wide-ranging neighborhood of cultural taste and style: the Hellenistic cultural *koine*. The missing piece of cultural influence in the Hellenistic eastern Mediterranean is Alexandria, which is the most likely origin for styles and tastes. Published excavation reports from northern Egypt are scant, and examples of beads in comprehensive exhibition catalogues are of more ornate material and decoration than is found at Anafa.<sup>88</sup> Such elaborate objects may not have reached the more isolated Hula Valley, thereby prompting local imitations. Places such as Delos and Rhodes, which do seem more closely connected to Anafa in terms of material culture, may have filtered and mimicked Egyptian tastes, making Anafa a tertiary consumer of Egyptian style but a secondary recipient of trends from the coast and islands.

Less influence in the Late Hellenistic/Early Roman bead assemblage is seen from Judea to the south. While some universal styles, most notably eye beads **BD 39–44** and several of the plainer glass monochrome beads, have parallels from Samaria and the City of David, these beads are simple and established types with long chronological and geographic spans. The material evidence of beads and pendants supports that of the pottery: the Anafa people looked to the west, to the coast, not to the south and Judea for their material culture.<sup>89</sup>

The relative paucity of clearly identifiable imports and luxury jewelry items among the Anafa bead and pendant assemblage suggests that the most expensive and elaborate jewelry was beyond the economic reach of the people living at Tel Anafa in the late second and early first centuries BCE (HELL 2A–C). This pattern is similarly displayed in other object categories of jewelry, such as metal and precious gems. All of the bracelets, rings, and fibulae at Anafa are bronze (**M 158–161**, **M 166–175**). Earrings **M 162–164** are the only silver jewelry items, and no gold objects were found.<sup>90</sup> Furthermore, the number of relatively inexpensive glass inlays overwhelms the number of gemstones, at 140 to 13, respectively.<sup>91</sup> While those living in the LHSB likely took their most valuable jewelry with them when they left the site around 75 BCE, beads, pendants, and earrings are small and easily lost over time. The near absence of luxury jewelry, coupled with the simplicity and lower-quality craftsmanship of the vast majority of jewelry found, strongly implies that higher-quality pieces were not affordable or available to the site’s occupants in great quantity. The residents

<sup>85</sup> Nenna 1999, passim; Rodziewicz 1984, 241–243, 251.

<sup>86</sup> Berlin TA II, i, 21–22.

<sup>87</sup> Kedesh K06 BD008; see Herbert and Berlin 2003.

<sup>88</sup> See Goddio and Clauss 2006, 266–273.

<sup>89</sup> See Berlin TA II, i, 23; 1997a, 84–85.

<sup>90</sup> Merker TA II, ii, 249–254.

<sup>91</sup> According to inventory information.

of Tel Anafa were cognizant of and desirous to participate in an international Hellenistic culture but may have lacked the financial means to purchase more luxurious jewelry items. Alternatively, such objects may have simply been unavailable in north Levantine markets. With such a strong and creative regional glass industry, types and imitations produced therein were more affordable and of adequate quality for a budding bourgeoisie.

In contrast to the jewelry of the LHSB occupants, the material from Roman layers at the site is less ostentatious and shows little of the international networks of trade and fashion exhibited in the Hellenistic strata. Significantly, mosaic cane and gold glass styles, which are widespread in the eastern Mediterranean by the end of the first century CE, are not found at Tel Anafa.<sup>92</sup> Beads found in Roman levels are overall plainer and more poorly made (for example, trail decorated bead **BD 49**) than their counterparts found in deposits from the Hellenistic period, and the most decorative among them, traditional eye and melon beads, are of widespread and frequent types.<sup>93</sup> Like the ceramics, which show that the small community active at Tel Anafa from the late first century BCE to the middle first century CE traded locally with their Galilean neighbors,<sup>94</sup> the beads that can be associated stratigraphically with this period were probably manufactured and bought relatively nearby in small-scale workshops that appear to have lost either awareness of international trends or the desire to follow them. Furthermore, it is worth noting that in the absence of any beads that must date to the Roman period on the basis of style and given the quantities of residual Hellenistic material found in Roman levels at Anafa,<sup>95</sup> *no* beads can be confidently dated to the Roman period; the Roman Anafa residents may not have had beads or personal adornment at all.

For this reason, despite some perceivable differences in character between the beads recovered from Late Hellenistic and Roman levels, all are here catalogued together. Lacking elaborate and distinctive imports, none of the material from the Roman strata must necessarily be later than the first or second century BCE, rendering it typologically indistinguishable from Hellenistic beads. The beads from Hellenistic strata, however, are highly characteristic of the Late Hellenistic period; several objects have strong parallels with similar pieces from other Late Hellenistic sites along the Phoenician coast and eastern Mediterranean islands. Both levels contained a large quantity of monochrome and plainly decorated beads with long chronological spans, but the Roman strata contained *only* these undistinguished types, which cannot be associated with certainty to the post-LHSB phase of occupation.

## BEADS

### Glass

#### Monochrome

The monochrome beads from Tel Anafa are subdivided here on the basis of shape: spherical (seventeen examples), barrel (four), cylinder (four), cone (three), bicone (three), lozenge (one), and melon (four).<sup>96</sup> The majority of beads from Tel Anafa were wound, a process by which molten glass was applied to a metal, ceramic, or wooden rod, which, upon removal, formed the perforation of the bead.<sup>97</sup> A few, notably **BD 25**, **BD 28**, and **BD 34**, were then shaped while still hot using a flat heat-resistant surface called a marver, which was either hand-held or supported on a table. Two cylindrical beads, **BD 26** and **BD 27**, were constructed by folding a glass plaque around a rod, as evidenced by visible seam lines running along the entire length of the bead, parallel to the perforation.<sup>98</sup> In general, cone and bicone beads were probably also shaped on a marver, although beads from various sites appear to have been initially formed by alternate methods of drawing, folding, or piercing.<sup>99</sup> The glass surfaces of the Anafa cone and bicone

<sup>92</sup> Spaer 2001, 121. This absence of Roman-period mosaic beads is reflected in the vessel glass as well; the three putative examples of Early Roman mosaic bowls are typologically unique and may be residual (Grose TA II, ii, 53 n. 36). See also above, n. 8.

<sup>93</sup> The most elaborate bead found in a context dated to the Roman period is **BD 45**, which is likely residual since a nearly identical bead (**BD 47**) was found in a solid HELL 2C level.

<sup>94</sup> Herbert TA I, i, 21–22; Berlin TA II, i, 31.

<sup>95</sup> Herbert TA I, i, 27–28.

<sup>96</sup> Although problems with Beck's chronology and other interpretive details have been noted in more recent scholarship (G. Weinberg 1969, 144 n. 6; Spaer 2001, 16), his basic, methodical description of bead shapes remains the best available. His alpha-numeric system being unnecessarily complicated, I have, however, only adopted his descriptive vocabulary.

<sup>97</sup> See Spaer 2001, 45–46, fig. 9a–b.

<sup>98</sup> Spaer 2001, fig. 10a–b.

<sup>99</sup> Spaer 2001, 74; G. Weinberg 1969, 144; Francis 2007, 252–253.

beads are too degraded to determine the striation matrix of the glass. Glass melon beads could either be shaped by rolling the glass on a ridged mold, as **BD 37**, or by manually cutting along the sides of the bead with a sharp tool, like **BD 38**. The former often results in an incremental shift in the angle of the ridges, as the glassworker spun the rod-formed bead unevenly on the mold, while the latter generates more irregularity in the shape and size of the lobes, which often stop short of the perforation. Several wasters found at Rhodes demonstrate that melon beads there were mass manufactured on a rod, then rolled together on a mold; they are still connected at their ends, and the depth and angle of their indentations and lobes align perfectly.<sup>100</sup>

Thus, by the Hellenistic period, when a variety of bead-making techniques were actively practiced and achievable with essentially the same tools and resources, the desired shape appears to have influenced the process by which the bead was manufactured rather than the manufacturing technique dictating what sort of shapes could be formed.<sup>101</sup> For example, in the Anafa material and elsewhere, cylindrical beads are most commonly folded or cut from drawn tubes. Their thin and even cross sections render this technique more efficient and practical than attempting to distribute the glass evenly along the length of the rod while wrapping. Cone and bicone beads, by contrast, seem to be made most efficiently by piercing, or piercing and folding, while spherical shapes, at least at Anafa, are most commonly wound. Economic considerations may also have been a factor in dictating how a particular shape and style of a bead could be most cheaply and efficiently produced. Francis suggests that piercing and folding required a lower temperature, and thus less wood to stoke the furnace, to mold the glass than did winding.<sup>102</sup> The presence of beads formed by all these techniques at the late third-century BCE glass factory on Rhodes documents multiple methods of manufacture within one production center. G. Weinberg identifies heart-shaped, biconical, and bipyramidal beads as folded, spherical, elliptical, polychrome cylindrical beads as wound, and monochrome cylindrical beads as drawn.<sup>103</sup> At Delos a century later, spherical beads were wound *en masse* around a rod, then separated, while triangular and various shapes of ribbon beads were folded from plaques.<sup>104</sup> Although no glass was produced at Tel Anafa, the narrow chronological range of the site combined with the numerous production techniques of the beads found there further confirms the variability of Late Hellenistic bead manufacture.

Intact jewelry finds from the Hellenistic cemetery at Rhodes and from underwater excavations around Alexandria are reminders that relatively plain monochrome glass beads, generally spherical, could be used in elaborate metal settings. A typical example of this style is a pair of gold and silver earrings from a tomb on Rhodes dated to the second–early first century BCE. Lynx-head finials hold oval emerald inlays, and beads of agate, green glass, and a missing third are arrayed behind the heads.<sup>105</sup> Similar earrings, though missing the beads, were found at Alexandria.<sup>106</sup> Plain beads, therefore, are not necessarily indicative of plain jewelry or settings in the Hellenistic period. However, the three earrings found at Anafa (**M 162–164**) are much less distinct: they consist of plain silver wire and belong to common types with broad chronological range.<sup>107</sup> Stone and glass monochrome and banded (perhaps imitating stone) beads in various shapes are also found on simple wire necklaces throughout the region, including a gold example from Hellenistic Rhodes and a bronze string from Roman Samaria.<sup>108</sup> Again, while no metal jewelry in these styles was found at Tel Anafa, such necklaces were popular vehicles for beads over long periods of time.

<sup>100</sup> G. Weinberg 1969, pl. 76b.

<sup>101</sup> Perhaps *contra* Francis 2000. Francis divides the roughly two thousand beads from Berenike by manufacturing technique, documenting a higher percentage of segmented beads in the Ptolemaic and Early Roman periods versus wound beads, which are more common in Late Roman (fourth–sixth century CE) strata. However, he has minimal discussion of shape, and individual beads are nowhere documented or described.

<sup>102</sup> Francis 2007, 252.

<sup>103</sup> G. Weinberg 1969, 144–145.

<sup>104</sup> Nenna 1999, 128–136.

<sup>105</sup> Filimonos and Giannikouri 1999, 214, pl. 72.

<sup>106</sup> Goddio and Clauss 2006, cat. 151–154.

<sup>107</sup> Merker TA II, ii, 250–251, **M 161–164**, pl. 34. Merker notes that these pieces “could have been hung with beads or other pendants.” **M 163** has four cast silver beads suspended from the earring wire.

<sup>108</sup> Filimonos and Giannikouri 1999, 213, pl. 60; Crowfoot 1957, fig. 92.91.

Spherical (**BD 9–21**)

The seventeen spherical beads, the largest single category of Late Hellenistic/Early Roman glass beads from Tel Anafa,<sup>109</sup> are defined by having circular cross sections that are thickest in the middle and taper to the perforation, creating a roughly spherical shape. The “short” spherical pieces, as the name suggests, are generally rounded in this fashion but have a shorter length than diameter, while the single “long” spherical piece, which could also be called ellipsoid, has a longer length than diameter.<sup>110</sup> All are extremely small, with the largest (**BD 18**) only 0.8 cm in diameter. Excepting the vibrant hues of the three beads with blue-green coloring, the original color of the majority is concealed under a white weathering layer, which overlays a spectrum of color from light amber to transparent purple that is revealed when the bead is dampened. Beads of this shape and size have been found in abundance at Rhodes and Jebel Khalid,<sup>111</sup> although the Anafa specimens were likely produced by local glassworkers.

<b>BD 9</b>	TA69 G5	Pl. 2	<b>BD 16</b>	TA70 G143	Pl. 2
Loc. 3301		MODERN	Loc. 2322		HELL 2C
Glass. Iridescent white. Original color indeterminate. Spherical. D 0.6, L 0.6.			Glass. Transparent purple with light iridescent white patina. Short spherical. D 0.5, L 0.4.		
			Two other examples: TA70 G168 (Loc. 2322, HELL 2C); TA73 G42 (Loc. 21321, ROM 1A).		
<b>BD 10</b>	TA69 G2	Pl. 2	<b>BD 17</b>	TA70 G132	Pl. 2
Loc. 1300		MODERN	Loc. 2906		HELL 2B or C
Glass. Translucent light amber with dark patina. Short spherical. One end chipped. D 0.6, L 0.5.			Glass. Transparent, with dark and white patina. Original color indeterminate. Short spherical. D 0.5, L 0.4.		
<b>BD 11</b>	TA70 G155	Pl. 2	<b>BD 18</b>	TA68 G67	Pl. 2
Loc. 2321		ARAB 1–ROMAN	Loc. 3211		HELL 2C or later
Glass. Yellow, appearing iridescent white (dry). Short spherical. Sides chipped. D 0.5, L 0.4.			Glass. Dark, with some white weathering. Original color indeterminate. Spherical. Some pitting. D 0.8, L 0.8.		
			Two other examples, fragmentary: TA69 G41 (Loc. 3319, ROM 1A contam.); TA70 G156 (Loc. 3413, ROM 1A).		
			Parallels: Ariel 1990, GL 51–52; Dayagi-Mendels 2002, Tomb ZR II 14, 15, 17, 18; Kedesh K06 BD009 (unpublished).		
<b>BD 12</b>	TA70 G157	Pl. 2	<b>BD 19</b>	TA69 G44	Pl. 2
Loc. 2326		ROM 1B	Loc. 1306		ARAB 2
Glass. Yellow weathering. Original color indeterminate. Irregular short spherical. Badly weathered. D 0.5, L 0.4.			Glass. Translucent gray with white patina. Spherical. Two pieces. D 0.6, L 0.7.		
<b>BD 13</b>	TA69 G48	Pl. 2	<b>BD 20</b>	TA69 G51	Pl. 2
Loc. 2312		HELL 2C	Loc. 2316		HELL 2C
Glass. Translucent blue-green, appearing iridescent white with brown patina. Spherical. D 0.6, L 0.5.			Glass. Bright blue with dark exterior weathering and white patina. Short spherical. In three pieces, incomplete. D 0.9, L 0.7.		
<b>BD 14</b>	TA70 G124	Pl. 2	<b>BD 21</b>	TA72 G70	Pl. 2
Loc. 2030		HELL 2A or ROM 1B	Loc. 3426		HELL 1 or 2A
Glass. Transparent green. Short spherical. Hole off-center. D 0.3, L 0.25.			Glass. Opaque white. Long spherical (ellipsoid). One-half preserved. D 0.6, L 0.9.		
<b>BD 15</b>	TA70 G121	Pl. 2			
Loc. 2810		HELL 2A–C?			
Glass. Transparent turquoise blue. Short spherical. D 0.4, L 0.3. Parallels: Dothan 1971, pl. xxiv.15.					

<sup>109</sup> Spherical is also the most common shape for Late Hellenistic/Early Roman stone beads from Tel Anafa (**BD 56–59**, below).

<sup>110</sup> Beck calls variations on this basic globular shape oblate, circular, and ellipsoid based on the shape of the cross section and relative length to width. He defines short as a length less than nine-tenths of the diameter and long as a length more than eleven-tenths of the diameter (Beck 1928, 5–6, pl. II). I find “spherical,” the term used by G. Weinberg and Spaer, more descriptive as it applies to the entire shape of the bead, not merely the cross section.

<sup>111</sup> G. Weinberg 1969, pl. 77a; O’Hea 2002, fig. 8.4,5,10.

Barrel-shaped (**BD 22–25**)

Barrel-shaped beads **BD 22**, **BD 23**, **BD 24**, and **BD 25** differ from spherical beads in that their ends are flat rather than tapered to the hole. This truncation most often results from the separation of beads, formed when a drawn cane or line of wound glass is shaped on a segmented marver and broken apart into individual beads.<sup>112</sup> On the whole, these four beads are larger than their spherical counterparts and more poorly preserved, with pitting and white weathering spots. Due to this weathering, it is impossible to determine whether they were wound or drawn, although the slight concavity on the ends of **BD 24** renders it likely to have been drawn and cut. **BD 25** was likely wound and then shaped on a marver into its short disc shape.<sup>113</sup> Its find spot, among luxurious imported pendants and fancy decorated beads, suggests it was most likely used as a spacer bead among these more elaborate types.

<b>BD 22</b>	TA69 G4	Pl. 2	<b>BD 24</b>	TA70 G151	Pl. 2
Loc. 1233		ROM 1	Loc. 2322		HELL 2C
Glass. Translucent brown, appearing dark with white weathering in chipped areas. Original color indeterminate. Short barrel. Surface severely chipped. D 1.2, L 0.85.			Glass. Dark blue. Short barrel. Flattened around perforation. Probably drawn. White weathering spots with some pitting. D 0.95, L 0.7.		
<b>BD 23</b>	TA69 G42	Pl. 2	<b>BD 25</b>	TA72 G56	Pl. 2
Loc. 3325		ROM 1B contam.	Loc. 1359		HELL 2B/C
Glass. Dark blue with mottled white weathering. Short barrel. D 0.5, L 0.3.			Glass. Amber, with white and iridescent purple patina covering 80 percent of surface. Barrel disc, marvered into rectangular shape. Pierced through short side. D 1.9 (0.7), L 0.9.		

Cylindrical (**BD 26–29**)

Beck defines the cylindrical shape as having a straight-line profile parallel to the axis of the bead.<sup>114</sup> All of the Anafa types are also truncated, meaning their ends are flat and meet the perforation at a right angle. Of the four monochrome cylindrical glass beads from Tel Anafa, two (**BD 26** and **BD 27**) were folded, one (**BD 28**) was wound and shaped on a marver, and one (**BD 29**) was incised after an indeterminate manufacturing process. All four were found in the South Annex of the LHSB, at levels associated with the primary occupational period of that building between 125 and 75 BCE. Small monochrome cylindrical beads cut from tubes were found at the glass bead manufacturing site at Rhodes, but **BD 26** and **BD 27** more closely resemble the manufacture technique of polychromed cylinder beads from Delos, which were made from mosaic glass folded around a central core.<sup>115</sup> The two Anafa pieces are probably locally or regionally produced variants on this style; a bead similar to **BD 26**, which may have a trail decoration although it is too poorly preserved to be sure, was found at Samaria.<sup>116</sup> The ivory color and rectangular shape of **BD 28** is apparently unprecedented in the coastal areas of the eastern Mediterranean, but a similar piece was found at Jebel Khalid on the Euphrates.<sup>117</sup> It seems to imitate bone beads such as **BD 76**, perhaps serving as a more luxurious and modern alternative to a traditional style for the residents of these two large, moderately wealthy residential sites.

**BD 29** is among the more distinctive beads from the site. Badly weathered, its incised markings may or may not have been clear or legible in antiquity. With its cylindrical shape and inscribed patterns, it most closely resembles a cylinder seal and exactly matches the dimensions of the single such item from Anafa, **BD 5**, which may have been reused in the Hellenistic period as an amulet.<sup>118</sup> While glass and faience cylinder seals were mass produced in the second half of the second millennium BCE, by the Hellenistic period cylinders were replaced with stamps, and cylindrical seals began to be

<sup>112</sup> Examples of such stone molds with ridged tops and wide bases for stability were found in glass workshops at Kôm el-Dikka, Alexandria (Rodziewicz 1984, pl. 72, 359–366). See also Spaer 2001, figs. 12–14.

<sup>113</sup> A disc-shaped bead is one in which the length is less than a third of the diameter (Beck 1928, 4).

<sup>114</sup> Beck 1928, 7.

<sup>115</sup> G. Weinberg 1969, 145, pl. 77b; Nenna 1999, 129.

<sup>116</sup> Crowfoot 1957, fig. 92.30.

<sup>117</sup> O’Hea 2002, fig. 9.8.

<sup>118</sup> Both objects were found in the South Annex, in similarly dated loci.

used as amulets.<sup>119</sup> **BD 29** then could be a Bronze Age faience or glass seal or, more likely based on the depth of incision and chaotic pattern of the lines, a Hellenistic imitation, poorly crafted with nonsense carvings. Its turquoise color mimics turquoise stone or earlier forms of turquoise glass. Similar replicas of seals and other inscribed objects can be found in markets in the tourist areas of Jerusalem even today, where they are sold for their antiquarian mystery and appeal.<sup>120</sup> The Anafa piece may have been interpreted and used as an amulet, or it may have just been an interesting *objet d'art* piece owned by the LHSB occupants. Cylindrical beads of bluish green faience with incised collars and cross-hatched decorations, perhaps similar to the original or intended appearance of **BD 29**, are in the Corning Museum of Glass and attributed to Amlash in Iran from the second century BCE to the second century CE.<sup>121</sup>

<b>BD 26</b>	TA73 G5	Pl. 2	<b>BD 28</b>	TA70 G123	Pl. 2
Loc. 2549		HELL 2B	Loc. 2330		HELL 2C
Glass. Bright blue. Possible white zigzag trail decoration. Long cylinder. Folded, with visible seam line parallel to perforation. Some pitting. D 0.6, L 1.3.			Glass. Opaque ivory. Long cylinder, marvered into rectangular shape. D 0.5, L 1.44.		
Parallels: G. Weinberg 1969, 145, pl. 77b; Nenna 1999, 129; Crowfoot 1957, fig. 92.30.			Parallel: O'Hea 2002, fig. 9.8.		
<b>BD 27</b>	TA73 G11	Pl. 2	<b>BD 29</b>	TA70 G82	Pl. 2
Loc. 2577		HELL 2A	Loc. 2027		HELL 2A–C?
Glass. Black and white mottled. Long cylinder. Folded, with visible seam line parallel to perforation. D 0.6, L 1.3.			Glass. Opaque turquoise with brown weathering. Irregular incisions on surface, perhaps imitating a cylinder seal. Long cylinder. Badly weathered and pitted. D 1.0, L 2.1.		
Parallels: Same as <b>BD 26</b> .			Parallel: Goldstein 1979, cat. 844.		

#### Conical (**BD 30–31**)

The two conical beads from Tel Anafa were recovered from the main (HELL 2) occupation phase of the LHSB. Following Beck, the conical shape is defined as one end wider than the other, with a straight line profile; “long” and “short” are based on the relative ratio of diameter to length.<sup>122</sup> **BD 30** and **BD 31** are both badly weathered but intact. Because both examples are poorly preserved, their method of manufacture is difficult to determine. Likely, **BD 30** and **BD 31** were pierced and folded like the biconical beads (see below). Unlike their bicone relatives, conical beads are rare in the eastern Mediterranean in all periods, with none published from Delos, Rhodes, City of David, Samaria, or the Israel Museum. The two Hellenistic samples found at Anafa are thus probable products of local or coastal style and manufacture, perhaps a variant on the more popular bicone.

<b>BD 30</b>	TA68 G77	Pl. 2	<b>BD 31</b>	TA73 G45	Pl. 2
Loc. 3018		HELL 2A	Loc. 2327		HELL 2C
Glass. Iridescent black weathering. Original color indeterminate. Long cone. D. 0.8, L 0.7.			Glass. Iridescent black weathering. Original color indeterminate. Short cone. D 0.9, L 0.4.		

#### Biconical (**BD 32–33**)

The two catalogue entries of glass biconical beads, representing three objects, are of a type that was exceedingly popular in the eastern Mediterranean in both glass and stone. The bicone shape, as its name implies, consists of two cones joined at their large ends, so as to taper to the perforation.<sup>123</sup> In addition to the two glass examples catalogued here,<sup>124</sup> three stone beads belong to this shape class (**BD 69–71**, below). Carnelian, amethyst, and blue glass bicone beads were found at Samaria, and two glass bicone beads come from tombs used over a wide chronological span at

<sup>119</sup> Collon 1987, 102.

<sup>120</sup> Thanks to Paul Lesperance for this suggestion and reference.

<sup>121</sup> Goldstein 1979, cat. 844.

<sup>122</sup> Beck 1928, 7.

<sup>123</sup> Beck 1928, 7.

<sup>124</sup> Inventory information lists two additional beads from the 1978–1981 excavation series, TA79 G202 and TA79 G245, as bicones.



Akhziv.<sup>125</sup> Additional examples from the necropolis at Tyre have been dated to the Roman period based on accompanying material.<sup>126</sup>

Method of manufacture for this type seems to vary depending on location of production and perhaps date. On the evidence from Hellenistic and Roman Berenike, Francis postulates a specialized technique that he calls “pierced-folded-and-marvered” for making this shape.<sup>127</sup> Bicone beads from Rhodes, described by G. Weinberg as “folded and pressed,” may also have been made in this fashion, by piercing a hole in a wide disc of glass, then folding it up along the rod and shaping it on a marver.<sup>128</sup> Spaer speculates that beads with unevenly sized halves (such as **BD 32** and the majority of exempla from Rhodes) predate a later type that was manufactured by drawing, then segmented on a mold to create more uniform ends.<sup>129</sup> Based exclusively on shape, the surfaces being too weathered to determine striation patterns, the small sample of specimens from Anafa appears to uphold Spaer’s hypothesis of a development in bicone bead production from folded to drawn sometime between Hellenistic Rhodes and the Roman period. **BD 32**, found at a second-century BCE level, tapers more on one side than the other, while **BD 33** and its non-catalogued duplicate, TA68 G74, from first-century BCE and topsoil levels, are more evenly shaped. However, the data samples from Anafa and the Israel Museum are exceptionally small, and other evidence from Anafa suggests a high degree of variability in bead manufacturing techniques based on shape and personal preference of the bead-maker in this period.<sup>130</sup>

<b>BD 32</b>	TA69 G36	Pl. 2	<b>BD 33</b>	TA72 G60	Pl. 2
Loc. 1247		HELL 1 or 2A/B	Loc. 1235/36		HELL 2C+/ROM 1
Glass. Translucent blue-green with yellow weathering patina. Bicone, one end truncated. D 0.5, L 0.4.			Glass. Iridescent blue. Original color indeterminate. Truncated bicone. D 0.8, L 0.6.		
Parallels: Crowfoot 1957, fig. 92.36; Spaer 2001, cat. 45a–b; G. Weinberg 1969, pl. 76d.			One other example: TA68 G74 (surface find) Parallels: Chéhab 1986, pl. XXXVI.3; Crowfoot 1957, fig. 92.35; Dayagi-Mendels 2002, ZRVI 9, ZRXIII 29; O’Hea 2002, fig. 9.2; Spaer 2001, cat. 46a–b; G. Weinberg 1969, pl. 76d.		

#### Lozenge-shaped<sup>131</sup> (**BD 34**)

The single lozenge-shaped bead from Tel Anafa, **BD 34**, appears to be a variant of a wound bead that was then flattened on a marver. The irregular shape and size of the perforation reflects that of the core on which it was formed. The shape is uncommon but not unknown, with monochrome beads of similar shape and size found at Samaria, Jebel Khalid, and Kedesh.<sup>132</sup>

<b>BD 34</b>	TA70 G122	Pl. 3
Loc. 1344		HELL 2C+/ROM 1
Glass. Iridescent white weathering. Long truncated bicone, marvered flat. One end has longer taper and is slightly thicker. Perforation round at thicker end and flattened oblong at other. D 1.5 (0.6), L 1.7.		
Parallels: Crowfoot 1957, fig. 93.38; O’Hea 2002, fig. 8.11; Kedesh K99 BD007 (unpublished).		

<sup>125</sup> Crowfoot 1957, fig. 92.35–36, 69–70; Dayagi-Mendels 2002, ZRVI 9, ZRXIII 29.

<sup>126</sup> Chéhab 1986, 173, Bijoux pl. XXXVI.3.

<sup>127</sup> Francis 2007, 252–253.

<sup>128</sup> G. Weinberg 1969, 144.

<sup>129</sup> Spaer 2001, 64, 74. Such a mold for shaping bicone beads was found at Byzantine Alexandria (Rodziewicz 1984, pl. 72.364).

<sup>130</sup> See above, p. 98.

<sup>131</sup> While Beck’s nomenclature categorizes the so-called lozenge shape as a flattened type of bicone, I have elected to catalogue it separately using the terminology and method of more recent scholarship. While the shapes are related geometrically, they do not appear to be so stylistically or chronologically.

<sup>132</sup> Crowfoot 1957, fig. 93.38; O’Hea 2002, fig. 8.11; Kedesh K99 BD007 (unpublished).

Melon-Shaped<sup>133</sup> (**BD 35–38**)

While various bead scholars have attempted to replace Beck's "melon" type with another, clearer name,<sup>134</sup> this catalogue follows the traditional term on account of its sheer ubiquity, acknowledging that it might not be the most accurate descriptor. Generically, melon refers to any bead that is segmented into ridges, which most commonly run parallel to the axis of perforation. The ridges, or lobes, can be of any thickness and number. The shape was especially popular in the second millennium BCE in Egypt, where it may have been ascribed with various cultic properties; a faience type, represented by Anafa **BD 1** (above), is especially common.<sup>135</sup> The four Late Hellenistic/Early Roman-period glass melon beads from Tel Anafa are greatly varied, ranging from five wide lobes (**BD 36**) to ten narrow ridges (**BD 37**). Such a diversity within the type is typical by the Hellenistic period, as demonstrated by the material from Delos.<sup>136</sup> Almost 700 beads of the melon type in various shapes and colors were found at Rhodes and likely produced there.<sup>137</sup> This diversity and proliferation, which could be described as an almost careless attitude toward the form, suggests that the shape had lost its inherent cultic properties by this period. Beads generally similar to those from Anafa come from all over the Levant and eastern Mediterranean in glass and faience, including Tel Keisan, Samaria, Tyre, Sarepta, and Corinth.<sup>138</sup>

<b>BD 35</b>	TA69 G62	Pl. 3	<b>BD 37</b>	TA72 G21	Pl. 3
Loc. 2412A		HELL 2C and ROM 1A	Loc. 2327		HELL 2C
Glass. Turquoise underlay with yellow and white weathering. Standard barrel, with nine evenly spaced lobes. D 1.3, L 1.0. Parallels: G. Weinberg 1969, pl. 76e top row, fifth from left.			Glass. Dark purple, with gold iridescent weathering. Spherical, with ten narrow ridges running 0–30° off perforation. D 1.0, L 1.0. Parallels: Crowfoot 1957, fig. 92.55; Chéhab 2002, pl. XXXIV.6.		
<b>BD 36</b>	TA72 G18	Pl. 3	<b>BD 38</b>	TA73 G40	Pl. 3
Loc. 3411		MODERN	Loc. 1423		ROM 1
Glass. Iridescent, with thick white and yellow weathered surface and black patina. Original color indeterminate. Standard barrel, with five lobes. D 1.1, L 0.9. Parallels: Nenna 1999, E143; Pritchard 1988, cat. 25; Eisen 1930, nos. 99–110; Marchand 1996, Bead 10.			Glass. Iridescent purple, with white patina. Original color indeterminate. Probably spherical, with two preserved lobes and beginning of third. L 2.6. Parallels: G. Weinberg 1969, fig. 76e, top row, fourth from left; Eisen 1930, nos. 114–115.		

DecoratedEye Beads<sup>139</sup> (**BD 39–44**)

Six beads from Tel Anafa can be described as eye beads, belonging to a type originating in the second millennium BCE and continuing through the present. An eye bead at its most basic consists of at least one spot, surrounded by one or more concentric layers so as to resemble an eye. While early eye beads may have been intended to mimic banded stone, more importantly they possessed an apotropaic function of guarding against the "evil eye," a value that helps account for their ongoing popularity. However, the degree to which a given piece was appreciated for its amuletic or cultic properties as opposed to strictly decorative is a longstanding, and likely ultimately unknowable, question.<sup>140</sup>

<sup>133</sup> TA81 G133, described in inventory as two lobed fragments, may also be a spherical lobed bead of melon type.

<sup>134</sup> As early as 1927, Eisen suggested that "lotus" would be a more apt name, befitting the early amuletic nature of the shape (Eisen 1930, 20). The name "lotus," however, should be reserved for the Iron Age and Persian beads of Phoenician origin that mimic the two-petal shape of the lotus blossom (Spaer 2001, fig. 35; shape not represented in the Anafa material). Other suggestions have included "fruit" shaped or "côtelées" (ribbed) (Nenna 1999, 136), neither of which is particularly more descriptive than the more traditional "melon."

<sup>135</sup> Eisen 1930, 20–22; Ogden 1982, 63.

<sup>136</sup> Nenna 1999, E136–E149. Nenna claims that melon beads were produced at Delos, but since only one was found in a workshop and the rest in domestic contexts, and there appear to be no wasters or other direct evidence of production, the evidence is inconclusive.

<sup>137</sup> G. Weinberg 1969, 144, pl. 76a–b.

<sup>138</sup> Nodet 1980, pl. 95.39–41; Crowfoot 1957, fig. 92.55; Chéhab 1986, pl. XXIV.1,2,6; Pritchard 1988, cat. 25; Davidson 1952, cat. 2418–2421.

<sup>139</sup> Two beads from the 1978–1981 excavations, TA80 G102 and TA80 G170, are described in inventory as having "bulleyes." Both come from HELL 2 floor levels (loci 7920 and 7417, respectively).

<sup>140</sup> On the history, interpretation, and attempts at dating of eye beads, Eisen 1916; Spaer 1987.

Eye beads are perhaps one of the most ubiquitous types throughout Europe and the Near East during the four millennia of their manufacture. At Rhodes, eye beads are “by far the greatest number and exhibit many varieties,” and, with forty-one catalogued examples, they are among the most prevalent categories at Delos as well.<sup>141</sup> Most attempts at dating them rely on differences in manufacturing technique of the eyes, which can be trailed by hand, applied in layers of color (“stratified”), or cut from canes and inset into the matrix of the bead. This last development is based on the mosaic technology in which glass is fused and drawn into miniaturized patterns, then worked secondarily into its final form. Spaer dates this technique to the third century BCE.<sup>142</sup> Waste products found at Rhodes, including polychrome canes of two or more concentric rings, support the use of this technique by the end of the third century, although it is unclear whether all eye beads there were necessarily made in this way.<sup>143</sup> The fracturing pattern on **BD 41**, broken away in one section enabling the profile of the eye to be viewed, clearly illustrates that the eyes on this bead were formed using the cut-cane technique. The regularity of size, shape, and color of the eyes on **BD 39**, **BD 40**, **BD 42**, and **BD 44** indicates that these eye beads are also examples of this technique, as would be expected in the Late Hellenistic period. The slight variability of color and thickness in individual eyes, particularly noticeable on **BD 39** and **BD 40**, is most likely an effect of the cane-making process; any irregularity in the glass itself or the ability of the glassworker can alter the relative thickness of the cane as a whole or of individual color components in that cane.<sup>144</sup> Alternatively, such variability could be intentional. Both exempla beads have two eyes that, being only blue and white with no exterior yellow ring, are noticeably different from the other eyes on the bead, a distinction that may have a symbolic meaning. The sixth and final eye bead, **BD 43**, is also likely decorated with cut canes, based on the erosion of parts of the glass matrix leaving some residual definition of the eye itself, but individual eyes, their colors and concentric rings, are difficult to ascertain.

Aside from manufacturing technique, the other main descriptor of eye beads is the pattern of the eyes. Iron Age and Persian eye beads appear to have been more rigid and limited in the arrangement and patterning of the eyes: common types are the triangular bead with three raised eyes, the paired eye bead with coupled sets of eyes placed at regular intervals, and the three-plus-four eye bead with three eyes surrounding the perforation on one end and four on the other.<sup>145</sup> None of the eye beads from Tel Anafa even remotely suggests any pattern. Eyes are placed haphazardly, asymmetrically spaced over the entire surface of the bead at irregular distances from one another. Such a disregard for order may indicate a decreased amuletic value of the pieces, which no longer had to adhere to a strict set of rules to invoke a desired benefit but instead were worn for purely aesthetic purposes.

Beads **BD 39**, **BD 40**, and **BD 41**, though ranging in diameter from 1.2 cm to 2.8 cm, are of a similar type based on the composition and distribution of their eyes, which primarily have blue centers surrounded by concentric rings appearing white, blue, and yellow.<sup>146</sup> Beads with these colors, variability in ring composition, and irregular spacing of the eyes appear at numerous sites from the second half of the first millennium, including Delos, Sarepta, Dor, Kedesh, Samaria, and the City of David.<sup>147</sup> The blue centers, which seem to be one of the few commonalities among most Hellenistic eye beads, might be a nod to realism as the eye overall became more abstracted. The original base color of these three beads is difficult to determine due to severe weathering but based on similar beads from Delos is likely to have been red, green, blue, or white. Eye beads of this type may have themselves been exported throughout the eastern Mediterranean from one or two important bead manufacturing centers, such as the one at Delos, but minor variations such as size of the bead

<sup>141</sup> G. Weinberg 1969, 145; Nenna 1999, E1–41.

<sup>142</sup> Spaer 1987, 3.

<sup>143</sup> G. Weinberg 1969, 149, fig. 84e. Similar canes, matching the patterns on eye beads, were found at Delos and help support the evidence for that site as a glass bead manufacturing center (Nenna 1999, 125–126, pl. 51.F69 and E2).

<sup>144</sup> *Contra* Eisen 1916, 24: “When some eyes on a bead have a different number of rings from other eyes on the same bead, we can suspect that the eyes are stratified.” However, such irregularities in cane eyes are not unprecedented. In describing such a bead from Samaria, Horace Beck stated that “in one eye the broken piece of cane was inserted at right angles to the correct position, so that a pattern is formed with white and blue bands on opposite sides of the eye” (Crowfoot 1957, 394).

<sup>145</sup> Spaer 1987, figs. 1–5; Spaer 2001, cat. 79–81, 87–92, 93–98.

<sup>146</sup> Nenna subdivides the eye beads from Delos by size, but there seems to be little correlation between the size and the type and colors of eyes, with similar beads being found among the various size classes (for example, E4 and E31) (1999, 125–128).

<sup>147</sup> Nenna 1999, E3, E7, E9, E15, E22, and others; Pritchard 1988, cat. 54; Stern 1995, fig. 7.2.15; Kedesh K06 BD010 (unpublished); Crowfoot 1957, fig. 92.4; Ariel 1990, GL 48, GL56.

and number of eyes suggest that they were probably produced elsewhere, likely at a local or regional workshop. **BD 42** probably belongs to this type and pattern of distribution as well. Although it is too poorly preserved to determine the original color or layers of the eyes, it does have an interesting concave “lip,” more severe than a standard truncation, surrounding both ends of the perforation. These indentations are the result of separating beads formed and decorated together around a rod and thereby serve as an indication of mass production.

Eye bead **BD 44**, found in a HELL 2C (98–75 BCE) level, is composed of tiny eyes in rough diagonal rows, many of which have fallen out of the matrix or eroded away. The lines of eyes do not extend all the way to the perforation, and the simplicity of the eye itself, which consists only of the center spot and one surrounding ring, is compensated by the density of eyes. Such beads with ten or more eyes seem to be primarily of Hellenistic date,<sup>148</sup> as supported by the context of the Anafa piece. Its colors are faded to an iridescent light bluish white matrix and eye spots, with matte yellow rings; an eye bead of similar weathering pattern in the Israel Museum was probably violet-blue and white.<sup>149</sup> Found in the South Annex with the pre-Hellenistic melon faience bead **BD 1** and the imported feather beads **BD 52a–e**, this eye bead likely carried a similar status value.

- |   |           |             |  |           |             |
|---|-----------|-------------|--|-----------|-------------|
| <b>BD 39</b>  | TA70 G146 | Pl. 3       | <b>BD 42</b>   | TA70 G142 | Pl. 4       |
| Loc. 2324   |           | ROM 1B      | Loc. 2417  |           | HELL 2C     |
| Glass. Blue, white, yellow on iridescent white background with thick black weathered layer. Original color indeterminate. Seven eyes; all with blue center and white and blue rings, five have additional thicker yellow ring. Spherical. D 1.2, L 1.1. |           |             | Glass. Black and white weathering; no original color visible. Nine irregularly spaced eyes with dark center and tan ring, some overlapping. Short barrel with truncated, indented ends. D 1.8, L 1.1.  |           |             |
| Parallels: Nenna 1999, E3, E7, E9, E15, E22, and others; Pritchard 1988, cat. 54; Stern 1995, fig. 7.2.15; Kedesh K06 BD010 (unpublished); Crowfoot 1957, fig. 92.4; Ariel 1990, GL 48, GL56.   |           |             | <b>BD 43</b>   | TA73 G12  | Pl. 4       |
| <b>BD 40</b>  | TA73 G6   | Pl. 3       | Loc. 5203A   |           | MODERN/ARAB |
| Loc. 5203A  |           | MODERN/ARAB | Glass. Iridescent, with white and black weathering. Original color indeterminate. Marbling around circumference, appearing to be part of bead matrix and not trail decoration. Five (?) eyes, incorporated into swirls. Irregular spherical. D 1.0, L 0.9. |           |             |
| Glass. Dark brown, almost black. Seven cane eyes; five with blue center and white, blue, and yellow rings, two with blue center and white or yellow and blue ring set in wide white background. Short barrel. D 2.3, L 1.8.                             |           |             | Parallels: Nodet 1980, pl. 95.31; Davidson 1952, cat. 2437.  |           |             |
| Parallels: Same as <b>BD 39</b> .   |           |             | <b>BD 44</b>   | TA70 G85  | Pl. 4       |
| <b>BD 41</b>  | TA73G21   | Pl. 3       | Loc. 2437  |           | HELL 2C     |
| Loc. 5203A  |           | MODERN/ARAB | Glass. Opaque iridescent white, yellow, with black weathering. Original colors indeterminate. Numerous small eyes with white center, yellow ring, irregularly spaced. Elongated barrel. About one-half preserved. L 1.5.                                   |           |             |
| Glass. Dark brown, almost black. Ten cane eyes, with blue center and white, blue, and yellow rings. Short barrel. Broken and mended, about one-quarter of surface missing. D 2.8, L 2.0.  |           |             |  |           |             |
| Parallels: Same as <b>BD 39</b> .   |           |             |  |           |             |

#### Trail Decorated Beads

Trail decorated beads from Tel Anafa fall into two primary categories: simple patterns with one or two light colored stripes around the circumference of the bead, or complex pieces with multiple trail lines in multiple colors, applied and then manipulated with a tool. All complex and all but two of the simpler pieces are wound, with decorative elements applied after this initial formation with smaller canes of accent colors.<sup>150</sup> The raised surfaces of the trail lines on beads **BD 45**, **BD 47**, and **BD 51** nicely exhibit how the trail decoration was added by hand. By contrast, the polychromy of **BD 48** and **BD 49** was achieved by folding plaques, similar to cylindrical beads **BD 26** and **BD 27**, above. Both winding and folding were in common use in the Late Hellenistic period. Numerous mosaic plaques found at

<sup>148</sup> Spaer 2001, 85.

<sup>149</sup> Spaer 2001, cat. 100.

<sup>150</sup> See Spaer 2001, fig. 21.

Delos in the same colors as beads there suggest that this was the preferred production method at the glass workshops on that island,<sup>151</sup> meaning the majority of Anafa trail decorated beads were not Delian imports, though they seem to have been influenced by the styles. Like the majority of beads from Anafa, those with trailing appear predominately in Hellenistic and Roman levels and are concentrated in the South Annex area of the LHSB, with scattered finds from the West Annex and South Slope. One, **BD 48**, was found at a Hellenistic level in the North Colonnade.

#### SIMPLE TRAIL DECORATED (**BD 45–51**)

Simple trail decorated beads from Tel Anafa are overwhelmingly blue with white trailing. Such a combination is also prevalent at the Hellenistic bead workshops on Delos and Rhodes, although both sites have a greater range of beads in additional or alternate colors.<sup>152</sup> With at least three exempla, beads **BD 45**, **BD 46**, and **BD 47**, represent the second largest type class of glass bead from Anafa.<sup>153</sup> The type has a *terminus ante quem* of the early first century BCE, as provided by the earliest dated locus for these three beads of HELL 2C. They are relatively large, at almost 2 cm long, and were wound into rough cylindrical shapes and decorated with two white trail lines around the circumference at the center. Overall, the beads appear poorly crafted or unfinished. The irregularity of the cylindrical shape, which is asymmetrical and bumpy in all three pieces, and raised surface of the trail lines suggest a relatively inexperienced glassmaker lacking the knowledge or skill to marver or fire-polish the beads. The three examples of this type from Anafa indicate a strong local variant on the general type of white trail lines on dark beads. Two nearly identical beads were found at Bethsaida, on the shore of the Sea of Galilee. Similar cylindrical beads with one central white stripe come from Hellenistic Delos and Rhodes, and a necklace in the Corning Museum of Glass attributed to Parthian Iran contains blue beads with two white center lines in the popular Roman “cornerless cube” shape.<sup>154</sup> It is unclear whether the Anafa type, which appears to be an amalgam of the two shapes and styles, is an intermediary between the eastern Mediterranean islands and Near East in stylistic development, or whether a local glassmaker consciously combined the two extant styles. Another close parallel is a bulged cylinder black bead with two white bands from a pre-Herodian fill at Samaria. At 1.3 cm, this bead is about half a centimeter smaller than the Anafa pieces.<sup>155</sup> Its presence at Samaria is further evidence of minor regional variation in manufacture and style.

The only simple trailed bead without a blue matrix is **BD 50**, which has a green, yellow, and blue mottled body, perhaps imitating stone. This color and veining are paralleled in two beads from the City of David, from tenth-century BCE and first-century CE contexts, with no white trail around their circumferences.<sup>156</sup> The break of the Anafa piece reveals that the white trail, flush with the surface of the bead, does not continue down through the body, indicating that the trail was added after the initial stage of forming.

Two simple trail decorated pieces were made from polychrome folded plaques. Fragment **BD 49**, in the way in which it is broken, clearly shows that the white central color continues through the entire bead to the perforation, and therefore was constructed using a bichrome sheet of blue and white glass. The visible seam and discontinuity in the wave pattern of **BD 48**, as well as the very fine detail and synchronicity of the lines, indicate it was similarly folded. As with the monochrome beads, by the Hellenistic period, use of different techniques to form different styles of bead is probably more indicative of the personal preference of the bead maker than of a limitation of technology. Small beads of similar wave patterns to **BD 48** come from Samaria and Jebel Khalid, suggesting more Near Eastern than Mediterranean influences for this particular design.<sup>157</sup> The simple pattern of **BD 49**, with a central wide white stripe flanked by dark bands, may be an inexpensive imitation of agate beads with similar appearance that were popular in this period.<sup>158</sup>

<sup>151</sup> Nenna 1999, 128, pl. 58.

<sup>152</sup> Nenna 1999, 128; G. Weinberg 1969, 145.

<sup>153</sup> Beads **BD 52a–e**, a common Hellenistic feathered type, were found together and likely belong to one necklace. According to inventory information from the 1978–1981 excavations, two additional beads with a blue base and white banding at the center may also belong to this type (TA80 G192 and TA81 G2).

<sup>154</sup> Nenna 1999, E66; G. Weinberg 1969, pl. 78d, bottom row; Goldstein 1979, cat. 812. Rottloff 2009, 231, no. 167. Rottloff suggests a date in the Islamic period based on a parallel from Nubia, but the Anafa finds support a late Hellenistic date.

<sup>155</sup> Reisner et al. 1924, fig. 244.3b.

<sup>156</sup> Ariel 1990, GL 41 and GL 58.

<sup>157</sup> Crowfoot 1957, fig. 92.22; O’Hea 2002, fig. 9.5.

<sup>158</sup> Examples of agate beads of this type in their original gold settings come from the Hellenistic-period tombs on Rhodes (Filimonos and Giannikouri 1999, 213–214).

- BD 45** TA69 G1 Pl. 4 **BD 49** TA73 G50 Pl. 4  
 Loc. 3319 ROM 1A/B Loc. 4110 ROM 1B or later, contam.
- Glass. Dark matte indigo, white. Two raised white trail lines in center of bead, around circumference. Long cylinder. Chip at one end, some pitting. D 0.8, L 1.7.  
 Parallel: Rottloff 2009, 231, No. 167.
- BD 46** TA69 G47 Pl. 4  
 Loc. 2311 — **BD 50** TA70 G136 Pl. 4  
 Loc. 2330 HELL 2C
- Glass. Dark glossy indigo, white. Two white trail lines in center of bead, around circumference. Long cylinder, irregular. Chipped at one end, some pitting. D 0.8 (0.5), L 1.9.
- Glass. Green, iridescent black, and yellow marbled body, white. White trail line at center around circumference. Short barrel. Three-quarters preserved. D 1.0, L 1.0.  
 Parallels: Spaer 2001, cat. 164; G. Weinberg 1969, pl. 78c, bottom row; O’Hea 2002, fig. 8.9.
- BD 47** TA73 G51 Pl. 4  
 Loc. 2327 HELL 2C
- Glass. Dark iridescent indigo, white. Two raised white trail lines in center of bead, around circumference. Long cylinder, irregular. Weathered surface, some pitting. D 0.8, L 1.8.
- BD 51** TA73 G52 Pl. 4  
 Loc. 4110 ROM 1B or later, contam.
- Glass. Dark iridescent weathered blue, white. One white band in center of bead, around circumference. Long barrel. Folded from glass plaque. One-half preserved; white band extends through entire bead. D 0.9, L 1.4.
- BD 48** TA69 G6 Pl. 4  
 Loc. 2607 HELL 2B/C
- Glass. Light opaque blue, white. Three white trail lines, in wave pattern around circumference. Long cylinder. Folded from blue and white plaque. Chipped at one end. D 0.4, L 0.8.  
 Parallels: Crowfoot 1957, fig. 92.22; O’Hea 2002, fig. 9.5.

COMPLEX TRAIL DECORATED<sup>159</sup> (**BD 52–55**)

For the feathered and chevron beads (such as **BD 52** and **BD 54**), the decorative lines were applied by hand with a thin cane of glass and next dragged with a tool, probably metal or bone.<sup>160</sup> In the Hellenistic period, this feathering technique was commonly used on small glass vessels such as oinochoai, alabastra, and amphoriskoi, examples of which were found at Anafa.<sup>161</sup> Lightfoot has suggested that similarities of technique between lentoid aryballois and rod-formed glass head pendants may indicate that the two have similar industries or influences;<sup>162</sup> a similar argument seems likely for feathered glass vessels and beads, both of which were popular and widespread in this period. In addition to sharing a common decorative technique, the colors most commonly used—dark blue or green glass with white, yellow, or orange trails—are similar in the two types of glassworking product.<sup>163</sup>

**BD 52a–e**, the most elaborate set of beads from Tel Anafa, were found in a HELL 2C (98–75 BCE) context and likely originate in the islands of the eastern Mediterranean. All five beads, found and catalogued together, are of the same type, distinguished by a long (2–3 cm) cylindrical shape and a similar decorative technique of white trail lines applied to the surface of the bead and dragged to form a feathered pattern. All but (e) are “capped” with a thick yellow or white line at each end. Quite similar beads in color schemes of blue, orange, red, yellow, and white were found in a disturbed third–second-century BCE context at Sarepta, in an undated context at the necropolis of Tyre, and in domestic areas on Hellenistic Delos.<sup>164</sup> The type is also common in museum collections, including that of the Israel

<sup>159</sup> TA79 G149, from an ARAB 1 fill level (locus 5408), is described in inventory as cylindrical, with a combed white and green V-shaped pattern on a darker background. Since polychrome combed trail decorated beads were also popular in the Islamic period (see Spaer 2001, 103–104), absent a photograph or sketch this bead could either be from the Arab or Late Hellenistic occupation of the tel.

<sup>160</sup> Spaer 2001, figs. 21–22. Bone, terracotta, and bronze implements found at the glass factory on Rhodes appear to have been used as tools (G. Weinberg 1969, 150).

<sup>161</sup> Grose TA II, ii, cat. 1–19, especially feathered pieces 14, 16, and 17. All examples of core-formed glass bottles from Anafa are blue glass with white, orange, or yellow decoration.

<sup>162</sup> Lightfoot 2001, 63.

<sup>163</sup> For examples, see Uberti 1988, 476, cat. 144; Harden 1981, pls. XVIII–XIX.

<sup>164</sup> Pritchard 1988, cat. 45; Chéhab 1986, 171, Bijoux pl. XXIX.7; Nenna 1999, 144. A similarly feathered black and white bead from Megiddo is almost certainly later than its designated stratum date of Early Iron I (Loud 1948, pl. 216.118).

Museum. It reemerges in the Byzantine and Islamic periods, with examples from Byzantine Corinth, the Roman–Byzantine tombs at Castra, and an Umayyad style in the Israel Museum.<sup>165</sup> Lacking waste products or other evidence for production of this feather-and-capped type at Delos, Nenna assumed the ten examples found there to be imported; the Hellenistic glass bead production center at Rhodes produced a similar type, with trailed capped ends but fusiform in shape and a swirled, rather than feathered, pattern.<sup>166</sup> Since the Rhodes workshop appears to date to the third century, the fusiform shape produced there may be a precursor to the early first-century BCE Anafa and Delos type. The style may trace its influence back to a much older example of elaborate glass beads with metal caps, such as two in the Ernesto Wolf Collection in Germany. The lobed, cylindrical beads are turquoise blue with yellow stripes winding around the circumference, distorted into a wave pattern by the undulating surface, crowned by two gold caps on the ends. Thought to be made in Italy, examples of this mid-seventh-century BCE type are known from the Black Sea, Greece, and Austria and may themselves imitate cylinder seals from western Asia.<sup>167</sup> The high level of craftsmanship, the very specific Late Hellenistic distribution of the type at coastal sites but not inland Palestine, and the similarities of the type to Rhodian and Italian precursors point to an international source among the bead making centers in the eastern Mediterranean islands for these five beads. The three other beads found together with **BD 52**—**BD 1**, **BD 44**, and **BD 53**—are similarly distinctive and valuable.

**BD 53**, the final bead from locus 2437, and **BD 54**, which is from a similar early first-century BCE context, are decorated in a chevron pattern that runs perpendicular to the axis of perforation. Both are wound beads, and **BD 54** was flattened on a marver after it had been decorated, based on the continuity and compression of the pattern on the narrow ends. It is difficult to determine whether the bead maker of **BD 54** applied lines of color and then tooled them into the chevron shape, using the same technique as the feathering, or whether he drew the design freehand. While the pattern appears too regular to be freehand, there is little bleeding of line and color, which comes from tooling already applied glass; either way, the production is very skillful. By and large, the pattern is rare or unknown in Hellenistic bead assemblages. Somewhat similar beads, both spherical and flattened and in blue, red, and yellow, were found at Rhodes, although a great majority just have simple spiral threads and not the more elaborate chevron pattern.<sup>168</sup> Two beads from Corinth, dated by Davidson to the Byzantine period and described as “herring-bone,” have a similar appearance.<sup>169</sup> The closest parallels in the region come from Kedesh, in a context dated to the middle of the third through middle of the second centuries BCE, and Bethsaida.<sup>170</sup> In color, shape, and pattern, the Kedesh and Anafa beads are veritable twins and in all probability originate from the same production source. The earlier dates of both the Kedesh and Rhodes examples suggest that the Anafa bead was either an heirloom of the LHSB residents or leftover from the HELL 1A (332–198 BCE) period of occupation. Finally, the chevron Anafa beads bear a strong similarity to a later style of transverse zigzag bead found in Roman Syria and may be a stylistic precursor to them.<sup>171</sup>

One polychrome trail decorated piece, **BD 55**, is mysterious. Its poor level of preservation—weathered, pitted, and broken—renders its original shape and function indeterminable, but the intricate design and coloring of the feathered trail lines point to an object of relatively high value. S. Weinberg initially published it in conjunction with the other pendants found in square 1.3,<sup>172</sup> but it is hard to envision how it would hang against the body. One possibility is that it was the bale (suspension loop) for a pendant that would have dangled freely from the narrow end. A glass plaque would have been folded around the pendant material, likely glass or metal, then trailed lines were added to the folded bale. This supposition is purely hypothetical; no similar baled pendants are known in glass from the Hellenistic eastern Mediterranean. Alternatively, **BD 55** could be the handle end of a glass implement. It is included in the catalogue here on the basis of its decorative patterning.

<sup>165</sup> Davidson 1952, cat. 2483; Spaer 2001, fig. 47, cat. 175–176.

<sup>166</sup> Nenna 1999, 144; G. Weinberg 1969, fig. 79b. Two of this fusiform shape were also found at Delos (Nenna 1999, cat. E189, E190).

<sup>167</sup> Stern and Schlick-Nolte 1994, 200, no. 42.

<sup>168</sup> G. Weinberg 1969, 145, pls. 78c and 78e. Only one pictured bead, fifth from left in pl. 78c, has a chevron pattern. A yellow and green bead with a chevron pattern from Samaria has no date (Crowfoot 1957, fig. 92.16).

<sup>169</sup> Davidson 1952, cat. 2461–2462.

<sup>170</sup> Kedesh: CB38031.1, inv. no. K06 BD 008 (unpublished); Bethsaida: Rottloff 2009, 230, nos. 159–160.

<sup>171</sup> Spaer 2001, cat. 162–163.

<sup>172</sup> S. Weinberg 1972, 15, fig 10.



<b>BD 52</b>	TA70 G83a–e	Pl. 4	<b>BD 53</b>	TA70 G84	Pl. 5
Loc. 2437		HELL 2C	Loc. 2437		HELL 2C
Glass. Appearing black, white, yellow. Long cylinder.			Glass. Appearing black, dark yellow. Yellow trail lines zigzag around circumference. Standard barrel. Iridescent white weathering spots, original color indeterminate. Large break at one end, three-quarters preserved. D 1.4, L 1.1.		
(a) Spirally applied white trail lines dragged in opposite directions to form feather pattern, straight trail lines appearing yellow at both ends of bead. Well preserved. D 1.1, L 2.5.			Parallels: G. Weinberg 1969, pl. 78c, top row, fifth from left.		
(b) Spirally applied trail lines, appearing black, gray, and iridescent white, dragged in opposite directions to form feather pattern, straight lines appearing dark yellow at both ends of bead. Probably same as (a) but colors badly weathered. D 1.2, L 2.7.			<b>BD 54</b>	TA72 G55	Pl. 5
(c) Some faint trail lines of undistinguishable pattern visible on black background, lines appearing yellow at both ends. Chip at one end. Probably same as (a) but badly weathered. D 1.0, L 2.4.			Loc. 1359		HELL 2B/C
(d) Spirally applied trail lines, appearing dark yellow, dragged in opposite directions to form feather pattern, straight trail lines appearing white at both ends of bead. Probably same as (a) but colors badly weathered. <sup>173</sup> D 1.1, L 2.2.			Glass. Iridescent white, yellow, red, and black. White, yellow, and red trail lines dragged around circumference, forming chevron pattern completely covering body of bead. Standard barrel, flattened on marver into a square. Large chip at one end. D 1.4 (0.6), L 1.2.		
(e) White line applied in continuous spiral over body of bead. Broken at one end, two-thirds preserved. D 1.0, L 2.1.			Parallels: Davidson 1952, cat. 2461–2462; G. Weinberg 1969, pl. 78e; Kedesh K06 BD008 (unpublished); Rottloff 2009, 230, no. 159–160.		
Parallels: Spaer 2001, cat. 153; Chéhab 1986, Bijoux pl. XXIX.7; Nenna 1999, E183–186; Pritchard 1988, cat. 45; G. Weinberg 1969, pl. 79b; Loud 1948, pl. 216.118; Davidson 1952, cat. 2483; Stern and Schlick-Nolte 1994, cat. 42.			<b>BD 55</b>	TA72 G57	Pl. 5
			Loc. 1355.3		HELL 2A/B
			Glass. Iridescent blue, gray-white, yellow. Slightly raised white and yellow trail lines, applied and dragged in feather pattern around circumference. Loop folded around rod with thick point at juncture, seam visible in break. Broken and badly pitted; original shape indeterminate. D 1.2 (0.8), L 2.3.		

*Stone*<sup>174</sup>

The Late Hellenistic/Early Roman stone jewelry from the site is represented by nineteen catalogued beads (**BD 56–75**) and one pendant (**BD 93**). The majority of the assemblage represents the Late Hellenistic occupation at Tel Anafa, with a few pieces possibly representing the Early Roman occupation. A few examples display the cosmopolitan character of the material culture from the site during this Late Hellenistic period (indicated by the imported pottery assemblage, coinage, and other various imports). The majority of stone beads from Tel Anafa are from Hellenistic levels (2A–C) located in the LHSB and South Annex; beads were also recovered from the West Annex and Room 2A on the South Slope.

The stone beads range in size from the smallest spherical bead with a diameter of 0.3 cm to the largest cylindrical bead with a length of 4.1 cm and a diameter of 1.7 cm. The most common shape from the site is spherical; other shapes represented are truncated spherical, elliptical, cylindrical, biconical, melon, disc, and short barrel. Some of the beads have a bevel near the perforation, a feature that allowed abrasives to be concentrated during the drilling process and thus aid in more efficient drilling.<sup>175</sup> The size of the perforations of the beads varies, though this appears to have no chronological or developmental significance.

Like glass beads, stone beads could have hung from hoop earrings, such as **M 164**, and they were also sometimes suspended from chains attached to fibulae and functioned as pendants (see above). Melon bead **BD 73** was found in the same locus as a pair of hemispherical bronze and iron bells, **M 165**.<sup>176</sup> Such bells were sometimes worn as jewelry and attached to a necklace or bracelet together with beads, as evidenced by examples from Egypt.<sup>177</sup>

The stone beads are arranged according to shape, with the most common shape listed first. All varieties and

<sup>173</sup> White glass commonly weathers to yellow, and vice versa (personal communication with Malka Hershkovitz, July 2008).

<sup>174</sup> Initial study and cataloguing of the stone beads was done by Susan Morris.

<sup>175</sup> Zuckerman 1996, 278.

<sup>176</sup> Merker TA II, ii, 252.

<sup>177</sup> Moorey 1980, 92.

colors of stone within each shape category are represented. The parallels provided in the catalogue for the various shapes and materials of the beads from Tel Anafa attest to the commonality, widespread and continued use of them throughout the eastern Mediterranean world (Syria, Egypt, Jordan, Greece, and Asia Minor). Comparanda from a range of chronological periods are given in order to demonstrate the continuity of styles over time; they should not be considered comprehensive.

Spherical (BD 56–59)

**BD 56** TA73 S62 Pl. 5  
Loc. 5203c HELL 2C+/ROM 1A

Yellow stone. Intact, chipped. D 0.7.

Parallels: Zuckerman 1996, 42, 6–9; Lamon and Shipton 1939, pl. 90.15,30,53,70; Crowfoot 1957, fig. 92.60; O’Hea 2002, fig. 9.11.

**BD 57** TA72 S6 Pl. 5  
Loc. 2444 HELL 2C

Carnelian, pale pink. Chipped surface. D 1.3.

Parallels: Same as **BD 56**.

**BD 58** TA72 S6 Pl. 5  
Loc. 2006 ROM 1A/B

Carnelian, mottled pale brown to dark red-brown. D 0.9.

Parallels: Same as **BD 56**.

**BD 59** TA78 S4 Pl. 5  
Balk trim —

Dark red carnelian. Intact. H 0.6, Th 0.7.

Parallels: Same as **BD 56**.

Spherical, Truncated (BD 60–62)

**BD 60** TA68 S15 Pl. 5  
Loc. 2109a ARAB/MODERN

Black stone. Truncated. D 1.0.

Parallels: Zuckerman 1996, 42.10–13; Lamon and Shipton 1939, pl. 90.14; O’Hea 2002, fig. 9.10.

**BD 61** TA70 S68 Pl. 5  
Loc. 2326 ROM 1B

Carnelian, mottled. Intact. Truncated. D 1.1, H 0.7.

Parallels: Crowfoot 1957, fig. 92.64.

**BD 62** TA72 S55 Pl. 5  
Loc. 1382 HELL 2A/B

Carnelian, mottled. Intact. Truncated. Roughly cut. Small perforation. D 1.1, H 0.6.

Two other examples: TA68 S12 (Loc. 3212, HELL 2C+/later); TA73 S3 (Loc. 21400, MODERN).

Parallels: Same as **BD 61**.

Elliptical (BD 63–65)

**BD 63** TA73 S44 Pl. 5  
Loc. 1406 MODERN

Pale yellowish white translucent stone. Intact. L 1.5, D 1.0.

Parallels: Lamon and Shipton 1939, pl. 90.1,24; Crowfoot 1957, fig. 92.66–67.

**BD 64** TA68 S11 Pl. 5  
Loc. 2112 HELL 2C+

Green stone. L 1.0.

**BD 65** TA72 S3 Pl. 5  
Surface find —

Possibly carnelian. Intact. L 1.4, D 1.0.

Cylindrical (BD 66–68)

**BD 66** TA72 S11 Pl. 5  
Loc. 2446 HELL 2C

Alabaster. Intact. L 0.9, D 0.6.

Parallels: Zuckerman 1996, fig. 43.6; Lamon and Shipton 1939, pl. 92.68; O’Hea 2002, fig. 10.3.

**BD 67** TA73 S93 Pl. 5  
Loc. 21200 MODERN

White marble. Broken at both ends. Perforation bored off-center and with greater diameter at one end than at other. L(P) 1.4, D. 0.8.

Parallels: Same as **BD 66**.

**BD 68** TA72 S4 Pl. 5  
Loc. 2542a HELL 2C+/ROM 1A

Slightly translucent stone. Possibly chalcedony. Intact, surface gone on one side. L 4.1, D 1.7.

Parallels: Same as **BD 66**.

Biconical (BD 69–71)

**BD 69** TA69 S63 Pl. 5  
Loc. 2312 HELL 2C

Carnelian. L 1.2, D 0.8.

Parallels: Crowfoot 1957, fig. 92.69–70.

**BD 70** TA69 S7 Pl. 5  
Loc. 2407 ARAB

Cream colored stone. L 1.2, D 0.7.

**BD 71** TA78 S1 Pl. 5  
Loc. 7112 ARAB/MODERN

Black onyx. Highly polished. Intact, chipped beside piercing on one side. Pierced through center. L 2.0, D 3.2.

Parallels: Zuckerman 1996, 42.2–5; Lamon and Shipton 1939, pl. 90.18,25.

Melon (BD 72–73)

**BD 72** TA69 S24 Pl. 5  
 Loc. 2415 ROM 1A  
 Green stone. Spherical, with eight lobes. L 1.2.

**BD 73** TA70 S70 Pl. 5  
 Loc. 2427 HELL 2C+ contam.  
 Carnelian. Long barrel-shaped with creases. Chipped at both ends. P L1.6.  
 Parallels: Lamon and Shipton pl. 92.63

Disc (BD 74)

**BD 74** TA73 S33 Pl. 5  
 Loc. 21305 ARAB  
 Mottled light to dark gray stone. Intact. D 1.3, L 0.5.  
 Parallels: Zuckerman 1996, 42.1; Lamon and Shipton 1939, pl. 90.44; O’Hea 2002, fig. 9.12.

Short Barrel (BD 75)

**BD 75** TA70 S71 Pl. 5  
 Loc. 2112a HELL 2C+  
 Carnelian. L 0.6.  
 Parallels: Zuckerman 1996, 42.15; Lamon and Shipton 1939, pl. 90.37.

Bone and Shell (BD 76–84)

Four cylindrical bone beads were found in Hellenistic and Roman levels, ranging in length from 1.45 to 2.1 cm and with diameters of 0.6 to 1.0 cm (**BD 76–79**).<sup>178</sup> They are finely crafted from thin, even, cylindrical bone and perforated by smoothing out the interior marrow with varying degrees of precision. **BD 76** has a square perforation, while the marrow of **BD 79** is only partially removed. **BD 80** is smaller and has a slight bulge in the middle, indicating it was made from a different type of bone. Its darkened ends are probably decorative, perhaps in emulation of collared glass beads such as **BD 52a–e**.

**BD 81** and **BD 83** were originally published by S. Weinberg along with several glass beads and pendants (**BD 25**, **BD 54**, **BD 55**, **BD 85**, **BD 87**, **BD 89**, and **BD 90**).<sup>179</sup> He describes the set as “a group of glass and bone pendants from 1.3, found in a late second century context.” The locus and dating of these two bone pieces, however, cannot be further identified since inventory cards have not been located. The glass pieces span three loci assigned by Herbert to successive occupational strata, HELL 2A/B and HELL 2B/C.<sup>180</sup> It is reasonable to infer that bone beads **BD 81** and **BD 83** can be assigned to the general HELL 2 occupation of the LHSB, spanning the last quarter of the second century BCE and the first quarter of the first century BCE. The ROM 1A stratum date of **BD 82**, which is almost identical to **BD 81**, further validates the first-century BCE dating of these artifacts.

Technically, **BD 81**, **BD 82**, and **BD 83** are beads since they are perforated at the center, and not pendants, which hang from an end. The precise carving on dense bone exhibits a high degree of detail and craftsmanship, rendering them among the finest and best-preserved beads from Anafa. Identical pieces come from an undated, illegally excavated tophet at Tyre,<sup>181</sup> suggesting a shared locale of manufacture or strong cultural affinity between the coastal and Anafa residents. **BD 81**, **BD 82**, and the objects from Tyre are variations of a relatively common amuletic type of clenched fist that was particularly popular later in the Roman period, occurring in carnelian, steatite, blue glaze faience, and bone.<sup>182</sup> Bone pendants quite similar to the Anafa example were found in the Phoenician/Punic necropolis at Ibiza.<sup>183</sup> Two pendants of this type in blue glaze come from the necropolis at Dura Europas. Pin heads with the four-fingered, clenched hand motif come from unstratified debris at Samaria and a first-century CE context at Corinth, demonstrating the ongoing popularity of the style in domestic and funerary contexts a century or more after the Anafa pieces.<sup>184</sup> Seeden interprets the objects from Tyre as protective charms, a purpose that may be readily ascribed to the Anafa pieces as well, given the find spot of **BD 81** among other amuletic types.

<sup>178</sup> One more cylindrical bone bead of similar shape and size to **BD 76** and with an identical square perforation is among the Tel Anafa material held at the Israeli Antiquities Authority warehouse (IAA no. 79-1639). Its original Anafa inventory number was not recorded, and no matching inventory card has been found in the Kelsey Museum archives.

<sup>179</sup> S. Weinberg 1972, 15, fig. 10.

<sup>180</sup> See above, n. 17.

<sup>181</sup> Seeden 1991, 76, figs. 48–51.

<sup>182</sup> Petrie 1914, 11, pl. I.12d–e. He interprets the fist as an amulet to inspire and assure “vigorous action.”

<sup>183</sup> Vives y Escudero 1917, pl. 28 nos. 1–6.

<sup>184</sup> Toll 1946, 57, no. 69 (pl. XLVI); 68, no. 20 (pl. L); Crowfoot 1957, 461, fig. 114.39; Davidson 1952, no. 2351.

**BD 83** is more difficult to identify. It bears passing resemblance to a Ptolemaic style occurring in blue glass, described by Petrie as a palm column.<sup>185</sup> Like **BD 81**, however, its closest published comparison is a bone pin from Samaria with an X-shaped hatch at the head, appearing from the side to resemble a crown.<sup>186</sup> A very similar pendant comes from a Roman-period deposit at Tell Hesban, which, like the late second-century deposit of beads at Anafa, contained several amuletic-type pendants and bone objects. Platt identifies this shape as a crude “lotus-seed vessel.”<sup>187</sup> Crowfoot generally dates the bone pins from Samaria to the Roman period.<sup>188</sup> These bead styles may then be precursors to decorative pins.

**BD 84** is the single piece of mother-of-pearl found at Anafa, likely imported from the coastal areas to the west. It comes from a HELL 2C (98–75 BCE) stratum, and it may or may not have been manufactured in that period; its dating here is based solely on its stratigraphic context. Although the disc of the bead is of irregular shape and thickness due to the natural shape of the shell, the perforation through the length of the bead is even and smooth.

<b>BD 76</b>	TA69 B21	Pl. 5	“fingers” at one end. Two raised bands (bracelets?) at wrist, one incised band at end of arm. Perforation at center, along short axis, perpendicular to plane of hand. D 0.6, L 2.5 (0.8). Parallels: Seeden 1991, figs. 48–51; Crowfoot 1957, pl. 114.39; Toll 1946, 57 no. 69 (pl. XLVI), 68 no. 20 (pl. L); Petrie 1914, pl. I.12d–e; Vives y Escudero 1917, pl. 28,1–6 (Ibiza necropolis).
Loc. 2513A		ROM 1B	
Bone. Cylindrical, with square perforation. Ends weathered. D 0.8, L 1.9.			
<b>BD 77</b>	TA70 B13	Pl. 5	<b>BD 82</b>
Loc. 2423		HELL 2B/C	
Bone. Cylindrical, perforated along length probably by removing marrow. D 0.8, L 1.45.			
<b>BD 78</b>	TA73 B4	Pl. 5	TA80 B2
Loc. 2394		HELL 1/2A	Pl. 5
Bone. Cylindrical, perforated along length. Weathered or burned to black. D 0.6, L 2.1.			
<b>BD 79</b>	TA79 B12	Pl. 5	Loc. 7428
Loc. 5312		ROM 1A	ROM 1A
Bone. Cylindrical, perforated along length by partially removing marrow. Surface roughly polished, possibly by use. D 1.0, L 1.9.			
<b>BD 80</b>	TA73 B13	Pl. 5	<b>BD 83</b>
Loc. 21400		MODERN	
Bone. Cylindrical, slightly bulging in center, perforated along length. Slightly darkened at both ends. D 0.45, L 1.3.			
<b>BD 81</b>	TA72 B11	Pl. 5	TA72 B12
Loc. unknown		HELL 2	Pl. 5
Bone. Clenched fist with forearm (Petrie Type 12), with four			

### PENDANTS

Pendants are commonly differentiated from beads on the basis of the placement of the perforation at one end rather than through the middle. While the essential decorative function of pendants is the same as beads, they

<sup>185</sup> Petrie 1914, 50, pl. XLIII.268.

<sup>186</sup> Crowfoot 1957, fig. 114.30–31.

<sup>187</sup> Platt 2009, 298.

<sup>188</sup> Crowfoot 1957, 440–441.

were worn differently, either individually or as the central focal point of a necklace. Because they are fundamentally more ostentatious, pendants are more subject to changes in fashion and style than are beads, and therefore are more readily traceable and datable. Pendants found at Tel Anafa have close parallels from all over the Late Hellenistic eastern Mediterranean, including Israel, Lebanon, Delos, and the Black Sea region, and many were likely imported from the major glass production centers in these locales. The wide distribution of remarkably similar pieces in this period points not only to an extensive trade network but to a certain homogeneity of fashion. The inhabitants of the Late Hellenistic building at Tel Anafa saw themselves as active participants in this *oikumene* and ornamented themselves appropriately.

### Glass

The glass pendants from Tel Anafa fall into four categories with two objects each: flattened triangular, aryballo-shaped, figurative, and twisted rods.

**BD 85** (flat triangle), **BD 87** (aryballos), **BD 89** (head), **BD 90** (phallic) belong to one of the largest concentrations of jewelry at the site, dated to the main phase of LHSB occupation. Along with these four glass pendants were three glass beads (**BD 25**, **BD 54**, and **BD 55**), one carnelian bead (**BD 62**), and two bone beads (**BD 81** and **BD 83**). These nine objects represent at least three loci and two phased strata.<sup>189</sup> Interestingly, they were found not in a domestic area but in the West Annex, which Herbert identified as an industrial-service area.<sup>190</sup> **BD 87** and **BD 90** were found in an ashy deposit inside the earliest tanur, in locus 1371, dated to HELL 2A/B, 125–98 BCE. **BD 85** and **BD 89** belong to the overlying floor, locus 1359, dated slightly later.

**BD 90** and the two bone pendants found with it almost certainly had at least minor amuletic properties, and **BD 89**, **BD 87**, and **BD 88** may have as well. At Dor in the Persian period and later, apotropaic pendants and charms of various materials, worn as the focal piece of glass necklaces, were believed to have the ability to protect the wearer and to frighten evil forces.<sup>191</sup> Excepting perhaps the eye beads (**BD 39–44**), the Anafa beads and pendants in whole lean more toward decorative or marginally amuletic functions than truly apotropaic. The Anafa material, therefore, points to the increased urbanization of its residents, who elected to purchase and wear inexpensive locally produced beads and commonly available imports in recent fashions rather than adhere to ancestral religion and customs.

### Flattened Triangle (**BD 85–86**)

Flattened triangle pendants like **BD 85** were found at Delos in houses as well as glass workshops. Nenna attributes their production to the island, where they were cut from monochrome glass plaques of various thicknesses and pierced along the top.<sup>192</sup> The shape is relatively common throughout the Hellenistic East, often occurring in polychrome glass made with prefabricated canes or plaques.<sup>193</sup> A second, less canonical piece from Anafa is **BD 86**. While no perforation is preserved, the thickness, shape, and size are still in keeping with the Delian material. The examples from Tel Anafa are too weathered to determine their original color, but the regularity of their iridescent silica surface layers suggests they were monochrome. Petrie lists similar objects, pierced at the top and roughly triangular in shape in imitation of stone tools, as potent amulets for success in militaristic endeavors and against lightning and evil.<sup>194</sup> While all the Egyptian examples are made of stone and the last dates to the twenty-sixth dynasty (seventh–sixth centuries BCE), the Hellenistic pieces in glass seem to imitate the style, if not the function, of their Egyptian predecessors.<sup>195</sup> **BD 85**, found as it was near other pieces of more certain apotropaic or amuletic value such as phallus pendant **BD 90**, may have been viewed as an amulet as well.

<sup>189</sup> This set of finds was originally published together in S. Weinberg 1972, 15, fig. 10. See above, n. 17.

<sup>190</sup> Herbert TA I, i, 95; see also Wells et al. TA II, ii, 302–303.

<sup>191</sup> Stern 1994, 176–177.

<sup>192</sup> Nenna 1999, 133.

<sup>193</sup> Spaer 2001, fig. 67, from private collection; Goldstein 1979, cat. 813, from Amlash, Iran. In addition to monochrome, multicolored triangular pendants were also found on Delos and are likely to have been produced there (Nenna 1999, 128, E42–46).

<sup>194</sup> Petrie 1914, 28.

<sup>195</sup> O’Hea similarly associates a stone pendant, probably malachite, from Late Hellenistic Jebel Khalid with Egyptian predecessors (2002, 264, fig. 7.4).

<b>BD 85</b>	TA72 G54	Pl. 6	<b>BD 86</b>	TA73 G20	Pl. 6
Loc. 1359		HELL 2B/C	Loc. 5203A		MODERN/ARAB
Glass. Iridescent weathering. Long cone, marvered flat along both planes. Perforation at narrow end of cone. D 0.8, L 2.0 (0.6). Parallels: Nenna 1999, E91–97, esp. E97; Spaer 2001, fig. 67.			Glass. Iridescent flaky weathering, appearing purple and blue. Long cone, flattened. No visible perforation. Narrow end weathered, appearing broken. D 0.4, L 1.5. Parallels: Same as <b>BD 85</b> .		

#### Aryballos-shaped<sup>196</sup> (**BD 87–88**)

**BD 87** and **BD 88** mimic the shape of the ceramic aryballos, characterized by a small rounded body, narrow neck, and wide lip. While this description generically fits the assortment of pendants classified by this shape, individual pieces can vary greatly in their specific forms. The two Anafa pendants are no exception; **BD 87** has a bulbous, circular bottom and narrower circumference at the top, whereas **BD 88** is narrower in profile, with an ovoid bottom and similar width from top to bottom. A pendant from Rhodes is similar to the former, while Delian examples exhibit the straight profile of the latter. Two pieces in the Israel Museum fall somewhere in between. While there may be chronological or geographical significance to these variations, no systematic study has been undertaken of these so-called aryballos pendants or of the similar “amphora” pendants that are often associated with them.<sup>197</sup> Nenna argues that the aryballos shape was produced in Delian workshops due to the presence of finished, unfinished, and waster objects, including some that were not pierced, in the Magasin des stucs.<sup>198</sup> In the absence of another known production source, Delos seems a possible point of origin for the Anafa pendants, particularly **BD 88**.

<b>BD 87</b>	TA72 G19	Pl. 6	<b>BD 88</b>	TA73 G7	Pl. 6
Loc. 1371		HELL 2A/B	Loc. 5203A		MODERN/ARAB
Glass. Iridescent weathering. Drop-shaped, with wide circular bottom, narrow rounded shoulder, and flat flare at top. D 1.0 (0.6), L 1.3. Parallels: G. Weinberg 1969, pl. 77c second from left; Tatton-Brown 1990, pl. 22d.			Glass. Iridescent weathering. Jar-shaped with ovoid drop, thin flat shoulder, and flat top. Pitted. D 0.7 (0.4), L 0.9. Parallels: Spaer 2001, cat. 290–291; Nenna 1999, cat. E76–79; Crowfoot 1957, fig. 92.43; Tatton-Brown 1990, pl. 22e.		

#### African Head (**BD 89**)

Pendant **BD 89**, a mold-made male head in the round, attracted much scholarly attention after its initial publication by S. Weinberg.<sup>199</sup> Its find spot at Anafa has confirmed the existence of this common type in the late second-/early first-century BCE Levant. Since so many of these distinctive pieces, with the physiognomy of a black African male, are in museum or private collections from uncontrolled contexts, the place of origin and chronological span of the type is ambiguous. Pieces from the Israel Museum, Toledo Museum of Art, British Museum, and miscellaneous private collections are described as originating in the eastern Mediterranean, possibly Egypt or the Phoenician coast, anywhere between the third century BCE and first century CE.<sup>200</sup> Spaer lists the Anafa piece and others as “remarkable for the mere fact that so many identical pieces are known” and, based on this ubiquity, suggests that the type or at least the molds used to make it originate from one workshop.<sup>201</sup> Fischer and Jackson-Tal agree with Spaer’s theory, adding that the most likely location for the manufacture of these pieces is Alexandria, given the reputation of Alexandria’s glass industry and the common subject matter of Egyptian deities.<sup>202</sup> Certainly, all share common characteristics, including a dark purple or black color (excepting a piece from Jebel Khalid that is a translucent pink), curly

<sup>196</sup> Inventory cards from the missing 1978–1981 excavation series list two other glass pendants (TA78 G126 and TA80 G1) as having an “aryballos” shape.

<sup>197</sup> For amphora and other jar-shaped pendants, generally from the Roman period, Chéhab 1986, Bijoux pl. XXXI; Spaer 2001, cat. 288–289, Petrie 1914, pl. V.70. None are represented in the Anafa material.

<sup>198</sup> Nenna 1999, 131–132.

<sup>199</sup> S. Weinberg 1972, fig. 10.

<sup>200</sup> Spaer 2001, cat. 325–326; Grose 1989, cat. 645; Tatton-Brown 1990, pl. XXIIa–c.

<sup>201</sup> Spaer 2001, 162. For additional examples of the type, see comparanda in Nenna 1999, 143, and Spaer 2001, 168.

<sup>202</sup> Fischer and Jackson-Tal 2003, 36.

hair, large nose and lips, and manufacture in a two-part mold, as evidenced by the visible seam down the side of the face. However, slight differences in the published examples may represent regional or even local variations on the international theme. The Samaria piece, which Crowfoot describes as the top of a pin and not a pendant, has less distinctively African features than the others.<sup>203</sup> Of the two Israel Museum pieces, photographed side by side, catalogue no. 325 is overall puffier and rounder, with a lower hairline and almost cherubic features, whereas no. 326 is slimmer through the cheeks and chin with a longer neck and more deeply set eyes. The three pendants in the British Museum resemble one another in frontal view, but their profiles vary in thickness and shape, and the suspension loops are set on different parts of the head and are triangular, rectangular, or round in shape. The Toledo Museum piece, catalogued by Grose as an amulet, has a round face, heavy brow ridge, button nose, and faint smile best described as Archaic. The top suspension loop, though broken, on account of its regularity seems to have been formed around a rod as opposed to the Anafa piece and others that have more irregular shapes as the result of being added by hand after the initial molding stage.<sup>204</sup> Two pendants likely found on Cyprus and housed in museums there are different in facial features and size, one being 1.8 cm in height with an oval face, high forehead, and small round eyes and the other 2.3 cm tall with a longer face, protruding nose, and thick eyelids.<sup>205</sup> Finally, two otherwise unpublished examples in the Metropolitan Museum of Art also differ in size and shape.<sup>206</sup>

Some of these minor variations are attributable to slight differences in the individual mold used, with all clearly expounding on the same theme and intended to mimic one another. A piece found at Jebel Khalid, however, deviates more markedly from the type and points to greater regional variability. As well as being a different color, the head wears a Phrygian cap, pierced to serve as the suspension hole.<sup>207</sup> While the piece demonstrates a high degree of familiarity with the manufacturing technique and style used in the eastern Mediterranean islands and the Levantine coast, its producer apparently adapted the type to fit local tastes. Seven beads in the rough shape of African heads, found in the Magasin des stucs workshop on Delos and presumably made there, are less detailed than their mold-made pendant counterparts. Made in brown glass shaped on a rod with metal implements, they also exhibit variability of producible shapes and the popularity of the style.<sup>208</sup> The wide geographical range of the type and the resulting subtle differences suggest an international style with regional production centers. The transiency of glassworkers and explosion of glass technology in this period likely contributed to this diffusion.<sup>209</sup> In this light, one production source for so many exempla with distinct differences and such vast geographic distribution seems unlikely. As more specimens are recovered in controlled excavation, more specific arguments may be able to be made about the evolution and distribution of this type. For now, its popularity and proliferation at multiple production centers are all that can be determined.<sup>210</sup>

The emblematic value of African head pendants is ambiguous. Depiction of African heads in vessels, jewelry, and other objects with both utilitarian and decorative functions explodes in the third through first centuries BCE, a development perhaps related to the general aesthetic trend toward realism in this period.<sup>211</sup> Pollitt argues that this increased interest in realism is an expression of the more urban, cosmopolitan, and international sensibilities as people came into more contact with a greater number of ethnicities and races.<sup>212</sup> In the western Mediterranean, beginning around 200 BCE, Roman taste also moved toward veristic portraiture, which Rose views as a similar attempt to

<sup>203</sup> Crowfoot 1957, 420, pl. 26.7.

<sup>204</sup> Grose 1989, cat. 645.

<sup>205</sup> Karageorghis 1988, cat. 40, 41.

<sup>206</sup> Karageorghis 1988, cat. 42, 43.

<sup>207</sup> O'Hea 2002, fig. 7.3. All jewelry finds from the site are dated to the Late Hellenistic period, with the latest being from the early first century BCE (2002, 261).

<sup>208</sup> Nenna remarks on the similarities between the locally made beads and the single African head pendant from the site, which she classifies as an import due to lack of evidence for Delian production, but she offers no discussion regarding the probable influence of one on the other (1999, 134–135 E108–109, 143 E177).

<sup>209</sup> See above, pp. 87–88.

<sup>210</sup> A gold head of a pin, attributed to the Hellenistic period, bears remarkable similarity to glass pendant examples. In addition to the typical tightly curled hair, flat nose, and wide lips, at 0.015 m it is of equivalent size, and a seam down the side of the face suggests it was also mold-made (Snowden 1976, pl. 246).

<sup>211</sup> See Snowden 1976, 187–211, for an overview of blacks in Hellenistic art. Karageorghis attributes the proliferation of the African type to an interest in realistic portraiture (1988, 40).

<sup>212</sup> Pollitt 1986, 141–147.



define oneself in an increasingly cosmopolitan world.<sup>213</sup> Portrayal and emphasis of “like” and “unlike”—or “other”—as expressed aesthetically seems to be motivated less by antagonism than by curiosity and desire for self-definition in a large and diverse *oikumene*. However, unlike other examples of realism that occur in more traditional venues for artistic expression such as sculpture, the African head appears more frequently in domestic settings or as personal adornment, perhaps as early as the sixth century BCE.<sup>214</sup> The basic intent or sensibility of ethnic definition may extend to this earlier period, but the context is much more personal. To view a sculpture with exotic or grotesque subject in a public forum is one type of setting; to wear it as jewelry, or use it to serve liquids, is quite another.

African head pendants like **BD 89** exhibit certain stylistic and technical similarities to other pendants popular in the Late Hellenistic period. Barag, and others after him, includes molded African heads within a group of small pendants “in the round” dating from the second–first centuries BCE.<sup>215</sup> Examples of popular forms include Harpocrates, a seated goddess (either Isis or Cybele), Hecate, theater masks, squatting figures, three maids around a column, bull’s head, bunch of grapes, standing eagle, and the African head. Aside from production technique and size (generally 2–2.5 cm), this broad distribution of types has little in common. The gods and goddesses have a clear theophoric, amuletic function connected to worship and devotion.<sup>216</sup> Symbolically rich figures such as the bull’s head, grapes, and theater mask also have relatively well-established religious and cultural value, while that of the African heads may be related to self-definition in a cosmopolitan world. If Spaer is correct that the African heads are slightly earlier in date than the other mold-made pendant shapes,<sup>217</sup> their progression to mold-made manufacture may represent a new technique applied to the production of an item with an existent popularity in the eastern Mediterranean. The bivalve mold enabled an ease of manufacture and resulting affordability that quickly increased the possibilities for glass pendant production. These molds then came to be used to create other, more diverse forms and shapes, which themselves became widespread.

**BD 89** TA72 G53

Loc. 1359

Pl. 6

HELL 2B/C

Parallels: Nenna 1999, cat. E177; Spaer 2001, cat. 325–326; Grose 1989, no. 645; O’Hea 2002, fig. 7.3; Tatton-Brown 1990, pl. 22a–c; Crowfoot 1957, pl. 26.7; Karageorghis 2000, cat. 40–43.

Glass. Iridescent weathering. “African” head in the round, with curly hair, low forehead, deep-set eyes, puffy cheeks, and slender neck. Suspension loop at top. Mold-made, with visible seam. D 1.2, L 2.2.

### Phallus (BD 90)

Less common than the African head but still popular in the Hellenistic period is a phallic pendant, represented at Anafa by **BD 90**.<sup>218</sup> Found in the West Annex among several other pendants and elaborate beads in a locus dated to the late second century BCE (125–98 BCE), **BD 90** was manufactured on a rod and mimics the shape of a man with a prominent phallus. The two-lobed face, sloping shoulders, long torso, and short rounded legs were hand tooled and formed before the phallus was added. Although the original color of the glass is not preserved, the pendant appears to have been monochrome. Perforation through the back of the head would have allowed the pendant to hang flat against the body in a necklace. While the piece appears slightly crude, the overall balance of the pendant and its clear, simple iconography indicate it was made by a skilled glassworker.

<sup>213</sup> Rose 2008, 110.

<sup>214</sup> A chlorite pendant in the Metropolitan Museum of Art, dated to sixth-/fifth-century BCE Cyprus, and a gold pendant in the British Museum, dated to the fifth century, both have African facial features (Karageorghis et al. 2000, 195–196, cat. 325; Snowden 1976, pl. 202). Third-century and earlier rod formed, polychrome glass pendants with large lips, curly hair, and wide noses display similar characteristics to their mold-made successors (Grose 1989, cat. 39, “likeness of a male Negro head,” late seventh–fifth century BCE). Grotesques and Negro heads continue in popularity through the second and third centuries CE, when a type of glass mold-blown head flask is common (Grose 1984, 33).

<sup>215</sup> Barag 1985, 88; also Spaer 2001, cat. 325–311, and Nenna 1999, 140–144.

<sup>216</sup> As observed by Petrie 1914, 6.

<sup>217</sup> Spaer 2001, 162. A Harpocrates pendant found at Yavneh-Yam, on the southern Mediterranean coast of Israel, is securely dated to the period of John Hyrcanus (r. 135–104 BCE), thereby pushing back the date for full figure mold-made pendants in the round to the late second century BCE (Fischer and Jackson-Tal 2003). This date is still likely later than the early molded African head beads from Delos.

<sup>218</sup> Previously published: S. Weinberg 1972, fig. 10.

Phallic pendants of this general type appear in the eastern Mediterranean in the middle of the Hellenistic period, with examples from Cyprus, Egypt, Greece, Southern Russia, Dura-Europas, Delos, and the Antikythera shipwreck.<sup>219</sup> The lack of phallic pendants at the late third-century workshop on Rhodes, contrasted to the sixteen found at late second-/early first-century Delos, offers tempting evidence that the form originated sometime in the second century, but questions of dating at Rhodes and possibilities of variations in local taste render this a mere suggestion. The Anafa specimen is the most anthropomorphic of all other published examples of the type, excepting perhaps the blue glazed pieces from the Dura-Europas necropolis. It has an identifiable head, while the pieces from Delos and the Corning Museum of Glass have only shoulders, arms, legs, and a phallus. By the Roman period, a polychrome representation, often just of the genitals, replaces the Hellenistic type.<sup>220</sup> Supposing a general distillation of the form, from most human in appearance to most abstract, the Anafa piece ranks among the earliest in both datable context and style. In his treatise on amulets, Petrie classes phallic pieces among other homopoeic types, intended “for influencing similar parts, or functions, or occurrences, for the wearer.”<sup>221</sup>

The discovery of a phallus pendant in the Antikythera shipwreck, where it was likely part of the crew belongings rather than the cargo load, has been suggested to indicate the presence of a male or female slave child on board.<sup>222</sup> The find spot of **BD 90** in the industrial and service area of the LHSB might also point to its having been worn by a servant or slave.

<b>BD 90</b> Loc. 1371	TA72 G52	Pl. 6 HELL 2A/B	Parallels: Seefried fig. 45; Toll 1946, 50 no. 19 pl. XLIII, 55 no. 17 pl. XLIV; Nenna 1999, E152–167; Gadolou 2012, no. 19.
Glass. Iridescent weathering. Anthropomorphic man with wide shoulders, two short legs, and prominent phallus. Rod-formed hole through head. D 1.1, L 1.8.			

### Twisted Cane (BD 91–92)

Two pendants from Tel Anafa, both found in the South Annex at strata dated to the last phase of LHSB occupation, in the early first century BCE, have no published comparanda. **BD 91** and **BD 92** were made by binding together two or more colors of glass, which were gathered together at the end of a rod and then pulled and twisted to form the cane.<sup>223</sup> This method was most commonly used in production of cosmetic implements. Fragmentary pieces from Rhodes and Delos, thought to be scrap pieces from the production of such instruments, confirm the use of this technique in the Hellenistic period.<sup>224</sup> One fragment of such a piece, TA68 G204, was found at Anafa in an ARAB/MODERN context. The two Anafa pendants, however, were clearly intended to be worn, with loops at the thicker end of the cane meant for stringing and hanging the pendant. **BD 91** is pierced through the wide, relatively flat top; it is impossible to determine whether this perforation was created when the glass was still soft or whether it was subsequently bored mechanically, in order to modify an implement for secondary use as an adornment. The latter is less likely due to the fragile nature of glass and evenness of the bore. The metal loop set into the very end of **BD 92** must have been inset when the glass was malleable since there is no evidence of a secondary affixing of the metal. While metal and glass were certainly worn together as jewelry items, the combination of the two media into one manufacturing step is otherwise unknown. Both twisted cane pendants would have hung awkwardly against the body—**BD 91** sideways and **BD 92** at an angle—however they were strung. At roughly 3 cm long, they are among the largest glass

<sup>219</sup> Seefried 1982, fig. 45; Toll 1946, 50 no. 19 pl. XLIII, 55 no. 17 pl. XLIV; Nenna 1999, E152–167; Gadolou 2012, no. 19; also Petrie 1914, pl. 1.16a–d; Goldstein 1979, cat. 804; Spaer 2001, cat. 426. Among her catalogue of Phoenician-influenced head pendants, Seefried identifies this phallic type as FIV, dating most examples to the second and first centuries BCE.

<sup>220</sup> Spaer 2001, 186.

<sup>221</sup> Petrie 1914, 6.

<sup>222</sup> Gadolou 2012, 54.

<sup>223</sup> See Spaer 2001, 49, fig. 16a–c.

<sup>224</sup> G. Weinberg 1969, pl. 81a; Nenna 1999, E263, E269. See Spaer 2001, cat. 632–638, for intact examples of spirally twisted cosmetic tools and pins from the Hellenistic and Roman periods.

jewelry items found at Anafa, in keeping with the general use of pendants as ostentatious centerpieces of necklaces. Relatively simple to form with basic glassworking tools and abilities, these pieces were probably made and distributed locally or regionally. Their similar appearance in both shape and color to conch shell pendant **BD 97** suggests that they may have been made to imitate shell.

<b>BD 91</b>	TA69 G43	Pl. 6	<b>BD 92</b>	TA72 G1	Pl. 6
Loc. 2316		HELL 2C	Loc. 2444		HELL 2C
Glass. Deep red-orange with white weathered trail. Twisted cane, tapered. Perforation off-center and angled, at wide end of the pendant. D 0.9 (0.5), L 2.7.			Glass. Amber-orange with white iridescent weathering. Twisted cane, tapered. Metal loop at wide end. D 1.4 (0.9), L 3.3.		

#### Stone (**BD 93**)

One oval-shaped stone pendant was recovered from Tel Anafa just outside the LHSB, in a context dated to HELL 2A. As with beads, artisans produced stone pendants in the same few specific shapes (i.e., elliptical, rectangular, trapezoidal, anchor-shaped) over a long period of time.<sup>225</sup> An almost exact parallel for this pendant was recovered from a Middle Bronze I (1850–1800 BCE) tomb context from Megiddo.<sup>226</sup> The shape and style also appear in a hematite piece and “several (others) in black stone” at Samaria.<sup>227</sup>

<b>BD 93</b>	TA79 S35	Pl. 6	with suspension hole (D 0.5) drilled 2.5 from end. L 3.4, W 2.8, Th 1.2.
Loc. 5318		HELL 2A	
Dark stone, smoothed. Intact, some incrustation. Oval shaped		Parallels: Crowfoot 1957, fig. 92.78; Loud 1948, pl. 207.11.	

#### Bone and Shell (**BD 94–98**)

**BD 95–98** are made from sea shells, attesting to connections of the Anafa residents with the coast. The shells were lightly modified, usually only enough to allow them to be suspended from a thread and worn. This suggests that the shells were valued for their own sake, either as purely aesthetic items or possibly as status symbols identifiable with remote locales. **BD 95** and **BD 96** are comparable with the cowry shells used as necklace in the Arab-period burial (**BD 103**), but they were found in solidly Hellenistic contexts in the South Annex. Both were cut along the rounded, dorsal side, allowing them to be strung and worn. **BD 97** is an auger sea shell that has been pierced near the top. Morphologically, it closely resembles the twisted cane glass pendants **BD 91** and **BD 92**; imitation in glass, often considered to be a luxury material, may indicate a high status ascribed to these shells. **BD 98**, from an animal run, may be quite late.

<b>BD 94</b>	TA73 B18	Pl. 6			
Sq. 5.1.188		—	<b>BD 96</b>	TA70 B31	Pl. 6
Bone. Cylindrical rod, rounded and perforated at the top, broken at lower end. Suspension hole 0.9 from end. L 4.4, D 0.6. Parallel: Loud 1948, pl. 216, no. 128.			Loc. 2427 HELL 2C+ contam. Cowrie shell. Rounded dorsal section sliced off, exposing interior. D 2.75. Parallel: Same as <b>BD 95</b> .		
<b>BD 95</b>	TA70 B34	Pl. 6	<b>BD 97</b>	TA73 B6	Pl. 6
Loc. 2437		HELL 2C	Loc. 1420		ARAB
Cowrie shell. Rounded dorsal side sliced off, exposing interior. D 2.3. Parallel: Loud 1948, pl. 217, no. 129.			Auger shell. Long and twisted, bored near the thick end. Lower tip broken off. L 2.6.		

<sup>225</sup> For example, stone pendants of this shape at the City of David are found in MBII strata through Iron Age II (650–586 BCE) (Zuckerman 1996).

<sup>226</sup> Loud 1948, 120, pl. 207.11. This pendant, made of gray stone, is thinner than the one from Tel Anafa (0.4 cm).

<sup>227</sup> Crowfoot 1957, 397.

**BD 98** TA72 B25 Pl. 6  
Loc. 3516 —

Half of bivalve shell, white with very pale brown stripes. Perforated by crudely formed round hole near apex. H 2.8, W 2.9.

### BRACELETS (BD 99–100)

**BD 99** and **BD 100** are curved and polished fragments of bone that may have been used as bracelets. They are included here as possible objects of personal adornment, although this attribution is tentative. Bone and ivory bracelets are known from antiquity in two forms: as a continuous carved circle and in smaller curved fragments held together by metal rivets.<sup>228</sup> **BD 99** and **BD 100**, in fragmentary state, could have been either. Only elephant ivory is large enough to make a continuous adult bracelet; the estimated diameter of **BD 100** indicates it was intended for a child.

<b>BD 99</b>	TA70 B18	Pl. 7	<b>BD 100</b>	TA81 B15	Pl. 7
Loc. 2417	HELL 2C or HELL 2C+/ROM 1A		Loc. 9114		ROM 1B
Ivory? Curved, approximately one-third preserved. L 3.1, W 0.55.			Bone. Broken at both ends. Curved fragment, roughly circular in section; polished. L 4.6, Th 0.5, Est D 5.0.		

### ARAB PERIOD

Arab-period jewelry at Tel Anafa is associated with the ARAB 2 cemetery, with all pieces from stratified contexts having been found in burials. Bead necklaces were the only grave goods found with the bodies.<sup>229</sup> The cemetery has proved difficult to date due to the paucity of grave goods, and the evidence of beads cannot further narrow the chronological sequence. All are small and poorly crafted in traditional methods, used over the course of millennia in the Levant. Glass necklace **BD 101a–m**, thirteen wound tan beads, and shell necklace **BD 103a–g**, seven pierced cowry shells, are the most significant catalogued objects on account of the relative completeness and regularity of the pieces. It seems likely that individual necklaces for the deceased were comprised of beads all of similar material and type. The range of material from shell to glass to one stone bead (**BD 102**) indicates that the material itself is symbolically insignificant, and selection of adornment style for the interred rather relied on available material or personal taste. However, given the chronological uncertainties in dating the cemetery as a whole and individual burials within it, different materials may instead be reflective of different periods of use of the cemetery. Without an independent dating method, no hypothetical sequence can be proposed, so a holistic interpretation of cultural material seems optimal. Post-Roman cemeteries of indeterminate date, spanning a millennium of historical occupation in the Hula Valley, are also known at Kedesh, Dan, and Omrit.<sup>230</sup>

### BEADS

#### Glass (BD 101)

The thirteen glass beads (**BD 101a–m**) belong to a child burial from the ARAB 2 phase, when the site was used as a cemetery. The cemetery of indeterminate date is localized to the northwest slope of the tel; scattered beads and necklaces were the only grave goods.<sup>231</sup> All thirteen glass beads of **BD 101** were crudely wound from tan glass into tiny ridged cylinders or narrow oblate discs. The majority have “tails,” which occur when the bead is not fire-polished and smoothed after winding the glass around the rod. The perforations range in diameter, indicating use of an irregularly sized mandrel, possibly a wooden stick or twig. In appearance and size, they greatly resemble stone bead **BD 102**, which is also roughly spherical and a mottled brown color. While of relatively poor quality in comparison to the Hellenistic- and

<sup>228</sup> St. Clair 2003, 106.

<sup>229</sup> One early Ottoman coin, found near the skull of burial 1206, may or may not belong to the burial (Meshorer TA I, i, 147, cat. 260).

<sup>230</sup> For Kedesh, Herbert and Berlin 2003, 42–43; for Dan, Spaer 1992, 57–59; for Omrit, Overman and Schowalter 2011.

<sup>231</sup> Herbert TA I, i, 147–148. The latest datable material in the subsoil of the burials is Arabic brown glaze.

Roman-period material, beads from necklace **BD 101** are among the few material remains from the cemetery, signifying that they carried some status value.

<b>BD 101</b>	TA68 G63	Pl. 7	(e) Same as (d). D 0.4, L 0.3.
Loc. 1219		ARAB 2	(f) Same as (d). Visible "tail" from wrapping of glass around rod. D 0.5, L 0.3.
Glass. 13 beads, found together in child burial. Tan. Likely from one necklace.			(g) Same as (d). D 0.5, L 0.4.
(a) Long cylinder, thicker at one end. Wrapped around rod; poorly finished, with ridged spiral still raised and unsmoothed. D 0.3, L 0.7.			(h) Same as (d). Visible "tail." D 0.4, L 0.3.
(b) Same as (a). D 0.4, L 0.8.			(i) Same as (d). D 0.4, L 0.3.
(c) Same as (a). D 0.4, L 0.5.			(j) Same as (d). Two visible "tails." D 0.4, L 0.3.
(d) Irregular oblate disc. D 0.5, L 0.3.			(k) Same as (d). Visible "tail." D 0.4, L 0.3.
			(l) Same as (d). D 0.4, L 0.2.
			(m) Same as (d). Visible "tail." D 0.4, L 0.3.

#### Stone (**BD 102**)

One stone bead (**BD 102**) was recovered from an ARAB 2 burial of a child. Stones of reddish colors (carnelian and agate) were popular and valued in antiquity for their amuletic properties.<sup>232</sup>

<b>BD 102</b>	TA68 S23	Pl. 7
Loc. 1206		ARAB 2
Mottled stone. Truncated. D. 0.5.		

#### Shell (**BD 103**)

Seven cowry shell beads of various sizes were found in association with an ARAB 2-period burial. Each bead is bored along the long axis, generally at one or both ends of the aperture. These perforations often have gaps, either by mistake or by design, and therefore they could not have been used to string a series of beads together. They may instead have been strung through their broken dorsal sides. Cowry shell beads with this same pattern of breakage were found in Hellenistic contexts at Anafa (**BD 95** and **BD 96**) as well as at Iron Age Megiddo and with Iron Age-Persian-period burials at Tel Michal, suggesting this practice is a longstanding custom in the region.<sup>233</sup>

<b>BD 103a-g</b>	TA81 SH1a-g	Pl. 7
Loc. 1502		ARAB 2
Cowry shell. Seven beads, mottled ivory. Back removed and perforated along ends. L 2.2-1.5, W 1.5-1.1.		

#### BRACELET (**BD 104**)

One bracelet fragment was found during the first series of stratigraphic excavation at Tel Anafa, in a modern topsoil context.<sup>234</sup> While glass bracelets become widespread only in the third century CE, they have been found in

<sup>232</sup> Platt 2003, 203.

<sup>233</sup> Loud 1948, pl. 217.129; Kertesz 1989, 371-372.

<sup>234</sup> Two glass bracelet fragments were found in the 1978-1983 series of excavations, both in topsoil loci. TA78 G151, described as "green glass with a white strip running along the outside," has an inventory dating of fourteenth-eighteenth century. A second fragment (TA79 G42), composed of green, black, and yellow glass, has a Byzantine inventory date. Two additional, non-inventoried, glass bracelet fragments were found by the author among the Anafa material in IAA storage in a box with assorted other fragmentary glass marked "Picked up by Dan Barag." These two specimens belong to an Islamic type common from the Mamluk period on (Spaer 1992, 54-55, Type D3[1] or D3[2]). They are not included in this catalogue since they did not come from controlled excavation, but their presence at the site is worth noting here. Similar pieces are known locally from Arab burials at Tel Kedesh (K99 G1, K99 G2, unpublished).

Jerusalem from contexts as early as the Persian period and into the second and first century BCE.<sup>235</sup> O’Hea dates one of two bracelet fragments found at Jebel Khalid to the Late Hellenistic period and the other to “transient site-use” by Bedouin nomads.<sup>236</sup> Despite increasing evidence for early glass bracelets, this fragment more likely belongs to the period of Arab activity at Tel Anafa.<sup>237</sup> Its simplicity of style and lack of decoration correspond stylistically with **BD 101**, the set of thirteen poorly formed glass beads found in association with an Arab burial. While grave goods become less common in the Islamic period, bracelets occasionally appear in such contexts at sites throughout Palestine.<sup>238</sup>

The plain style and shape of **BD 104** correspond to Spaer Type A2, plain monochrome glass with semicircular cross section. The type is continuous from the Late Roman–Ottoman periods.<sup>239</sup> Since the entire bracelet is not preserved, this bracelet could either be seamed—manufactured by drawing out a cane of glass and folding it upon itself to form the ring—or seamless—rotated on a rod until centrifugal force forms the desired shape. However, horizontal striations on the glass itself, which are common in seamless bracelets, point to the latter process.<sup>240</sup> One small chip at the end reveals the original turquoise color of the bracelet. This color and semicircular cross section are known locally from the Late Islamic cemetery at Tel Dan and the Mamluk occupation deposit at Khirbet El-Minyeh.<sup>241</sup>

**BD 104**                      TA73 G80    Pl. 7  
Loc. 21400    MODERN

Glass. Turquoise, primarily appearing translucent brown with white patina. Curved, with semicircular cross section (Spaer Type A2). Horizontal striations from drawing of glass during manufacture. One-sixth preserved. L 2.9, Th 0.7.

Parallels: Spaer 1992 appendix A, 1–2, appendix B, 1; 2001, cat. 438–442.

<sup>235</sup> Spaer argued that bracelets dating to the Late Hellenistic period from Jason’s Tomb were characteristically Islamic and therefore intrusive (1988, 51–52), but more recently published finds from the City of David and Jerusalem Convention Center uphold the early presence of simple forms of glass bracelets in the city at an earlier date (Ariel 1990, GL 32–36 and discussion; Gorin-Rosen 2005, 208, cat. 45).

<sup>236</sup> O’Hea 2002, 261.

<sup>237</sup> Herbert TA I, i, 144–148.

<sup>238</sup> Spaer 1992, 44.

<sup>239</sup> Spaer 1988, 54–55; 1992, 47.

<sup>240</sup> Spaer 1992, 49; 2001, 193.

<sup>241</sup> Spaer 1992, appendix A, cat. 1; appendix B, cat. 2.

## CONTEXT CONCORDANCE

Loc. no.	Cat. no.	Inv. no.	Stratum
1206	<b>BD102</b>	TA68 S023	ARAB 2
1219	<b>BD101</b>	TA68 G063	ARAB 2
1233	<b>BD022</b>	TA69 G004	ROM 1
1235/36	<b>BD033</b>	TA72 G060	HELL 2C+/ROM 1
1247	<b>BD032</b>	TA69 G036	HELL 1 or 2A/B
1300	<b>BD010</b>	TA69 G002	MODERN
1306	<b>BD019</b>	TA69 G044	ARAB 2
1344	<b>BD034</b>	TA70 G122	HELL 2C+/ROM 1
1355.3	<b>BD055</b>	TA72 G057	HELL 2A/B
1359	<b>BD089</b>	TA72 G053	HELL2B/C
1359	<b>BD085</b>	TA72 G054	HELL 2B/C
1359	<b>BD054</b>	TA72 G055	HELL 2B/C
1359	<b>BD025</b>	TA72 G056	HELL 2B/C
1371	<b>BD087</b>	TA72 G019	HELL 2A/B
1371	<b>BD090</b>	TA72 G052	HELL 2A/B
1382	<b>BD062</b>	TA72 S055	HELL 2A/B
1406	<b>BD063</b>	TA73 S044	MODERN
1420	<b>BD097</b>	TA73 B006	ARAB
1423	<b>BD038</b>	TA73 G040	ROM 1
1502	<b>BD103a-g</b>	TA81 SH001a-g/ IAA81-2669	ARAB 2
2006	<b>BD058</b>	TA72 S062	ROM 1A/B
2027	<b>BD029</b>	TA70 G082	HELL 2A-C?
2030	<b>BD014</b>	TA70 G124	HELL 2A or ROM 1B
2109a	<b>BD060</b>	TA68 S015	ARAB/MODERN
2112	<b>BD064</b>	TA68 S011	HELL 2C+
2112a	<b>BD075</b>	TA70 S071	HELL 2C+
2311	<b>BD046</b>	TA69 G047	—
2312	<b>BD013</b>	TA69 G048	HELL 2C
2312	<b>BS069</b>	TA69 S063	HELL 2C
2316	<b>BD091</b>	TA69 G043	HELL 2C
2316	<b>BD020</b>	TA69 G051	HELL 2C
2321	<b>BD011</b>	TA70 G155	ARAB 1-ROM
2322	<b>BD016</b>	TA70 G143	HELL 2C
2322	<b>BD024</b>	TA70 G151	HELL 2C
2324	<b>BD039</b>	TA70 G146	ROM 1B
2326	<b>BD012</b>	TA70 G157	ROM 1B

Loc. no.	Cat. no.	Inv. no.	Stratum
2326	<b>BD007</b>	TA70 S012/ IAA71-183	ROM 1B
2326	<b>BD061</b>	TA70 S068	ROM 1B
2327	<b>BD037</b>	TA72 G021	HELL 2C
2327	<b>BD031</b>	TA73 G045	HELL2C
2327	<b>BD047</b>	TA73 G051	HELL 2C
2330	<b>BD028</b>	TA70 G123	HELL 2C
2330	<b>BD050</b>	TA70 G136	HELL 2C
2394	<b>BD078</b>	TA73 B004	HELL 1/2A
2407	<b>BD070</b>	TA69 S007	ARAB
2412A	<b>BD035</b>	TA69 G062	HELL 2C & ROM 1A
2415	<b>BD072</b>	TA69 S024	ROM 1A
2417	<b>BD099</b>	TA70 B018	HELL 2C or HELL 2C+/ROM 1A
2417	<b>BD042</b>	TA70 G142	HELL 2C
2423	<b>BD077</b>	TA70 B013	HELL 2B/C
2427	<b>BD096</b>	TA70 B031	HELL 2C+ contam.
2427	<b>BD073</b>	TA70 S070	HELL 2C+ contam.
2433	<b>BD006</b>	TA70 S001	ROM 1A
2437	<b>BD095</b>	TA70 B034	HELL 2C
2437	<b>BD052A-E</b>	TA70 G083a-e	HELL 2C
2437	<b>BD053</b>	TA70 G084	HELL2C
2437	<b>BD044</b>	TA70 G085	HELL 2C
2437	<b>BD001</b>	TA70 G086	HELL 2C
2444	<b>BD092</b>	TA72 G001	HELL 2C
2444	<b>BD057</b>	TA72 S006/ IAA74-1143	HELL 2C
2446	<b>BS066</b>	TA72 S011	HELL 2C
2474	<b>BD004</b>	TA73 B015	MB
2513A	<b>BD076</b>	TA69 B021/ IAA07-165	ROM 1B
2542a	<b>BD068</b>	TA72 S004/ IAA74-1147	HELL 2C+/ROM 1A
2549	<b>BD026</b>	TA73 G005	HELL 2B
2577	<b>BD027</b>	TA73 G011	HELL 2A
2607	<b>BD048</b>	TA69 G006	HELL 2B/C
2810	<b>BD015</b>	TA70 G121	HELL 2A-C?
2810	<b>BD005</b>	TA70 S031/ IAA71-185	HELL 2A-C contam?



Loc. no.	Cat. no.	Inv. no.	Stratum
2906	<b>BD017</b>	TA70 G132	HELL 2B or C
3018	<b>BD030</b>	TA68 G077	HELL 2A
3211	<b>BD018</b>	TA68 G067	HELL 2C or later
3301	<b>BD009</b>	TA69 G005	MODERN
3319	<b>BD045</b>	TA69 G001	ROM 1A/B
3325	<b>BD023</b>	TA69 G042	ROM 1B contam.
3411	<b>BD036</b>	TA72 G018	MODERN
3426	<b>BD021</b>	TA72 G070	HELL 1 or 2A
3516	<b>BD098</b>	TA72 B025	0
4110	<b>BD049</b>	TA73 G050	ROM 1B or later, contam.
4110	<b>BD051</b>	TA73 G052	ROM 1B or later, contam.
5203A	<b>BD040</b>	TA73 G006	MODERN/ARAB
5203A	<b>BD088</b>	TA73 G007	MODERN/ARAB
5203A	<b>BD043</b>	TA73 G012	MODERN/ARAB
5203A	<b>BD086</b>	TA73 G020	MODERN/ARAB
5203A	<b>BD041</b>	TA73 G021	MODERN/ARAB
5203c	<b>BD056</b>	TA73 S062	HELL 2C+/ROM 1A
5312	<b>BD079</b>	TA79 B012	ROM 1A
5318	<b>BD093</b>	TA79 S035	HELL 2A

Loc. no.	Cat. no.	Inv. no.	Stratum
7112	<b>BD071</b>	TA78 S001	MODERN/ARAB
7428	<b>BD082</b>	TA80 B002	ROM 1A
7615	<b>BD084</b>	TA79 B025	HELL 2C
9114	<b>BD100</b>	TA81 B015	ROM 1B
13103	<b>BD008</b>	TA78 S002/ IAA78-1212	HELL 1B
21200	<b>BD067</b>	TA73 S093/ IAA74-1146	MODERN
21305	<b>BD074</b>	TA73 S033	ARAB
21400	<b>BD080</b>	TA73 B013	MODERN
21400	<b>BD104</b>	TA73 G080	MODERN
21417	<b>BD003</b>	TA73 B011/ IAA07-538	MB or EB contam.
23106	<b>BD002</b>	TA73 S101/ IAA74-1145	MB
balk trim	<b>BD059</b>	TA78 S004	—
sq. 5.1.188	<b>BD094</b>	TA73 B018	none
surface find	<b>BD065</b>	TA72 S003/ IAA74-1144	—
unknown	<b>BD081</b>	TA72 B011	HELL 2
unknown	<b>BD083</b>	TA72 B012/ IAA79-1639	HELL 2

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PLATE 1: PERSONAL ADORNMENT



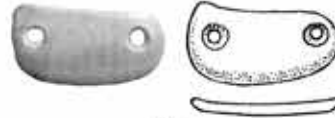
BD 1  
Faience



BD 2  
Stone



BD 3



BD 4

Bone and Shell



BD 5

Stone Cylinder Seal



BD 6

Stone Scarab

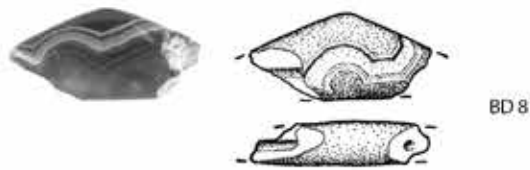


BD 7

Stone Stamp Seal

Bronze Age Beads of Various Materials





Stone  
Persian Period Bead



Glass—Spherical



Glass—Barrel-shaped



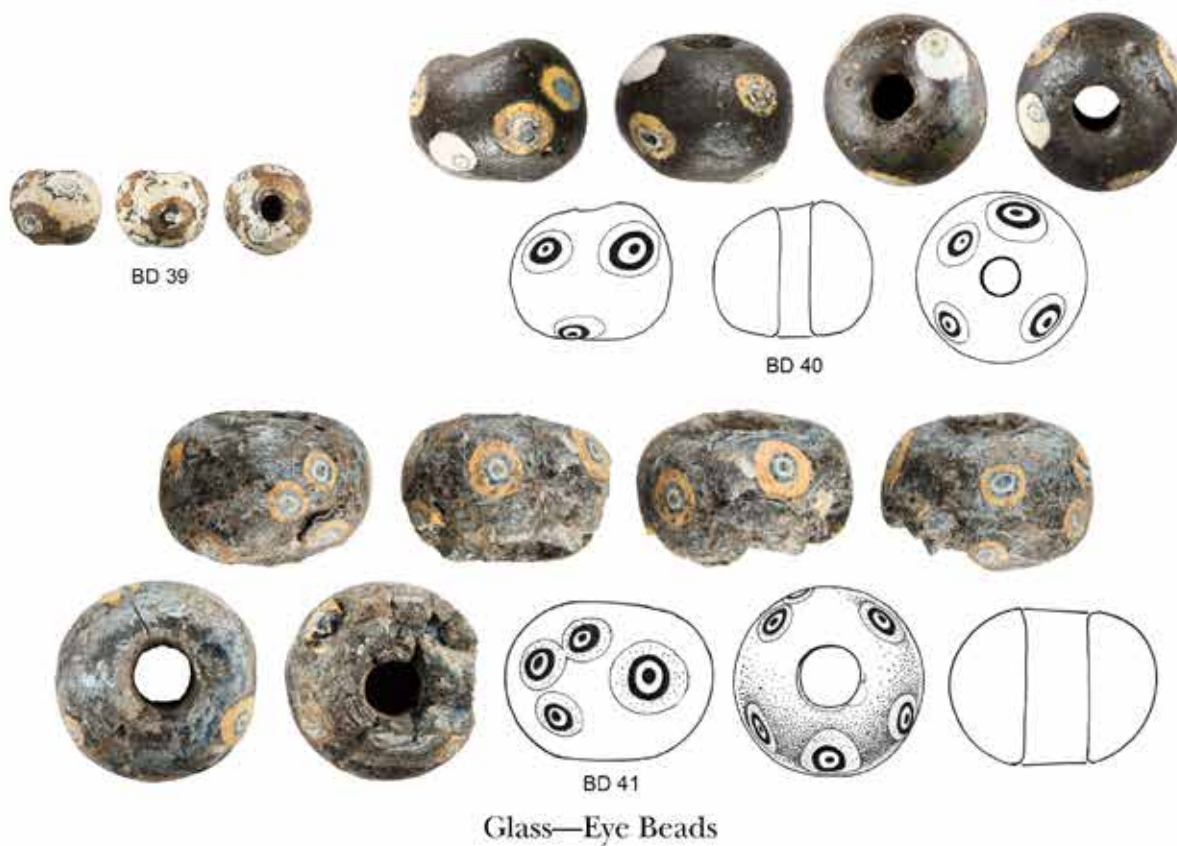
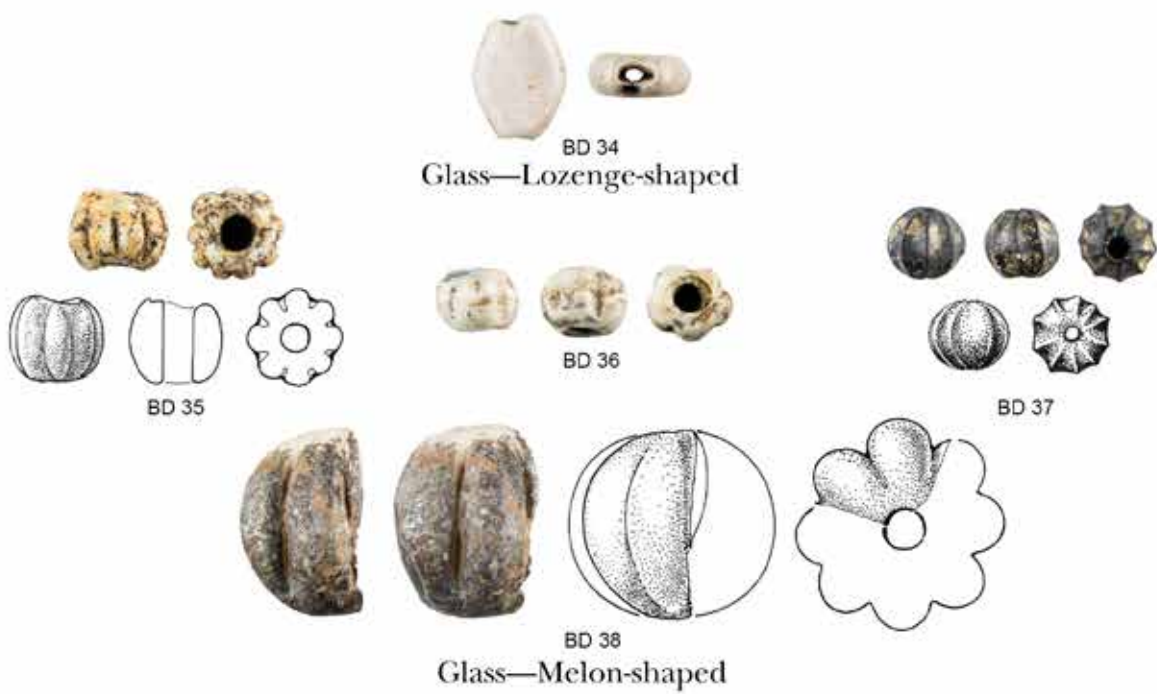
Glass—Cylindrical



Late Hellenistic/Early Roman Period Beads

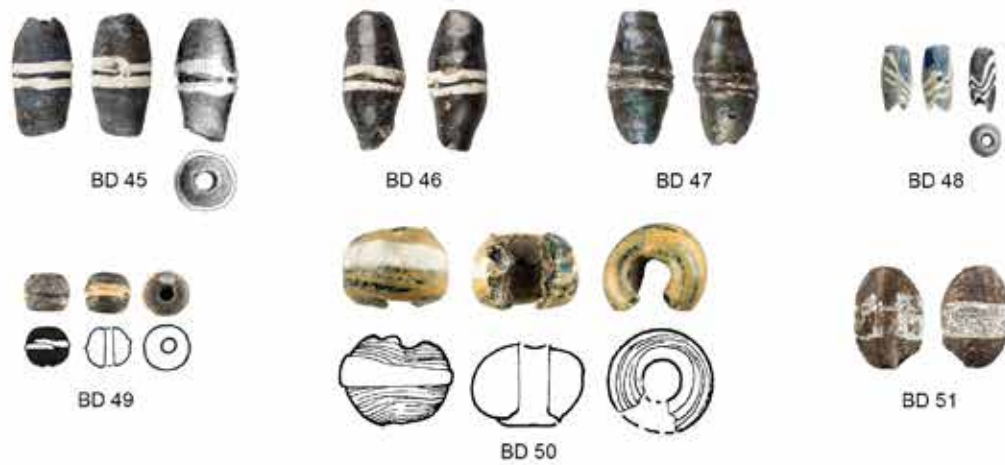


PLATE 3: PERSONAL ADORNMENT



Late Hellenistic/Early Roman Period Beads





Late Hellenistic/Early Roman Period Beads

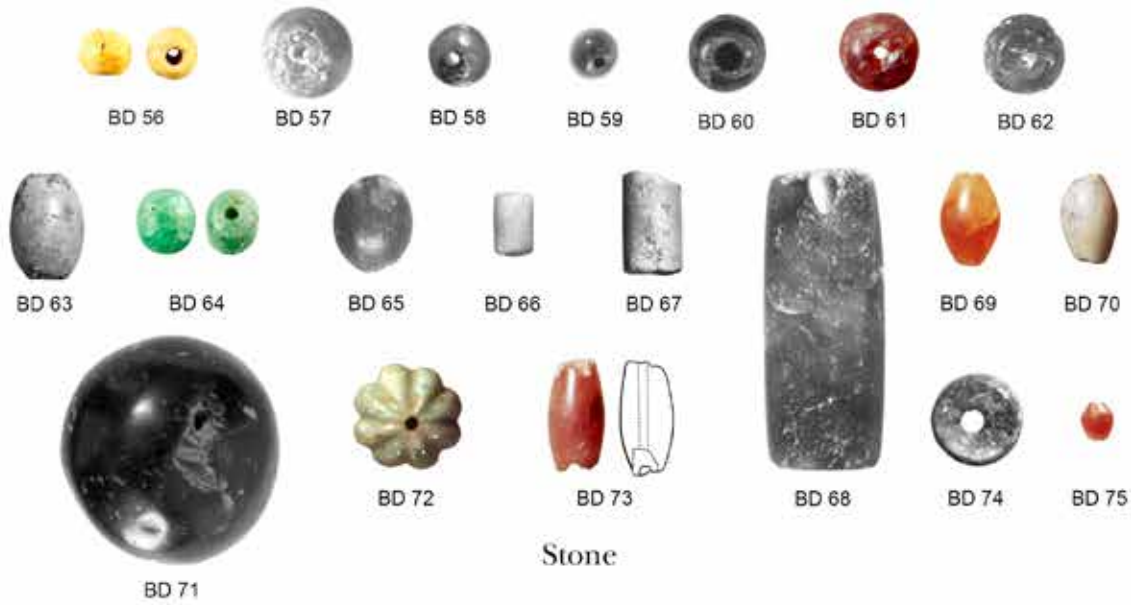




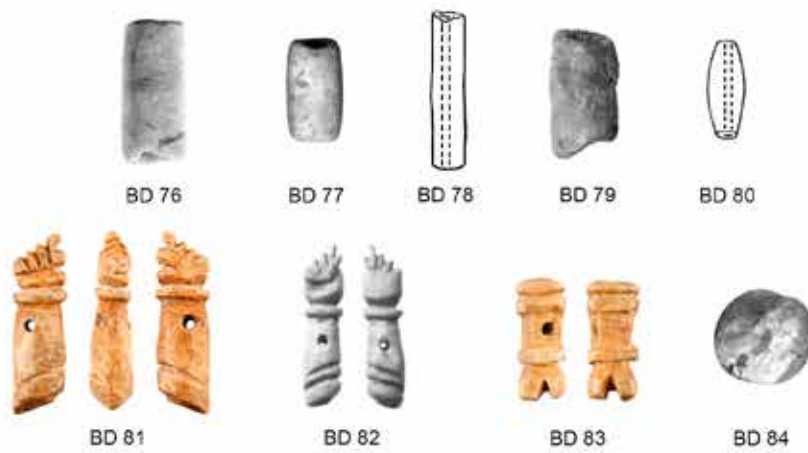
PLATE 5: PERSONAL ADORNMENT



Glass—Complex Trail-decorated



Stone



Bone and Shell

Late Hellenistic/Early Roman Period Beads



PLATE 6: PERSONAL ADORNMENT



BD 85



BD 86



BD 87



BD 88



BD 89



BD 90



BD 91



BD 92

Glass



BD 93  
Stone



BD 94  
Bone



BD 95



BD 96



BD 97  
Shell



BD 98



Late Hellenistic/Early Roman Period Pendants



5 cm

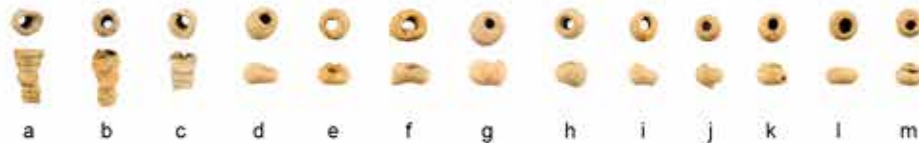


BD 99



BD 100

Bone Bracelet Fragments  
Late Hellenistic/Early Roman Period



BD 101

Glass Beads



BD 102

Stone Bead



BD 103

Shell Beads



BD 104

Glass Bracelet Fragment

Arab Period



5 cm

### 3. GLASS COUNTERS

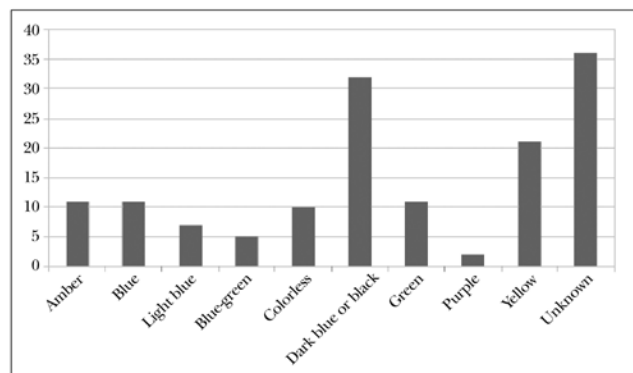
by Katherine A. Larson

#### INTRODUCTION

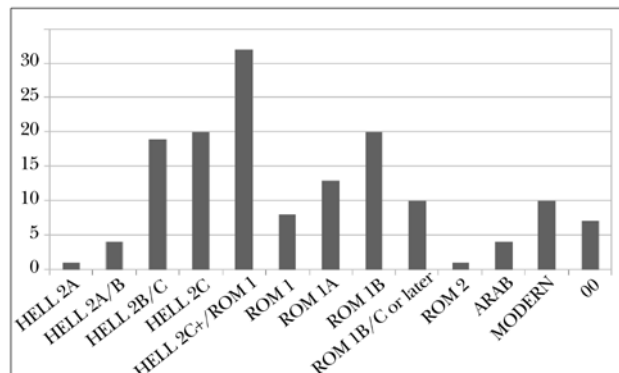
This section documents 150 small glass objects that were inventoried during the eight seasons of excavation at Tel Anafa.<sup>2</sup> These objects are distinguished from beads in that they are unperforated; most are plano-convex (flat on the underside with a domed top), but a few have flattened tops as well. Their function likely varied; such objects could have been used as gaming pieces (counters) or inlays into furniture, jewelry, or other objects.<sup>3</sup> Rosemary Lierke has demonstrated that they were quite simple to manufacture, requiring only a small quantity of scrap glass to be placed on a heat-resistant surface and placed in a furnace. As the glass melts, the surface tension creates the signature rounded top and flat underside.<sup>4</sup> The completely flat bottom is not universal, however: forty-eight objects (32 percent) have concave rather than flat bottoms, and several more have bent or ridged bottoms, the reason for which is unknown. They may be related to various functional possibilities (e.g., whether the object was designed to be glued into place as an inset or manipulated as a game counter) or could be artifacts of slightly different production methods.

Glass counters found at Anafa range in size from 0.5 to 2.0 cm long, 0.5 to 1.6 cm wide, and 0.1 to 0.9 cm thick. Most are round or ovoid, although a few are tapered, squared, or asymmetrically shaped. The majority are highly weathered, with iridescence, dark or white patina, pitting, and flaking all extremely common. The most common clearly identifiable color is yellow, followed by amber, blue, and green (fig. 1). Colorless, light blue, blue-green, and purple objects are also present. Only one—GC 101—is polychrome, with one half yellow and the other pale blue-green. Counters identified as “dark blue or black” may have been lighter beneath the visible dark coating.

Although they are often thought to be Roman, glass counters start to become common at archaeological sites in the region during the second century BCE. A few dozen have been found, including eighteen in a single deposit, in the administrative building at Tel Kedesh, which was destroyed in 143 BCE.<sup>5</sup> None appear at Tel Anafa until HELL 2A (ca. 125 BCE), with the majority of pieces coming from later occupational levels of the Late Hellenistic Administrative Building (HELL 2B/C, ca. 110–75 BCE) (fig. 2). They continue in loci dated to ROM 1A/B, although many of these objects, particularly from ROM 1A, may be residual.<sup>6</sup>



Counter quantities by color.  
Figure 1



Counter quantities by stratum.  
Figure 2

<sup>2</sup> It is unknown whether all small glass objects found during the excavation were formally inventoried, but since several of the inventoried objects are fragmentary, it is assumed that all were kept and inventoried rather than a selective sample.

<sup>3</sup> Spaer 2001, cat. 548.

<sup>4</sup> Lierke 2009, 7.

<sup>5</sup> Sharon Herbert, personal communication.

<sup>6</sup> Cf. Herbert TA I, i, fig. 2.2.



**GC 17** is engraved with a quadruped, possibly a sheep or boar, standing right. It was likely set into a ring. This is the single counter recovered from a ROM 2 level and almost certainly belongs to the Roman phase at Anafa. At only 0.2 cm thick, it is much thinner than most of the other objects catalogued here, thus suggesting they may not have been used as jewelry insets, as they would have been quite thick.

## CATALOGUE

The following table attempts to document these understudied and underpublished objects as thoroughly and succinctly as possible. A dagger (†) after a catalogue number indicates an item illustrated on p. 144. Objects are organized by shape, followed by length, width, and thickness, defined as follows:

*Shape:*

- Round: the difference between the length and width is 0.1 cm or less
- Oval: the difference between the length and width is greater than 0.1 cm
- Oval, tapered: in top view, one end is narrower than the other, creating an egg or teardrop shape
- Rectangular: an oval that has been shaped to have straight sides or top using a marver
- Irregular: no even or rounded sides, asymmetrically shaped

*Length:* maximum dimension of the object, in centimeters

*Width:* maximum dimension of the object perpendicular to the length, in centimeters

*Thickness:* maximum height of the object, with the flat edge taken as the base, in centimeters

*Concave Underside:* noted when present

*Color:* Color terms based on *Corinth XII*.<sup>7</sup> Colors are described as they appeared after the object was cleaned with a solution of ethanol and water.<sup>8</sup>

An asterisk (\*) denotes preserved, rather than complete, dimension, in the case of fragmentary pieces. Objects found during the 1968–1973 excavation seasons are currently housed at the Kelsey Museum of Archaeology and were examined by the author and documented using the above methods. Those objects from the 1978–1981 seasons are in Israel and were not available for the current study; all information is based on original inventory documentation.

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<sup>7</sup> Davidson 1952, 90.

<sup>8</sup> Thank you to Suzanne Davis and the Kelsey Museum of Archaeology for assistance and materials used in cleaning.

Cat. no.	Inv. no.	Shape	Length (cm)	Width	Thickness	Concave underside?	Color	Loc. no.	Stratum	Comments
GC 1	TA70 G139	round	0.5	0.5	0.2		yellow	2540	HELL 2B/C	
GC 2	TA68 G62c	round	0.6	0.6	0.4		dark blue or black	2310	ROM 1B	
GC 3	TA68 G62d	round	0.6	0.6	0.4		dark blue or black	2310	ROM 1B	
GC 4	TA68 G62e	round	0.6	0.6	0.4		green, pale?	2310	ROM 1B	
GC 5	TA68 G62b	round	0.7	0.7	0.5		dark blue or black	2310	ROM 1B	
GC 6	TA68 G61	round	0.7	0.7	0.5		unknown	2310	ROM 1B	
GC 7	TA73 G31	round	0.8	0.7	0.4	x	unknown	1421	ROM 1/later	
GC 8	TA79 G164	round	0.8		0.4		purple	8223	ROM 1B	
GC 9	TA69 G38	round	0.8	0.8	0.5		dark blue or black	3321.1	HELL 2B/C	
GC 10	TA69 G54	round	0.8	0.8	0.5		yellow?	2415	ROM 1A	
GC 11	TA68 G75	round	0.9	0.8	0.4		green, pale	2309	ROM 1B	Several large bubbles visible in glass
GC 12	TA72 G72	round	0.9	0.9	0.5	x	yellow?	5119.1	HELL 2A-C	
GC 13 <sup>†</sup>	TA70 G154	round	0.9	0.8	0.5	x	blue	1340	HELL 2B/C	
GC 14	TA69 G68	round	0.9	0.9	0.5	x	unknown	1228	ROM 1	
GC 15	TA73 G23	round	0.9	0.9	0.5		amber	21313	ROM 1A	
GC 16	TA79 G33	round	0.9		0.6	x	yellow	2807	ROM 1A	
GC 17	TA79 G280	round	1.0		0.2		yellow	8209	ROM 2	Engraved with quadruped standing right, possibly sheep or boar
GC 18	TA70 G159	round	1.0	1.0	0.4		green, light	2413	HELL 2C	Very flat
GC 19	TA79 G99	round	1.0		0.4		amber	8223	ROM 1B	
GC 20	TA72 G16	round	1.0	1.0	0.5	x	blue?	21305	ARAB	
GC 21	TA70 G149	round	1.0	0.9	0.5	x	amber	2907	ROM 1B	
GC 22 <sup>†</sup>	TA70 G166	round	1.0	1.0	0.5		unknown	2429	00	
GC 23 <sup>†</sup>	TA70 G134	round	1.0	1.0	0.5		yellow, light	2139	HELL 2C	
GC 24	TA68 G73	round	1.0	0.9	0.5		dark blue or black	3211	HELL 2C+/ later	
GC 25	TA69 G69	round	1.0	1.0	0.5		unknown	1235	HELL 2C+/ ROM 1	
GC 26	TA79 G190	round	1.0		0.5		blue, light	7623	HELL 2C+/ ROM 1A	
GC 27	TA80 G142	round	1.0		0.5		green, light	8300	MODERN	Underside has single groove
GC 28	TA78 G88	round	1.0		0.5			7115	ROM 1A	
GC 29	TA68 G65	round	1.0	1.0	0.5		blue, light?	2304	ROM 1B	
GC 30	TA69 G72	round	1.0	0.9	0.6	x	dark blue or black	1233	ROM 1	
GC 31	TA79 G252	round	1.0		0.6	x	blue, dark	5421	ROM 1A	

Cat. no.	Inv. no.	Shape	Length (cm)	Width	Thickness	Concave underside?	Color	Loc. no.	Stratum	Comments
GC 32	TA68 G62a	round	1.0	0.9	0.6	x	dark blue or black	2310	ROM 1B	Irregularly formed underside, bent and slightly concave
GC 33	TA70 G170	round	1.0	0.9	0.6		blue, light	2801	MODERN	Common small to medium bubbles visible; underside irregular
GC 34	TA70 G147	round	1.0	1.0	0.6		yellow, dark	2904	ROM 1B	
GC 35	TA68 G60	round	1.1	1.0	0.5	x	yellow	3015	HELL 2C	
GC 36	TA70 G137	round	1.1	1.0	0.5	x	yellow	2112	HELL 2C+	
GC 37	TA79 G236	round	1.1		0.5	x	green	8225	ROM 1B	
GC 38	TA72 G15	round	1.1	1.1	0.5		amber, dark	2450	HELL 2B/C	
GC 39 <sup>†</sup>	TA70 G162	round	1.1	1.1	0.5		yellow	1334	HELL 2B/C	
GC 40	TA79 G222	round	1.1		0.6	x	yellow	5.3 balk trim	00	
GC 41	TA70 G148	round	1.1	1.1	0.6	x	unknown	2139	HELL 2C	
GC 42	TA69 G61	round	1.1	1.0	0.6	x	unknown	1234	HELL 2C+/ ROM 1	
GC 43	TA80 G33	round	1.1		0.6		blue, light	8318	ARAB	
GC 44	TA72 G27	round	1.1	1.1	0.6		amber	2547/ 2523	HELL 2A-C	
GC 45	TA69 G59	round	1.1	1.1	0.6		unknown	2409	ROM 1B+	
GC 46	TA69 G58	round	1.1	1.0	0.9		unknown	1233	ROM 1	
GC 47	TA79 G8	round	1.2		0.5		green, light	5308	ROM 1A	
GC 48	TA73 G15	round	1.2	1.2	0.6	x	dark blue or black	1291	HELL 2A/B	
GC 49	TA70 G150	round	1.2	1.1	0.6	x	dark blue or black	2142	HELL 2B/C	
GC 50	TA79 G168	round	1.2		0.6	x	green, light	7420	HELL 2C contam(?)	
GC 51	TA70 G140	round	1.2	1.1	0.6	x	yellow	1326	HELL 2C+/ ROM 1	
GC 52	TA69 G161	round	1.2	1.2	0.6	x	colorless	1226	ROM 1	
GC 53 <sup>†</sup>	TA70 G165	round	1.2	1.1	0.6	x	green, light	3405.1	ROM 1A	
GC 54	TA72 G23	round	1.2	1.1	0.6		yellow?	2453	HELL 2A/B	
GC 55	TA72 G46	round	1.2	1.1*	0.6		blue, dark	2445	HELL 2C	
GC 56	TA70 G163	round	1.2	1.2	0.6		green, light	2322	HELL 2C	
GC 57	TA70 G164a	round	1.2	1.1	0.6		dark blue or black	2417	HELL 2C/ ROM 1A	
GC 58	TA72 G59	round	1.2	1.1	0.6		unknown	1235/16	HELL 2C+/ ROM 1	
GC 59	TA79 G147	round	1.2		0.6		blue, light	7514	HELL 2C+/ ROM 1A	
GC 60	TA69 G66	round	1.2	1.1	0.6		dark blue or black	1231	ROM 1	

Cat. no.	Inv. no.	Shape	Length (cm)	Width	Thickness	Concave underside?	Color	Loc. no.	Stratum	Comments
GC 61	TA69 G70	round	1.2	1.2	0.6		unknown	1232	ROM 1	
GC 62	TA69 G64	round	1.2	1.1	0.9		unknown	1234	HELL 2C+/ ROM 1	
GC 63	TA79 G4	round	1.2				purple, dark	7512	ARAB	
GC 64	TA70 G126	round	1.3	1.2	0.2		dark blue or black	2417	HELL 2C/ ROM 1A	Very flat
GC 65	TA79 G117	round	1.3		0.5		color- less with purple swirl	5312	ROM 1A	
GC 66	TA79 G210	round	1.3		0.6	x	yellow	7626	HELL 2C	
GC 67 <sup>†</sup>	TA68 G72	round	1.3	1.3	0.6	x	dark blue or black	3205	ROM 1B/C	
GC 68	TA69 G50	round	1.3	1.2	0.6		dark blue or black	2316	HELL 2C	Slight ridge on underside
GC 69	TA68 G69	round	1.3	1.3	0.6		dark blue or black	3211	HELL 2C+/ later	
GC 70 <sup>†</sup>	TA70 G160	round	1.3	1.3	0.6		unknown	2326	ROM 1B	Irregular ridge on underside
GC 71	TA72 G9	round	1.3	0.9*	0.6		unknown	2.5.234; 6/13/72 "locus cleanup"		
GC 72	TA80 G141	round	1.3		0.7		green	5547	ROM 1A	
GC 73	TA73 G4	round	1.4	1.4	0.5		dark blue or black	1402	MODERN	
GC 74 <sup>†</sup>	TA70 G141	round	1.4	1.3	0.6	x	unknown	1339	HELL 2B/C	
GC 75	TA72 G69	round	1.4	1.3	0.6		blue, dark?	2359	HELL 2B/C	
GC 76	TA79 G194	round	1.4		0.6		blue, pale	5421	ROM 1A	Underside has "three parallel ribs"
GC 77	TA70 G152	round	1.5	1.4*	0.6	x	dark blue or black	2325	HELL 2B/C	
GC 78	TA80 G2	round	1.5		0.6		colorless	7825	ROM 1C+	
GC 79	TA73 G22	round	1.5	1.4	0.7		dark blue or black	21300	MODERN	Irregular ridging on bottom
GC 80	TA78 G91	round	1.7		0.6		colorless	7112	ARAB/ MODERN	
GC 81	TA78 G146	"round- ed"	0.9		0.6			8105	ROM 1A	
GC 82	TA78 G141	"round- ed"	1.7		0.5			8104	MODERN	
GC 83	TA69 G67	round, irregu- lar	1.2	1.1	0.6	x	dark blue or black	1240	HELL 2C+/ ROM 1	
GC 84	TA69 G39	oval	0.9	0.7	0.4		amber	2700	MODERN	Edges and underside chipped
GC 85	TA80 G97	oval	1.0		0.1		yellow, pale	7823	ROM 1B+/C	
GC 86	TA79 G269	oval	1.0		0.5		yellow, dark	Surface	MODERN	Beginning of drill hole on one edge

Cat. no.	Inv. no.	Shape	Length (cm)	Width	Thickness	Concave underside?	Color	Loc. no.	Stratum	Comments
GC 87	TA73 G16	oval	1.1	0.9	0.5	x	dark blue or black	21313	ROM 1A	
GC 88	TA81 G134	oval	1.1	0.9	0.5		yellow	5923	ROM 1B	
GC 89	TA81 G95	oval	1.1	0.9	0.6		unknown	5.6 cleaning	00	
GC 90	TA81 G107	oval	1.1	1.0	0.6		yellow	5849	ROM 1B	
GC 91	TA68 G58	oval	1.1	0.9	0.8		green, light?	2112	HELL 2C+	
GC 92	TA72 G58	oval	1.2	0.9	0.5	x	unknown	1235/ 1236	HELL 2C+/ ROM 1	Underside highly contoured
GC 93	TA79 G154	oval	1.2		0.5		colorless	7518	HELL 2B/C	
GC 94	TA69 G52	oval	1.2	0.9	0.5		dark blue or black	1233	ROM 1	Underside bent
GC 95	TA79 G50	oval	1.2		0.5		colorless	7617	ROM 1C/ later	Underside described as "roughened"
GC 96	TA79 G231	oval	1.2	1.0	0.6	x	blue, dark	5.3 balk trim	00	
GC 97	TA79 G253	oval	1.2	1.1	0.6	x	blue, dark	5319	HELL 2A	Scored twice across top
GC 98	TA69 G65	oval	1.2	1.0	0.6	x	dark blue or black	1243	HELL 2A/B	
GC 99	TA73 G10	oval	1.2	1.0	0.6		amber?	2014	HELL 2C+	
GC 100	TA70 G164b	oval	1.2	1.0	0.7	x	unknown	2417	HELL 2C/ ROM 1A	Underside bent, chipped
GC 101 <sup>†</sup>	TA70 G145	oval	1.3	0.8	0.4		yellow; pale blue-green	2413	HELL 2C	Bichrome. Small protrusion on end; wavy ridges on underside where colors meet
GC 102	TA69 G53	oval	1.3	1.1	0.6	x	dark blue or black	2417	HELL 2C/ ROM 1A	
GC 103	TA70 G128	oval	1.3	1.1	0.6		unknown	1272	HELL 2B/C	
GC 104	TA70 G161	oval	1.4	1.2	0.6		unknown	2138	HELL 2C	Iridescent weathering spiral, possibly polychrome?
GC 105 <sup>†</sup>	TA69 G55	oval	1.4	1.2	0.6		dark blue or black	2405	ROM 1B+	Small protrusion on long side, like a coin flan
GC 106	TA81 G100	oval	1.5	1.2	0.5		colorless	5858	HELL 2C+/ ROM 1A	
GC 107	TA73 G39	oval	1.5	1.3	0.6	x	blue, light	1421	ROM 1/later	
GC 108	TA70 G129	oval	1.5	1.3	0.7	x	dark blue or black	2427	HELL 2C+ contam	
GC 109	TA68 G66	oval	1.6	1.3	0.7	x	blue, dark	3012A	HELL 2C+/ ROM 1	
GC 110 <sup>†</sup>	TA73 G26	oval	1.6	1.4	0.7	x	unknown	5203	HELL 2C- MODERN	
GC 111	TA69 G174	oval	1.6	1.4	0.7		unknown	2524	HELL 2C+/ ROM 1A/B	
GC 112 <sup>†</sup>	TA70 G125	oval	1.6	1.4	0.7		unknown	2324	ROM 1B	
GC 113	TA81 G50	oval	1.6	1.5	0.7		unknown	8439	ROM 1B	
GC 114	TA69 GXX	Oval	1.6	1.3*	0.7		bark blue or black	2606	ROM 1C	Irregular ridges on underside

Cat. no.	Inv. no.	Shape	Length (cm)	Width	Thickness	Concave underside?	Color	Loc. no.	Stratum	Comments
GC 115	TA69 G71	oval	1.1*	1.1	0.6	x	dark blue or black	1235	HELL 2C+/ROM 1	
GC 116	TA68 G68	oval	1.1*	1.2	0.6		blue, dark	3015	HELL 2C	
GC 117	TA70 G127	oval	1.2*	1.0	0.6		blue-green	2027	HELL 2A-C?	
GC 118	TA70 G158	oval	1.3*	1.1	0.6	x	dark blue or black	2403	ARAB	
GC 119	TA70 G138	oval	1.3*	1.4	0.7		unknown	2112	HELL 2C+	
GC 120	TA68 G59	oval	1.4*	1.3	0.7		blue, dark	2310	ROM 1B	One end broken; underside chipped
GC 121	TA72 G17	oval?	1.0*	0.9	0.6		blue	2546	HELL 2B/C	Irregularly shaped
GC 122	TA70 G169	oval?	1.1*	1.0	0.3		blue-green	2112	HELL 2C+	Very flat
GC 123	TA70 G167	oval, tapered	1.2	1.0	0.5		dark blue or black	2112	HELL 2C+	
GC 124	TA72 G25	oval, tapered	1.3	1.0	0.5	x	colorless	1235/ 1236	HELL 2C+/ROM 1	Underside bent
GC 125	TA68 G76	oval, tapered	1.3	1.0	0.5		unknown	2112	HELL 2C+	
GC 126	TA72 G11	oval, tapered	1.3	1.1	0.6	x	blue-green	2444	HELL 2C	
GC 127	TA69 G63	oval, tapered	1.3	1.0	0.6		dark blue or black	1227	ROM 1	
GC 128	TA69 G49	oval, tapered	1.4	1.0	0.5	x	unknown	2312	HELL 2C	
GC 129	TA68 G78	oval, tapered	1.4	1.2	0.6	x	yellow	3004	ROM 1B/C	
GC 130	TA69 G45	oval, tapered	1.5	1.1	0.6	x	unknown	2312	HELL 2C	
GC 131	TA73 G24	oval, tapered	1.5	1.3	0.6	x	yellow	5203	HELL 2C-MODERN	
GC 132 <sup>†</sup>	TA70 G131	oval, tapered	1.6	1.3	0.6	x	unknown	1349	HELL 2B/C	
GC 133	TA81 G88	oval, tapered	1.7	1.3	0.6		unknown	7.9 balk trim	00	
GC 134	TA81 G88	oval, tapered	1.7	1.3	0.6		unknown	7.9 balk trim	00	
GC 135	TA69 G46	oval, irregular	1.4	1.1	0.6		dark blue or black	2311	00	Somewhat rectangular, with irregularly shaped edges
GC 136 <sup>†</sup>	TA70 G135	oval, irregular	1.6	1.3	0.7	x	black	2413	HELL 2C	Irregular bumpy underside
GC 137	TA70 G244	oval, irregular	1.8	1.5	0.7		amber	1356.1	HELL 2B/C	
GC 138	TA70 G153	rectangular	0.9	0.6	0.4		blue-green	2419	HELL 2C+contam	
GC 139 <sup>†</sup>	TA69 G60	rectangular	1.2	0.8	0.6		unknown	2415	ROM 1A	Squared off sides, probably marvered
GC 140	TA73 G14	rectangular	1.4	0.8*	0.5		colorless	5201	ARAB/MODERN	Marvered, with squared edges, rounded top

Cat. no.	Inv. no.	Shape	Length (cm)	Width	Thickness	Concave underside?	Color	Loc. no.	Stratum	Comments
GC 141 <sup>†</sup>	TA70 G133	triangular	1.2	1.2	0.5		amber	1271	HELL 2C+/ROM 1	Rounded top with one rounded and two pointed corners
GC 142	TA72 G14	irregular	1.1	0.7	0.2		blue, dark with colorless swirl	5105	ARAB 1/MODERN	Probably a chip or flake from a vessel or other object
GC 143	TA68 G64	irregular	1.4	1.4	0.3		amber	2304	ROM 1B	Flat, with five squared sides around perimeter
GC 144	TA69 G160	irregular	2.0	1.6	0.7		unknown	3321.1	HELL 2B/C	Non-formed, possibly slag or glass waste
GC 145	TA81 G64	unknown	0.8		0.5		yellowish-green	7847	HELL 2A/B	
GC 146	TA79 G5	unknown	1.1				amber	5303	HELL 2C-MODERN	
GC 147	TA81 G45	unknown	1.2		0.6		colorless	8441	HELL 2A-C contam	
GC 148	TA81 G80	unknown	1.2		0.6		unknown	7832	HELL 2C+/ROM 1A	
GC 149	TA81 G86	unknown	1.5		0.6		unknown	7940	HELL 2C	
GC 150	TA81 G79	unknown	1.6		0.7		unknown	7832	HELL 2C+/ROM 1A	



GC 13



GC 22



GC 23



GC 39



GC 53



GC 67



GC 70



GC 74



GC 101



GC 105



GC 110



GC 112



GC 132



GC 136



GC 139



GC 141



Glass Counters



## **4. TOOLS FOR TEXTILE MANUFACTURE**

**by Katherine A. Larson  
and Katherine M. Erdman<sup>1</sup>**

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# CONTENTS

I	Introduction . . . . .	149
	Spatial and Temporal Distribution of Objects . . . . .	150
	A Note on Numbers and Density . . . . .	157
II	Spindle Whorls . . . . .	159
	Overview . . . . .	159
	Identifying Whorls . . . . .	159
	Distribution and Context . . . . .	161
	Features and Discussion . . . . .	162
	Size . . . . .	162
	Shape . . . . .	164
	Material . . . . .	165
	Decoration . . . . .	168
	Catalogue (WT 1–147) . . . . .	169
III	Loom Weights . . . . .	176
	Overview . . . . .	176
	Shape Typology . . . . .	176
	Evidence for Textile Production . . . . .	177
	Loom Weight Manufacture . . . . .	179
	Context and Use . . . . .	179
	Catalogue (WT 148–304) . . . . .	180
IV	Bone Tools . . . . .	187
	Overview . . . . .	187
	Typology . . . . .	188
	Spindles . . . . .	188
	Pick-up Sticks . . . . .	190
	Pin Beaters . . . . .	191
	Weft Beaters . . . . .	192
	Comb Beater . . . . .	193
	Pins or Needles . . . . .	193
	Needle Case . . . . .	193
	Discussion . . . . .	193
	Catalogue . . . . .	194
	Spindles (WT 305–317) . . . . .	195
	Possible Spindles (WT 318–322) . . . . .	195
	Pick-up Sticks—Triangular (WT 323–346) . . . . .	196
	Pick-up Sticks—Sharp-Nose (WT 347–356) . . . . .	197
	Unknown Type of Pick-up Stick (Bases without Noses) (WT 357–367) . . . . .	197
	Pin Beaters (WT 368–377) . . . . .	197
	Weft Beaters (WT 378–382) . . . . .	198
	Pins, Needles, Needle Case (WT 383–386) . . . . .	198

Bibliography . . . . .	199
Plates . . . . .	203
Appendix: Catalogue of Miscellaneous Bone Objects . . . . .	211
Astragaloi ( <b>BI 1–7</b> ) . . . . .	211
Handles . . . . .	211
Blade Handles ( <b>BI 8–12</b> ) . . . . .	211
Possible Blade Handles ( <b>BI 13–15</b> ) . . . . .	212
Other Handles ( <b>BI 16–17</b> ) . . . . .	212
Tools . . . . .	212
Awls ( <b>BI 18–19</b> ) . . . . .	212
Fish Hook ( <b>BI 20</b> ) . . . . .	212
Possible Blade ( <b>BI 21</b> ) . . . . .	212
Scrapers ( <b>BI 22–23</b> ) . . . . .	212
Fragments of Possible Tools ( <b>BI 24–30</b> ) . . . . .	212
Miscellaneous Bone Objects . . . . .	213
Counter or Inlay ( <b>BI 31</b> ) . . . . .	213
Possible Cosmetic Instrument ( <b>BI 32</b> ) . . . . .	213
Joint ( <b>BI 33</b> ) . . . . .	213
Spoon ( <b>BI 34</b> ) . . . . .	213
Parts of a Box? ( <b>BI 35–36</b> ) . . . . .	213
Cone-shaped Worked Bone ( <b>BI 37</b> ) . . . . .	213
Cylinder ( <b>BI 38</b> ) . . . . .	213
Round/Ovular Object ( <b>BI 39</b> ) . . . . .	213
Tube ( <b>BI 40</b> ) . . . . .	213
Worked Bone, Tusk, or Shell (Unidentified Objects) ( <b>BI 41–49</b> ) . . . . .	213
Possible Worked Bone ( <b>BI 50–52</b> ) . . . . .	214
Plates . . . . .	215

## I. INTRODUCTION

This chapter presents tools in ceramic, stone, bone, and glass that residents of the site used in the manufacture of textiles. These tools fall into three groups: spindle whorls (**WT 1–147**), loom weights (**WT 148–304**), and various bone implements used primarily for manipulating thread on the loom (**WT 305–386**). Additional objects used for textile production, already published in other final reports of Tel Anafa, include a Bronze Age copper hook (**M 13**), a bronze spindle shaft (**M 49**), three metal spindle whorls (**M 50, M 50a, M 51**), cropping shears (**M 52**), two copper alloy needles (**M 53, M 54**), and a basalt spool (**S 116**).<sup>2</sup> Few of these objects are intrinsically datable, so a full breakdown of tool use by occupation period is not attempted, but as with the ceramics and other categories of small finds, the vast majority of implements for textile manufacture probably belong to the main Hellenistic and Early Roman occupation phases. The majority of objects treated in this chapter are stored in the Israeli Antiquities Authority warehouse at Beth Shemesh and were not available for firsthand examination during the preparation of this study. Fortunately a number of items are housed at the University of Missouri Museum of Art and Archaeology. We were able to examine these objects, and that study proved vital to our interpretation of the textile tools. In the catalogue entries the objects that we could examine firsthand are noted with asterisks.

In considering the interpretative power of these objects, it is relevant to keep in mind the dates and character of the site's three main periods of occupation. The first Hellenistic phase, called HELL 1A/B and dated by numismatic and ceramic evidence to ca. 332–125 BCE, consists of a series of small rooms and courtyards interpreted as belonging to a small, relatively poor, insular, agricultural community.<sup>3</sup> In the second Hellenistic phase, called HELL 2A–C and dated to ca. 125–75 BCE, those earlier remains were covered over by the Late Hellenistic Stuccoed Building (LHSB), a courtyard house that included a large private bath. Residents of the LHSB possessed abundant imported luxury products, including cast glass bowls, Rhodian wine amphorae, and Eastern Sigillata A, but they were also agriculturally self-sufficient and engaged actively in producing their own foodstuffs.<sup>4</sup> The third occupation phase, ROM 1A–C, dates to the first half of the first century CE and consists of several small, unadorned structures built directly over the ruins of the LHSB.<sup>5</sup> In addition to these three phases of occupation, remains from the Bronze and Iron Ages were found on the top of the mound as well as on the Southern Slope. Finally, postdating the Early Roman era there was also a small early medieval-era occupation as well as later burials of indeterminate date.

With Barber's publication of *Prehistoric Textiles* (1991) and *Women's Work: The First 20,000 Years* (1994), textile production and weaving tools moved from a poorly studied and underpublished discipline to a full-fledged field of inquiry. Barber evaluated every step of the textile production process, from raw material through dyeing, using textual, artistic, archaeological, and ethnographic evidence to reconstruct the ancient history of textile production from the Neolithic to Early Iron Age. Using her monumental undertaking as a base, the archaeological evidence for weaving has increasingly become viewed as a means to acquire information about the role of women in ancient economy and society. In the last twenty years, spindle whorls, loom weights, and bone tools have been more thoroughly published and interpreted as full, contextualized assemblages of artifacts. While the vast majority of individual pieces are presently understood to show little typological development in aspects such as shape and decoration, physical properties of objects such as weight, which were rarely recorded in early publication, have proved useful toward inferring the archaeologically invisible, including the material used in textile production and culturally specific production techniques. In the excavation reports from the City of David in Jerusalem, Masada, and Jebel Khalid, spindle whorls and loom weights are interpreted collectively in comparative charts and tables rather than object by object, a convention

<sup>2</sup> Merker TA II, ii; Wells et al. TA II, ii.

<sup>3</sup> Herbert TA I, i, 14; Berlin TA II, i, 18.

<sup>4</sup> Herbert TA I, i, 14–19; Berlin TA II, i, 20–29.

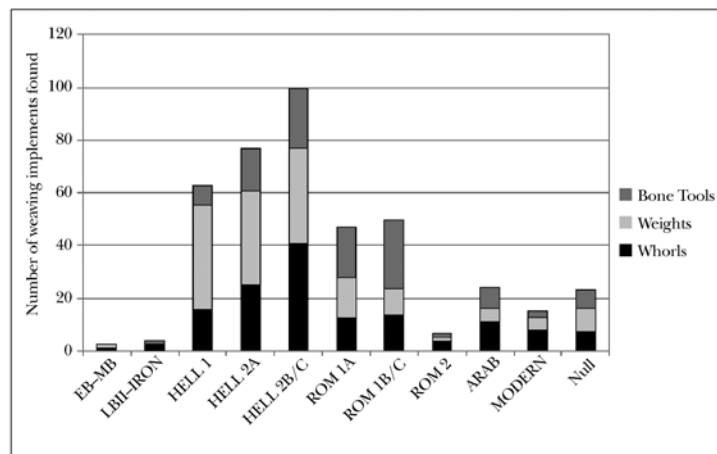
<sup>5</sup> Herbert TA I, i, 21–22; Berlin TA II, i, 30–32.

also employed in this publication.<sup>6</sup> We also follow much of the typological presentation set forth in Ariel (1990) and hope in doing so to advance the understanding of the archaeological value of these objects.

### SPATIAL AND TEMPORAL DISTRIBUTION OF OBJECTS

The quantity of spindle whorls, loom weights, and bone weaving tools found at Tel Anafa indicates that residents engaged in textile production throughout the Late Hellenistic and Roman periods on a moderate, household scale. This evidence adds further weight to the interpretation of Tel Anafa as a working residence. Along with the stone implements, weaving implements demonstrate that site residents were largely reliant on their own industry and relatively isolated from the greater economic community on a day-to-day, functional level. Comparative evidence from agricultural communities indicates that women would have been responsible for spinning, with women, and perhaps also men, weaving during the non-planting season.

We have not attempted a comprehensive tally of the change of textile production methods and materials over time at the site, due to the common appearance of earlier material in later strata. However, some picture of weaving at the site emerges from an accounting of all objects included in this catalogue according to their phase (fig. 1). We assigned a date to each object based on the phase to which its locus was assigned; when a locus was assigned to a range of phases, e.g., HELL 1/2A, we used the later date, i.e., HELL 2A. On the other hand, for objects from contaminated loci, meaning those identified with a “+” symbol, e.g., ROM 1A+, we assigned them to the ROM 1A phase. The “null” category represents objects from balk trim or cleaning; these have no identifiable phase.



Weaving implements, by phase.

Figure 1

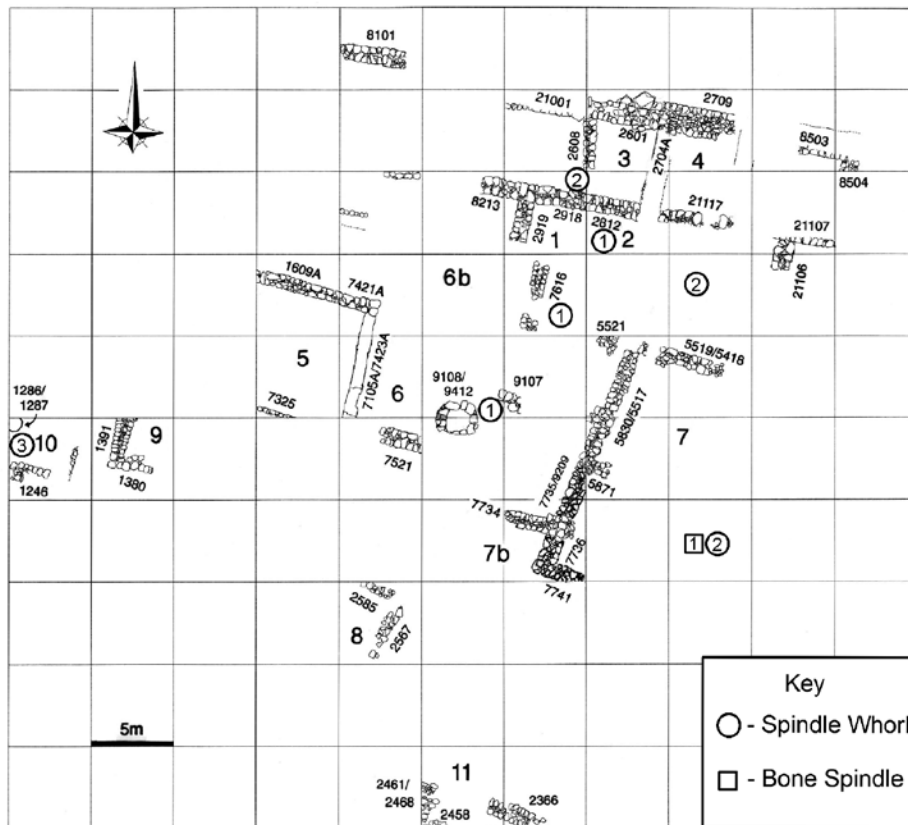
Spindle whorls and loom weights are attested in relatively equal proportion in all occupation periods, suggesting that both spinning and weaving took place during all phases of occupation. This pattern of activity is appropriate to households in the ancient world, where all stages of textile production were regularly carried out within the home. Based on numbers, residents during the two phases of Hellenistic occupation, HELL 1 and HELL 2A–C, spent far more time in textile production than did the site’s Roman-period residents; the diminished number of ROM 1A finds would be even more striking if in fact many of them actually date to the Hellenistic period—as does 96 percent of the pottery from that stratum.<sup>7</sup>

The clearest picture of textile production at Tel Anafa comes from the HELL 1 (ca. 332–125 BCE) phase of occupation (figs. 2 and 3). Since loci dated to HELL 1 do not contain later material, we infer that most or all of the weaving

<sup>6</sup> See Shamir 1994; 1996; Crewe 2002; Reich 2007.

<sup>7</sup> Herbert TA I, i, fig 2.2.

implements from these loci belong to this phase (though we acknowledge the possibility of some minor intrusion of material from earlier Bronze and Iron Age occupations). The assemblage of HELL 1 objects includes sixteen spindle whorls, forty loom weights, and seven bone implements. Textiles were likely produced for household consumption and perhaps small-scale bartering for food or other necessary goods. The largest concentrations of weaving tools were found in Rooms 3 (trench 2.8) and 6 (trench 9.1). In Room 3, a set of fifteen pyramidal loom weights (**WT 152–166**) were found clustered together on an earthen floor in a corner, where they were presumably stored between weaving projects and left behind when the site was abandoned. This room was adjacent to the kitchen courtyard of the same house, as identified by the presence of three brick ovens.<sup>8</sup> This distribution pattern of loom weights, representing weaving activity, located near but not in kitchens, is paralleled in several late fifth-/early fourth-century BCE houses at Olynthus, in Thessaly.<sup>9</sup> In area 6, under the area of the LHSB courtyard, were found seven more pyramidal loom weights (**WT 169–175**), along with two bone tools (**WT 347, WT 358**) and one terracotta spindle whorl (**WT 102**).<sup>10</sup> A circular structure of limestone blocks filled with black sludge, located nearby, may have been used for dyeing (locus 9127/9418).<sup>11</sup> These sets



Quantities of implements used for spinning, as distributed in HELL 1 strata (ca. 332–125 BCE).<sup>12</sup>

Figure 2

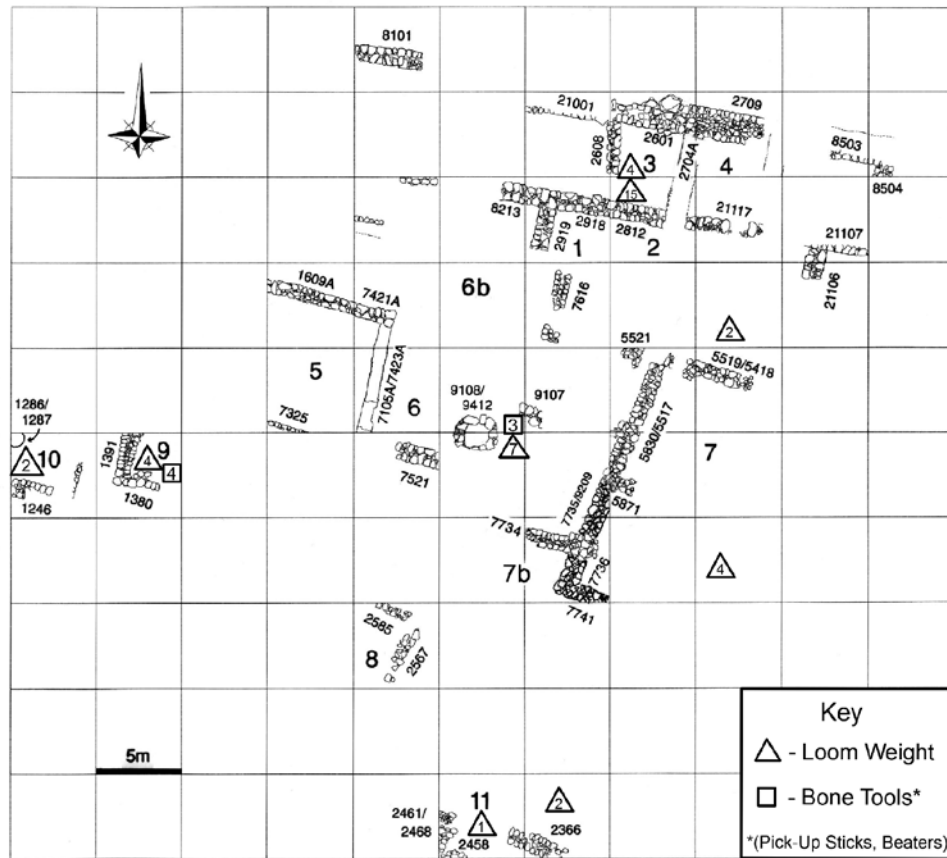
<sup>8</sup> Herbert TA I, i, 161. Four additional loom weights (**WT 148–151**) were also found in Room 3, in adjacent square 2.6 (see fig. 3).

<sup>9</sup> Cahill 2002, 111–112, 119–120.

<sup>10</sup> Loc. 9132, Herbert TA I, i, 162–163. A set of loom weights from Jebel Khalid were similarly stored together in a ceramic vessel (Crewe 2002, 239).

<sup>11</sup> Herbert TA I, i, 162–163.

<sup>12</sup> Distribution maps for Tel Anafa were generated for the three main phases of the site, HELL 1, HELL 2, and ROM. Each period has two maps, one representing spinning activity and the other weaving activity. An object was placed on one of these maps based on the latest possible date of the locus in which it was excavated. They were first plotted according to excavation square, which was available for all objects. If the object was associated with a room, it was placed in the room within its excavation square for a more accurate distribution record. The number within each plotted shape represents the total number of that object type found in that place during its designated period. Not pictured: three spindle whorls found in trench 3.3, Southern Slope.



Quantities of objects used for weaving, as distributed in HELL 1 strata (ca. 332–125 BCE).

Figure 3

of loom weights, found in multiple structures, indicate that weaving occurred in several areas of the site. Residents, possibly of different family groups, may have been self-sufficient and responsible for producing their own textiles, though it is also possible that they used textiles as goods to exchange.

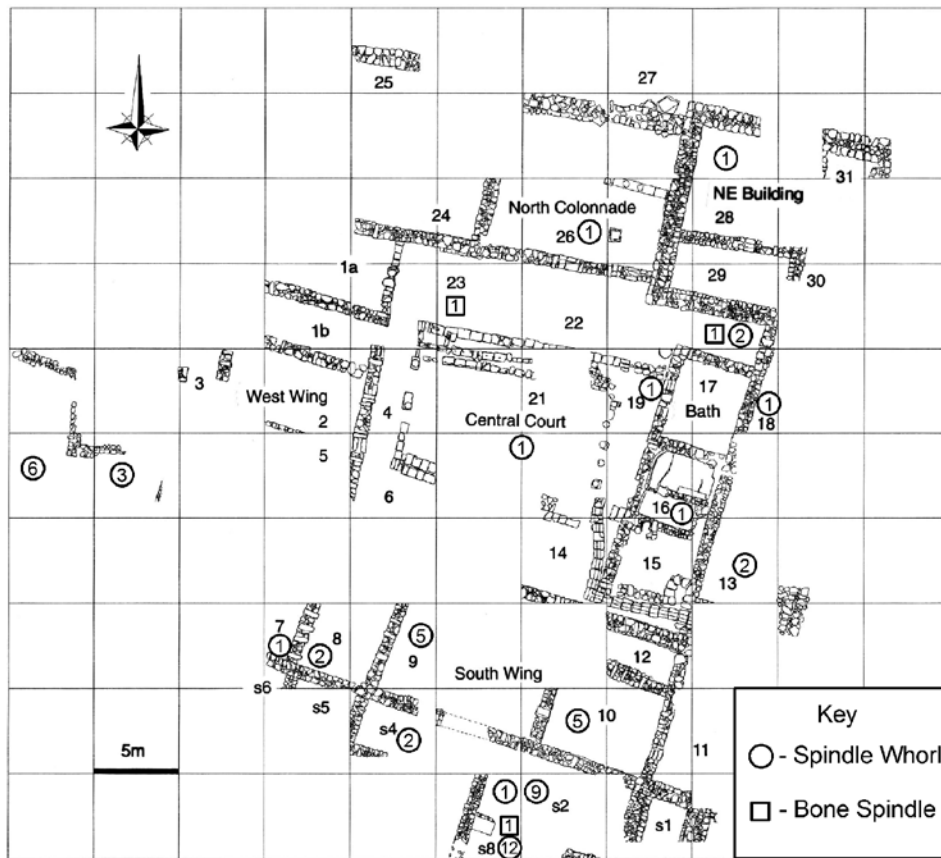
In HELL 2A–C (125–75 BCE), the Late Hellenistic Stuccoed Building (LHSB) phase, large quantities of spindle whorls, loom weights, and assorted bone weaving tools suggest a significant amount of textile production. Particularly high concentrations of objects were found in the area of the South Annex of rooms in the LHSB, the West Annex (figs. 4 and 5), and the rooms on the Southern Slope of the tel. The South Annex of rooms, where high numbers of beads were also found,<sup>13</sup> may have been a work or residential area for female residents of the household. The kitchen areas on the Southern Slope and West Annex are also conceivable locations for weaving and especially spinning to occur, as women took up these activities during breaks in other duties of cooking and child care.<sup>14</sup> However, women were clearly not isolated to particular areas of the LHSB, as weaving implements were found in almost every area of the building. Cahill's analysis of the distribution of loom weights from Olynthus indicates that there was no specific room type dedicated to weaving. Loom weights were found in almost all areas of houses except dedicated dining rooms, so-called *andrones*, whose name suggests an area strictly allocated to men, and flues and bathrooms, which would have been too small. Instead, at least at Olynthus, weaving seems to have occurred most often in an enclosed or semi-enclosed space adjoining a courtyard or light well, providing ample air circulation and light while protecting the weaver and her work from inclement weather and general household disturbance.<sup>15</sup> Despite the differences in

<sup>13</sup> Larson, "Personal Adornment," this volume.

<sup>14</sup> For a discussion of the suitability of spinning and weaving to other household duties of women, Barber 1994, 29–30.

<sup>15</sup> Cahill 2002, 175–178.





Quantities of objects used for spinning, as distributed in HELL 2A-C strata (ca. 125-75 BCE).<sup>16</sup>

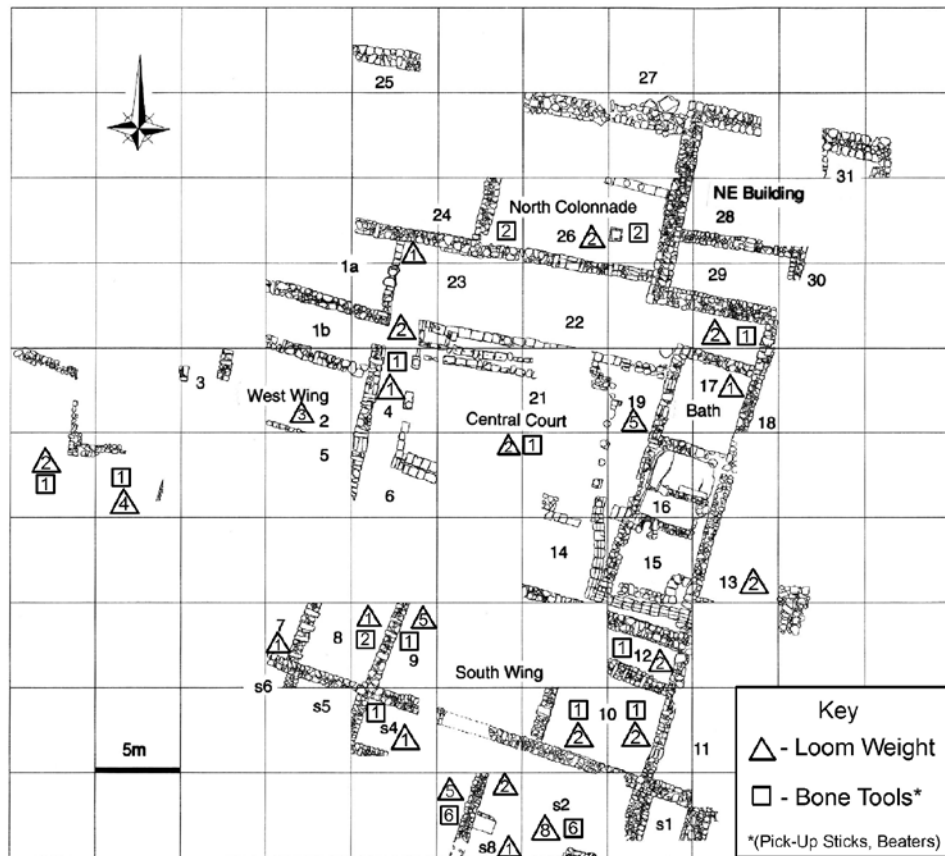
Figure 4

location, period, and character between Tel Anafa and Olynthus, a similar household configuration seems probable in the LHSB, with most weaving occurring in the relatively light and open South Annex, while spinning and storage of objects not in use occurred throughout the house but particularly in the West Annex and Southern Slope. However, since few objects were found *in situ* and most in fills, this picture is largely speculative.

The residents of Tel Anafa in the ROM 1B/C (early-mid-first century CE) period appear to have been less involved in textile production, at least on the evidence of the number of whorls and weights (see figs. 1, 6, and 7). Bone tools appear more frequently, although the number may be misleading since, as explained above, we assign objects to the phase of their locus, even when the majority of material within the locus is of an earlier date. The decrease in number of tools for textile production is odd in light of Redding's faunal analysis; he argues that the increased survival rate of sheep in the Roman period was due to the management of flocks in order to maximize wool growth, presumably for textiles.<sup>17</sup> Two factors may account for this discrepancy: first, all of the faunal material collected came from the tel itself, meaning that the only animals represented in the data would be those that died on the tel or were brought there after death. Animals living in the surrounding valley and hilly slopes, particularly those raised exclusively for wool, would never have been on the tel and therefore do not show up in the archaeological record. In the Hellenistic period, when much of the tel was covered by the LHSB, space allocated to animal husbandry would have been limited, while in the Roman period, when fewer, smaller, and cruder buildings

<sup>16</sup>Not pictured: Southern Slope, 3.2-Unit 1, Room 2b, one spindle whorl; 3.3-Unit 2, Room 1, one spindle whorl, one spindle; 3.4-Unit 2, Room 1, one spindle whorl; 3.4-east of Unit 2, Room 2, one spindle whorl; 3.5-Unit 2, Room 3, two spindle whorls.

<sup>17</sup>Redding TA I, i, 286-288.



Quantities of objects used for weaving, as distributed in HELL 2A–C strata (ca. 125–75 BCE).<sup>18</sup>  
Figure 5

spotted the tel, animals were more likely to be kept closer to the living areas. Second, but less likely, is that LHSB occupants produced more fabric from plant materials such as flax than wool. The assemblage of spindle whorls from the Hellenistic period does include larger and heavier whorls than those from the Roman period, with such whorls being better suited to spinning long staple fibers such as flax or thicker threads of short staple wool, appropriate for weaving blankets or cloaks. However, the heaviest cluster of whorls, at about 50–60 g, is probably still too light to spin flax in great quantity. If the settlers of Anafa in the early first century CE were indeed associated with the Roman army, as suggested by Berlin and Merker,<sup>19</sup> they were likely to have been at least partially provided with textiles from external sources and would not have had to engage in substantive weaving activity. The few spindle whorls and loom weights from this phase would have been used by a small number of women in the outpost, who perhaps generated some income by supplying the Roman troops.<sup>20</sup>

In sum, evidence of spinning and weaving indicates textile production during all three main occupation phases at Tel Anafa. At Olynthus, several houses that are considered to have belonged to wealthier families lacked evidence of

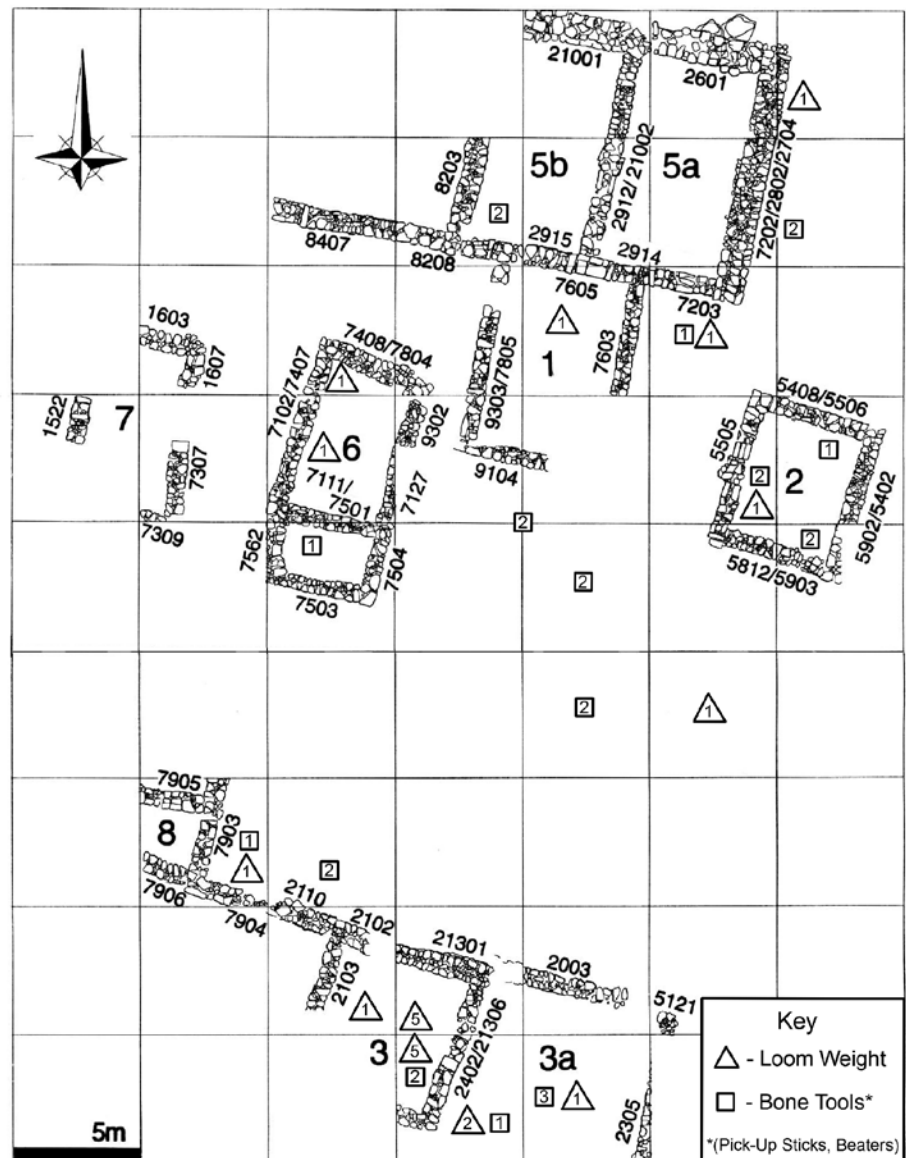
<sup>18</sup> Not pictured: Southern Slope, 3.1-Unit 1, Room 1, four bone tools, four loom weights; 3.2-Unit 1, Room 2a, two loom weights; 3.2-Unit 1, Room 2b, four bone tools, two loom weights; 3.3-Unit 2, Room 1, one bone tool, one loom weight; 3.5-Unit 2, Room 3, one loom weight.

<sup>19</sup> Berlin TA II, i, 32; Merker TA II, ii, 253, 255.

<sup>20</sup> Local sources were probably responsible for providing Roman garrisons in Britain with tunics and cloaks, as soldiers were unlikely to have had the time or resources to make their own clothing, and cost and logistics of large-scale importation would have been prohibitive. Spindle whorls have been found in some quantity in some camps, suggesting some manufacture, presumably not by the soldiery, took place within the *vici* themselves (Wild 2002, 31–32).



Quantities of objects used for weaving, as distributed in ROM 1–2 strata (early–middle first century CE).<sup>23</sup>  
Figure 7



A little bit of inductive reasoning is appropriate here. The HELL 2 LHSB occupants were obtaining moderate- to high-quality goods from the Phoenician coast. How did they purchase or otherwise acquire them? The LHSB, far from being a luxury retreat villa, was a working rural residence, actively involved in agriculture, weaving, and animal husbandry.<sup>24</sup> Residents could have exchanged excess quantities of these goods with coastal areas for the luxuries that made life more pleasant. Success in agriculture and pastoralism would have allowed LHSB residents to purchase products they were unable to make themselves, such as jewelry and glass and ceramic table vessels.<sup>25</sup> In a manner

<sup>23</sup> Not pictured: Area of HELL 2 West Annex, 1.2, two bone tools, one loom weight; 1.4, one loom weight; Southern Slope, 3.1, one bone tool; 3.2, six bone tools, two loom weights; 3.5, one bone tool.

<sup>24</sup> See Wells et al. TA II, ii, 330–333; Merker TA II, ii, 224–232; Redding TA I, i, 292.

<sup>25</sup> Fine-quality textiles could potentially also be added to this list of imported objects. Spindle whorls and pick-up sticks from the HELL 2 phase of occupation suggest that coarser fabrics were produced at Tel Anafa in this phase than in the preceding HELL 1 or later ROM 1B/C phases. This fits the interpretation that the HELL 2 residents produced common, utilitarian goods for use and profit and imported finer luxury products.

similar to pioneer farmsteads of nineteenth-century America, they would have been self-sufficient for the necessities of daily domestic life but used extra textiles and foodstuffs to trade with urban areas, where such goods were not as readily available. The character of textile production at Tel Anafa may best be categorized as domestic, trending toward a cottage industry as time and resources allowed.

#### A NOTE ON NUMBERS AND DENSITY

One outstanding question about Tel Anafa is the site's population size in the later Hellenistic and Roman occupation phases. Concentrations and numbers of weaving tools are insufficient to guesstimate even a minimum number of weavers operating at the site. Like the ceramic evidence, the proposed solutions and problems with those solutions are similar, given the gaps in our knowledge about object density and use practices in ancient households.<sup>26</sup>

Theoretically, a general estimate of the number of women living at Tel Anafa could be achieved by counting the number of whorls and dividing by the number estimated to belong to each woman. These "spinning kits," similar to the modern sewing basket or kitting bag, represent the tools at hand that each woman would have utilized in order to complete particular tasks. The problem is that the number of whorls that would have been included in an ancient spinning kit is completely speculative. Work baskets of Incan weavers contained as many as seventy whorls per kit, while contemporary spinners from Peru, Mexico, and the Sudan have fewer than ten spindles and whorls.<sup>27</sup> Perhaps closer to the composition of the Tel Anafa spinners' kits are small clusters of whorls, spindle rods, and unspun wool and yarn found in the caves surrounding the Dead Sea. These kits include five to twelve whorls of various sizes and materials with two or three rods.<sup>28</sup> Reich suggests that groups of spindle whorls from the same locus, ranging from three to thirteen, represent spinning kits as they were stored in homes.<sup>29</sup> At Tel Anafa, no such clear data exist, as living levels are largely disturbed, and the largest group of whorls in a single locus (four) was found in a pit with mixed material.<sup>30</sup> Additionally, the number of whorls made from unpreserved organic material such as wood is completely unknown, as is the use life of any given individual whorl.<sup>31</sup> Finally, because spindle whorls are not inherently datable, we are unable to separate data from the primary Hellenistic and Roman levels of occupation; thus any population estimate would give no accurate information about the site in either period. Therefore, without knowing the size or composition of the spinning kits, an estimate of the number of women involved in spinning and other textile production is impossible.

The number of looms that would have been operational at Tel Anafa is similarly ambiguous. Barber's analysis of *in situ* loom weights from various sites, where the loom was apparently destroyed while set up for use, suggests anywhere from six to thirty or more weights per loom.<sup>32</sup> Artistic representations on Attic vases similarly provide uneven evidence, with depictions of warp-weighted looms supporting from ten to fifty weights.<sup>33</sup> A line of forty-three loom weights was found in Villa CC at Olynthus, along with a hooked bronze implement, but most *in situ* groups of loom weights only contain between ten and twenty-five objects.<sup>34</sup> At Masada, approximately twenty loom weights were found with burned wood, likely from a loom that fell from an upper level.<sup>35</sup> At Tel Anafa, the largest set of loom weights found together is fifteen, clustered for storage rather than in a line as if they were suspended from a loom. Such a wide range of possibility for number of loom weights used per loom renders any estimate of the number of operational looms guesswork at best.

The weight of individual loom weights also affects how many would be used at a time; heavier weights harness more threads, resulting in fewer weights per loom, while lighter weights hold fewer threads, resulting in more weights

<sup>26</sup> Berlin TA II, i, 36.

<sup>27</sup> Liu 1978, 98.

<sup>28</sup> Aharoni 1962, 192, pls. 25C–D, 26E–F; Yadin 1963, fig. 51.20–24.

<sup>29</sup> Reich 2007, 186–187.

<sup>30</sup> Loc. 2407, Herbert TA I, i, 120.

<sup>31</sup> See Liu 1978, 98, for general discussion about the problems of estimating production amount or capacity based on numbers of whorls.

<sup>32</sup> Barber 1991, 387.

<sup>33</sup> Crewe 2002, 242–243.

<sup>34</sup> Cahill 2002, 171, 173–174, fig. 39.

<sup>35</sup> Netzer 1991, 564–565.

required for the same number of threads.<sup>36</sup> Generally, the wider the cloth, the more loom weights it would require. Therefore, once more, raw numbers of finds are inadequate to calculate quantities of the archaeologically invisible.

Another question regarding population dynamics at Tel Anafa is who would have been involved in textile production. That women bore the primary responsibility for spinning seems certain. Regardless of any potential class differential between elite women and their servants or slaves, both groups likely spun thread in any available moment. Depictions of noble women spinning in vase paintings and literary accounts from Classical Athens attest that spinning was considered honorable and appropriate work for all women, indicative of their virtue and propriety.<sup>37</sup> At rural sites such as Tel Anafa, all women were likely to be required to fully engage in the processing of wool. First, the site's isolation from major urban centers would likely have required almost all textiles to have been produced inside the home. Second, particularly in more rural areas, division of labor by gender or class seems less marked than in the urban upper classes.<sup>38</sup> Weaving is more ambiguous. Barber points out that spinning and sewing were compatible with childrearing as they were easily interrupted, repetitive, portable, and required little concentration.<sup>39</sup> However, while the spinning remained virtually unchanged for millennia, the increased commercialization of weaving in the middle of the first millennium BCE made weaving more difficult for women whose primary responsibility was to care for children. Evidence for male weavers begins to appear about this time and continues to occur periodically in areas around the Greek and Roman Mediterranean.<sup>40</sup> In an agricultural setting like Tel Anafa, where men's work in the fields was tied closely to seasonal cycles of planting and harvesting, it does not seem unreasonable to postulate that men could also have engaged in weaving. The greater amount of time required to spin thread relative to the time necessary to weave that same thread into fabric makes the proposition even more likely. Men could engage in the quicker work of weaving in seasonal cycles, when agricultural obligations were fewer, while women spun continually year round.<sup>41</sup>

<sup>36</sup> Barber 1991, 104.

<sup>37</sup> Kissell 1918, 236; Barber 1994, 273–277.

<sup>38</sup> Wild 2002, 29; Scheidel 1995, 209–211.

<sup>39</sup> Barber 1994, 39–40.

<sup>40</sup> Barber 1994, 277; Wild 2002, 29; Peskowitz 1997, 49–50.

<sup>41</sup> Data from other societies support this model. Men living in rural regions of Pennsylvania during the eighteenth century often made their fortunes in weaving and in turn used that money to buy land, although they probably never gave up weaving as a side industry (Hood 1994, 547–550). In Britain, throughout the Late Iron Age and Roman periods, textile production appears to have been largely seasonal, with fiber preparation and spinning taking place immediately after shearing in late spring and flax harvest in late summer, and weaving of those prepared fabrics completed before sowing the following spring (Wild 2002, 29).

## II. SPINDLE WHORLS

### OVERVIEW<sup>42</sup>

The spindle whorls catalogued here number 147 objects, primarily from Hellenistic and Roman strata, in addition to three metal whorls published by Merker.<sup>43</sup> It is likely that a few of these, such as **WT 110** and **WT 124**, are not whorls for reasons discussed below. The most dominant material for spindle whorls at Tel Anafa is stone, with sixty-two exemplars (41.3 percent). Terracotta whorls also appear in large quantities, with fifty-three objects (35.3 percent). Thirty bone whorls (20.0 percent) and two glass whorls (1.3 percent) complete the assemblage.

The process of textile production begins with raw material, either vegetal matter or animal hair. To prepare it for spinning, flax is combed with toothed tools in order to separate the stem from the fiber. Sheep wool can be washed either before or after spinning. Fibers must then be twisted together to form a stronger, thicker thread. This can be accomplished either by hand, by rolling the fibers along the thigh or by finger twisting, or with the help of a spindle whorl, which allows for quicker, more even spinning. A generally round or disc-shaped object with central perforation, the whorl essentially serves as a flywheel on a stick, or spindle, providing weight and angular momentum to create spinning torque. Whorls can either be mounted near the top of the spindle, common practice in ancient Egypt and the Near East, or at the bottom of the spindle, the preferred method in Europe and Anatolia.<sup>44</sup> There is little functional difference between the methods, although members of the Weavers Guild of Minnesota suggest that a bottom whorl will spin more slowly than a top whorl, resulting in a heavier yarn. The spindle and whorl may either hang freely from the hand of the spinner, supported by the tension of the newly spun thread, or be supported from below by a small cup, ceramic sherd, or stone. Supported spindles are best suited for spinning very short staple fibers like cotton and very fine thread that would not be strong enough to hold the weight of the spindle and whorl.<sup>45</sup> Occasionally, wear and decorative patterns on archaeologically recovered whorls may indicate whether the whorl was top or bottom.<sup>46</sup> Newly spun thread may be wrapped around the spindle or a spool or rolled into balls until ready to be woven. Hand spinning takes at least five times as long as weaving the same amount of material, often resulting in a production bottleneck.<sup>47</sup>

### IDENTIFYING WHORLS

Determining objects found in archaeological excavations to be whorls, as opposed to buttons or beads, has been a matter of debate since Petrie (1917) and Reisner (1924) identified objects in this category from the ancient world.<sup>48</sup> In her publication of the small finds from Corinth, Davidson (1952) identified many more buttons than whorls on the basis of size, weight, and material.<sup>49</sup> Crewe (1998) provides the most recent and comprehensive discussion of spindle whorls in her study of the Bronze Age whorls from Cyprus, based on the work of Liu (1978). Crewe defines six characteristics in considering a perforated object to be a whorl.

1. The perforation must be centrally pierced, so as to spin evenly. While experiments have demonstrated that objects with off-center holes will still spin thread, the process is significantly less efficient and more

<sup>42</sup> This section on Spindle Whorls was written by Katherine A. Larson.

<sup>43</sup> Merker TA II, ii, 230–231, **M50**, **M50a**, and **M51**.

<sup>44</sup> Barber 1991, 53–65.

<sup>45</sup> Barber 1991, 43.

<sup>46</sup> See Crewe 1998, 59–60.

<sup>47</sup> Wild 2002, 8–9.

<sup>48</sup> Petrie 1917, 53, pl. LXV; Reisner et al. 1924, 341.

<sup>49</sup> Davidson 1952, 172, 296.

unwieldy.<sup>50</sup> Given the amount of spinning performed in the ancient world, efficiency of the tools would necessarily have been a priority, and an imperfect tool would only have been used if no other alternative was available. However, objects such as **WT 74**, **WT 83**, and **WT 126**, which have off-center holes or other evidence of manufacturing error, may have been originally intended to serve as whorls but were abandoned for use when found ineffectual.

2. The perforation should be straight-sided or conical (slightly wider at one end). A curved perforation is certainly not a whorl, as it would be impossible to mount on the spindle.<sup>51</sup> Shape of the perforation helps determine usability, as well as manufacturing technique. A conical perforation allows the whorl to be wedged onto a tapered spindle, thereby securing it more effectively than a straight hole on a straight spindle and making manufacture easier, as perforation diameter and spindle diameter would not have to be as precisely aligned. Some whorls, including several ceramic objects found in the City of David excavations, have biconical perforations, with the center of the perforation being narrower than the openings.<sup>52</sup> This shape is the result of piercing the object from both sides to create the hole. **WT 34** is the only whorl from Tel Anafa to have a biconical perforation. Some imperfection in the shape of the perforation would not completely prevent effective use of the whorl; unspun fiber, resin, or wax could be used to affix the whorl more securely to the spindle.<sup>53</sup> Except for a few terracotta whorls with conical perforations, such as **WT 73**, **WT 74**, and **WT 78**, the whorls from Tel Anafa available for firsthand study have straight-sided perforations with even diameters.
3. The perforation should be centered at the point of widest diameter. According to Crewe, a perforation more than 20 degrees off this line causes the whorl to wobble while spinning.<sup>54</sup> Again, some variability in perforation orientation is permissible, as the whorl could be stabilized with fiber or wax. Several terracotta whorls from Tel Anafa (**WT 72**, **WT 82**, **WT 96**, and **WT 101**) have angled perforations, likely the result of poor manufacture rather than design. Whether or not these objects would have been used as whorls is uncertain.
4. Crewe hypothesizes that the diameter of the whorl perforation should be at least 0.4 cm, the minimum diameter for a spindle to be robust enough to be held easily and to support enough weight. The ideal diameter for a whorl perforation seems to be about 0.7–0.8 cm since most fall in that range; an object with a perforation diameter over 0.7 cm is almost certainly a whorl, as beads rarely have holes that wide.<sup>55</sup> Several bone and a few stone whorls from Tel Anafa have perforation diameters of less than 0.4 cm. There appears to be no correlation between overall whorl diameter or decorative scheme and perforation size; in other words, the only difference between objects with perforations greater than or less than 0.4 cm is the perforation size. Certainly, these marginal objects more closely resemble readily distinguishable whorls than they do beads. Therefore, we have taken minimum perforation size as insufficient evidence for whorl identification at Tel Anafa.<sup>56</sup> Metal spindles, which were used at Tel Anafa and other sites in the northern Levant,<sup>57</sup> would have been more stable than wood or bone spindles of a similar diameter, therefore allowing the spindle itself and also the perforation of the whorl to be narrower.
5. The diameter of the object is over 2.0 cm but could be significantly smaller. Size is more likely to distinguish beads from whorls than whorls from beads, as beads are generally less than 0.8 cm and rarely over 2.0 cm in diameter. Whorls apparently have no minimum size since they are dependent upon the type of fiber to be spun.<sup>58</sup> The majority of whorls from Tel Anafa are over 2.0 cm in diameter, while only a few well-decorated beads exceed this size.<sup>59</sup>

<sup>50</sup> Crewe 1998, 9, 13–14; Liu 1978, 100.

<sup>51</sup> Crewe 1998, 12; Liu 1978, 97.

<sup>52</sup> Shamir 1996, 150.

<sup>53</sup> Liu 1978, 97.

<sup>54</sup> Crewe 1998, 12.

<sup>55</sup> Crewe 1998, 11; Liu 1978, 97.

<sup>56</sup> Liu also finds that bone whorls from Afghanistan show extreme variability in perforation size. He hypothesizes that “small, light whorls need thicker, heavier spindles in order to have sufficient momentum to maintain spinning action” (1978, 99, fig. 26). However, in such a situation, the advantage of a light whorl—for spinning fine thread—would be negated by the heavy spindle.

<sup>57</sup> **WT 108** preserves a small bit of metal in the perforation, and Merker identified one bronze spindle (**M 49**) from Tel Anafa (TA II, ii, 231). Evidence of metal spindles also comes from Jebel Khalid and Samaria (Crewe 2002, 219, JK SW.59; Reisner et al. 1924, 341).

<sup>58</sup> Crewe 1998, 13; Liu 1978, 91.

<sup>59</sup> Larson, this volume, **BD 1**, **BD 40**, **BD 41**.



6. The object weighs at least 10 g. This qualification is based on the minimum weight of identified whorls from Bronze Age Cyprus, not any inherent spinning necessity.<sup>60</sup> Several whorls from Tel Anafa, especially those made from bone but also a few from stone, weigh less than 10 g. Given the temporal and cultural differences between Bronze Age Cyprus and the Hellenistic Levant, comparative weight is not a valid method of defining the whorls from Tel Anafa. The median weight of stone whorls from Masada is 8.14 g, and 90 percent of whorls from Jebel Khalid are less than 13 g, supporting the identification of the lightweight Anafa objects as whorls.<sup>61</sup> As discussed above, the weight of the whorl suits the type of fiber and type of thread. The presence of lighter, finer whorls at Tel Anafa indicates that shorter staple fabrics and finer threads were spun there and at Masada than in Bronze Age Cyprus.

In addition to the objects of uncertain attribution as whorls listed above, three objects in the catalogue are certainly not whorls since they have multiple perforations. **WT 111** is very crudely fashioned from clay, with two holes roughly central in the disc. The perforations were punctured from one side, leaving excess clay around both openings that was not smoothed out. **WT 43**, though broken, was made from much finer buff pink stone appearing very similar to ceramic. Two holes are preserved; the total number in the original piece cannot be determined. Somewhat similar limestone objects with multiple perforations were found in the City of David excavations. Shamir suggests they may have been used in tablet weaving, to braid narrow strips of cloth, and validated that use in weaving experiments.<sup>62</sup> Crewe lists similar pieces from Jebel Khalid alongside loom weights with no discussion.<sup>63</sup> They are almost certainly not buttons, as modern-style buttons with multiple perforations likely do not occur until the Byzantine period.<sup>64</sup> Alternatively, they may be simple toys strung and spun on multiple threads to create a humming sound. Van Beek calls these objects “buzzes,” after their modern name, and documents their occurrence in multiple civilizations around the world.<sup>65</sup>

Therefore, several objects from Anafa classified here as whorls may instead be buttons, beads, pendants, weaving tablets, or have another yet-to-be-determined function. Complicating the question is the likelihood that any given perforated object could have served multiple purposes, perhaps alternately used as an ornamental jewelry item or protective amulet, as well as a tool for weaving.<sup>66</sup> On account of the uncertainties in identification of specific objects and the ambiguity in the category of “whorl” as a whole, objects whose primary function may not have been to spin fiber are still published here as whorls in order to draw attention to these very difficulties and uncertainties. Objects such as **WT 110** that were almost certainly never used for spinning are so identified in the notes of table 1.

## DISTRIBUTION AND CONTEXT

Small quantities of spindle whorls were found in excavation of almost every square at Tel Anafa (see figs. 2, 4, and 6). Reich’s analysis of spatial distribution of the whorls found at Masada concludes that whorl owners, presumably women, owned several whorls that were kept together in kits containing anywhere from three to thirteen whorls. The actual act of spinning, however, took place throughout the site, as evidenced by the widespread distribution of individual whorls, lost or forgotten in scattered areas.<sup>67</sup> Unlike Masada, the original deposit layers at Tel Anafa were greatly disturbed by later site activity, and occupants likely took their primary tools with them when they abandoned the site.<sup>68</sup> No more than four whorls were found in a single locus at Tel Anafa,<sup>69</sup> providing little evidence for the size

<sup>60</sup> Crewe 1998, 13. Liu does not discuss weight as a defining quality for whorls.

<sup>61</sup> Reich 2007, 186; Crewe 2002, 219.

<sup>62</sup> Shamir 1996, 148–149, fig. 22.1–3.

<sup>63</sup> Crewe 2002, inv. 90.583, 90.667.

<sup>64</sup> Davidson 1952, 298.

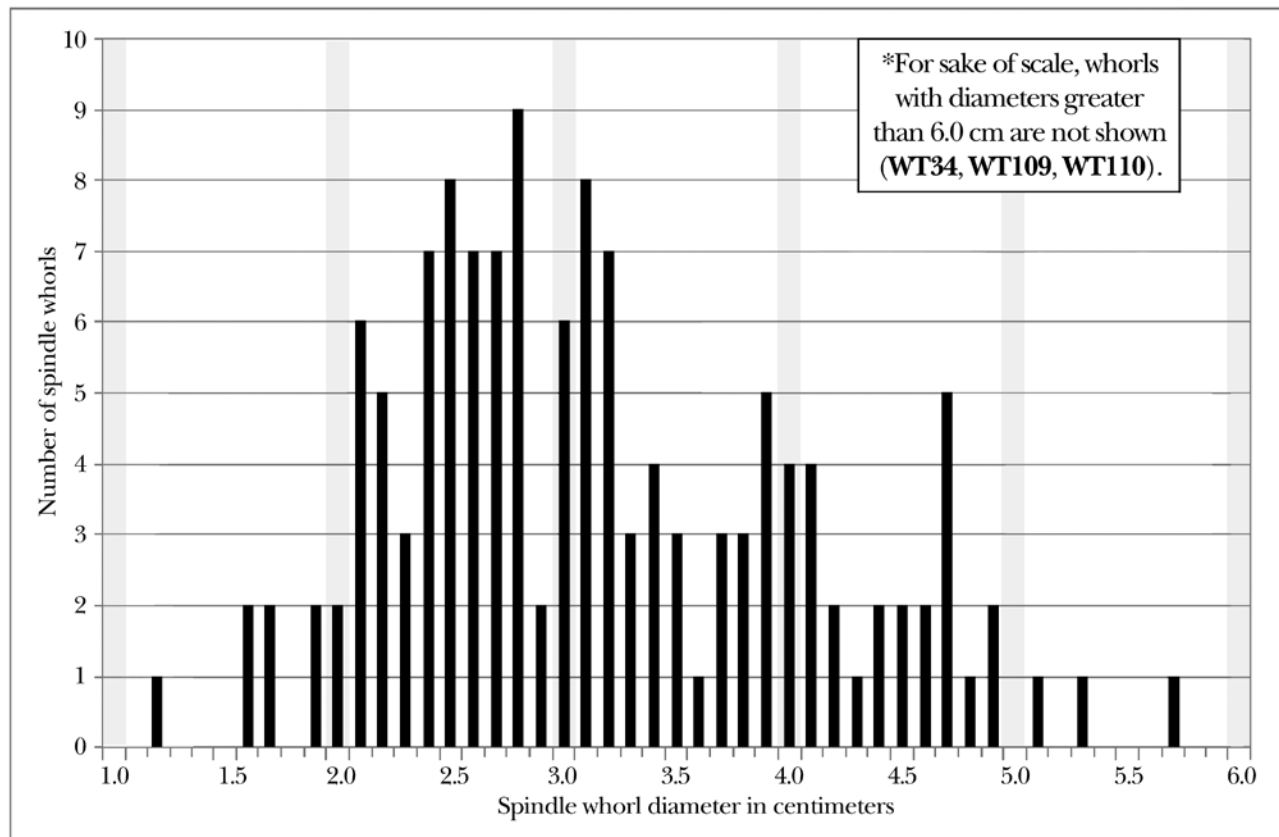
<sup>65</sup> Van Beek 1989.

<sup>66</sup> Liu 1978, 100–102.

<sup>67</sup> Reich 2007, 186–187.

<sup>68</sup> No destruction layers were identified at the site, indicating that occupants in all periods left deliberately, likely taking their most valuable and useful possessions with them (Herbert TA I, i, 19).

<sup>69</sup> Locus 2407, a pit containing material dating as late as the Arab period (Herbert TA I, i, 120), yielded four whorls; loci 2029, 2453, and 3352.1, all assorted fills, produced three whorls each.



Diameters of whorls from Tel Anafa.

Figure 8

or location of an individual spinner's kit. The homogeneity of distribution of individual spindle whorls suggests that women were spinning in multiple locations throughout the site, and there is no clear area of the LHSB where they were excluded. Ethnographic evidence from modern cultures as well as the time-consuming nature of spinning indicates that women spin at all hours of the day, whenever their hands are otherwise unoccupied.<sup>70</sup> High concentrations of whorls in the area of the South Annex of the LHSB, with nine whorls from square 2.3 and twenty from 2.4, suggest that this suite of rooms may have served as a primary space where women spun. Interestingly, beads are similarly more densely concentrated in this area,<sup>71</sup> giving further credence to this supposition.

## FEATURES AND DISCUSSION

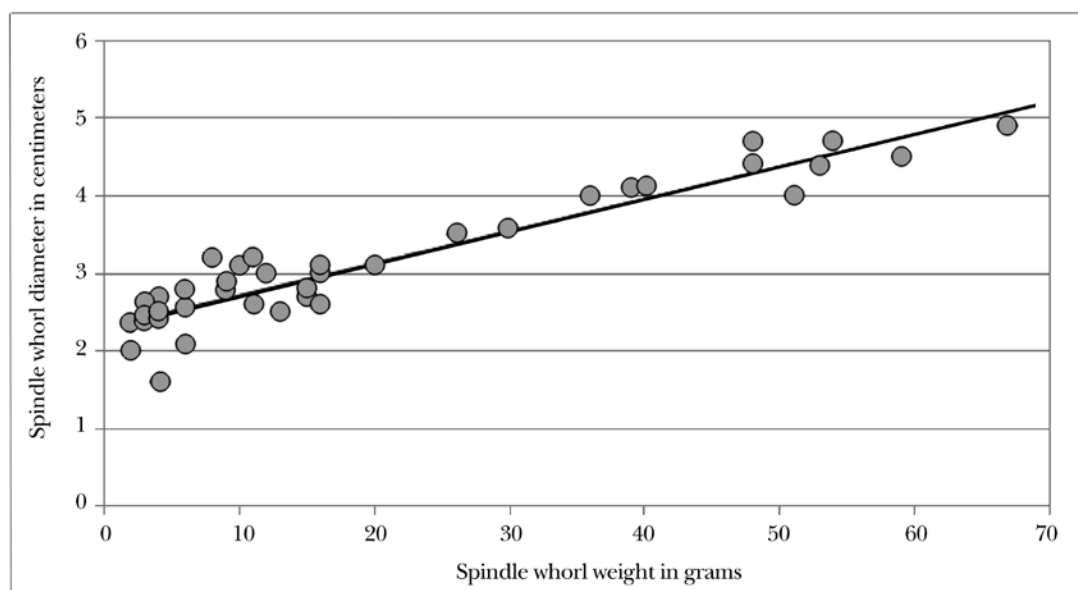
### SIZE

Diameters of spindle whorls from Tel Anafa range from 1.2 cm (**WT 60**) to 11.2 cm (**WT 34**) (fig. 8). Most are between 2 and 4 cm in diameter, comparable to the stone whorls from Masada and slightly larger than the whorls from Jebel Khalid.<sup>72</sup>

<sup>70</sup> Barber 1994, 31.

<sup>71</sup> Larson, "Personal Adornment," this volume.

<sup>72</sup> Reich 2007, 172–183; Crewe 2002, 219. Liu observes that this is the most common diameter range for spindle whorls all over the world (1978, 90–91).



Relationship between weight and diameter of whorls from Tel Anafa housed at the University of Missouri. Figure 9

While weight is the best indication of whorl function,<sup>73</sup> mass was not included in original inventory information, and a majority of whorls were not available for firsthand study at the time of writing. However, the forty-four whorls housed at the University of Missouri were weighed and their weight plotted against their overall diameter (fig. 9). The results demonstrate that the weight and diameter of spindle whorls from Tel Anafa are proportionately related. Wider diameters, predictably, result in heavier whorls, which are more suitable for long staple fibers and heavier threads; narrower whorls, with lighter weights, are more effective for spinning short staple fibers and finer threads. Therefore, although maximum diameter is the only measurement recorded for all whorls, it is by no means a meaningless figure and can still provide general information about the use function of whorls from the site.

Spinners at Tel Anafa had a strong preference for whorls with a maximum diameter between 2.1 and 3.2 cm (3–16 g). Other peaks in data occur around 4.0 cm and 4.7 cm (weight clusters around 40 and 55 g, respectively) (figs. 8, 10). Weights of spindle whorls from Bronze Age Cyprus also cluster around certain values, reflecting the optimal range for certain tasks and preferences of the spinners there. According to Crewe, whorls less than 35 g are best for short staple wool and fine thread, which would have been used as sewing thread or in lightweight garments. The 40–50 g whorls, a popular weight class at Cyprus, are best for spinning thicker woolen thread, which would be used to weave blankets or other heavy garments. The classes of largest whorls, at 60–95 g and over 100 g, are suitable for spinning long-staple fibers like flax and for plying thread together, respectively.<sup>74</sup> The Tel Anafa whorls that would have been used to spin heavier woolens are clustered at a higher weight than are the Bronze Age Cyprus whorls; possible reasons include use of a lighter spindle, rendering the overall weight of the spinning tool roughly similar,<sup>75</sup> or desire to spin a slightly heavier fabric. The seven whorls with diameters over 5.0 cm (**WT 3**, **WT 34**, **WT 76**, **WT 105**, **WT 109**, **WT 100**, and **WT 110**) were not available for weighing, so any data extrapolated from the smaller whorls to predict their weight would be misleading and speculative. Still, the presence of these few objects, all from Hellenistic strata, reflects that residents similarly needed a few heavier whorls in order to spin and ply heavy thread.

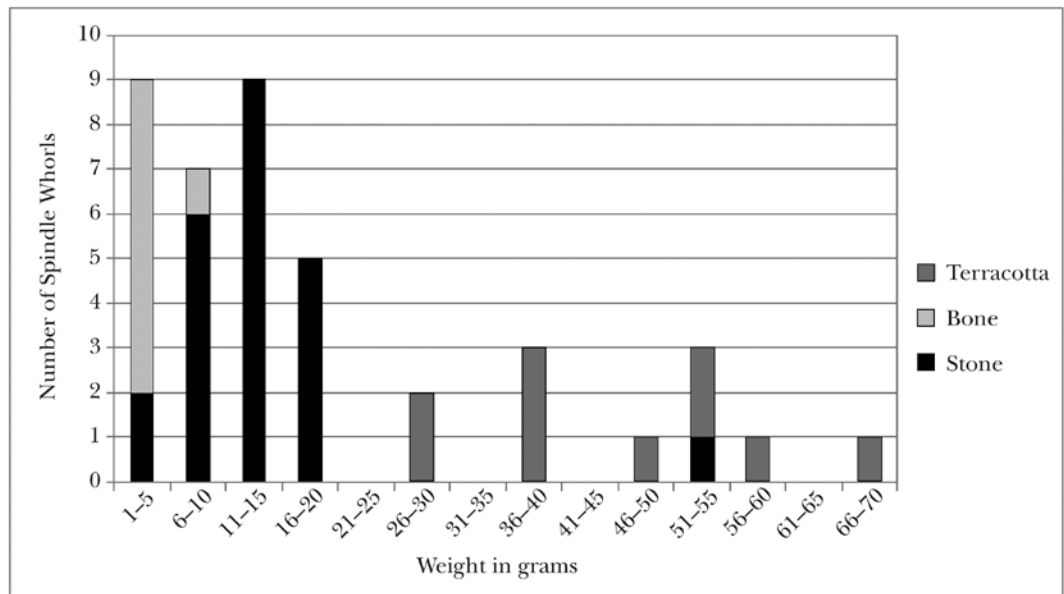
Recent experimental archaeology conducted by the Danish National Research Foundation's Centre for Textile Research has suggested further refinements of whorl weight for the thickness of the spun thread and its tensile strength (Mårtensson, Nosch, and Andersson Strand 2009, 378). A 4 g whorl produces an exceptionally thin thread of less than 3 mm, while an 18 g whorl produces a 0.4–0.6 mm thread. Thicker thread also requires a heavier loom weight

<sup>73</sup> Barber 1991, 52.

<sup>74</sup> Crewe 1998, 28–29, fig. 6.1.

<sup>75</sup> See Barber 1991, 43, for the importance of spindle weight.

Weight range of Anafa whorls housed at the University of Missouri, by material.  
Figure 10



and produces a coarser, more loosely woven fabric. Thus, with the extremely lightweight whorls, Anafa spinners were able to produce very fine, lightweight threads and textiles, which composed the majority of their output.

The “spinning kits” of individual spinners at Tel Anafa in both Hellenistic and Roman times thus probably contained several small bone and stone whorls, perhaps one or two nicely decorated, for spinning the most common product of fine wool thread, a few medium-weight terracotta whorls for spinning heavier woolens, and one very heavy whorl for plying.

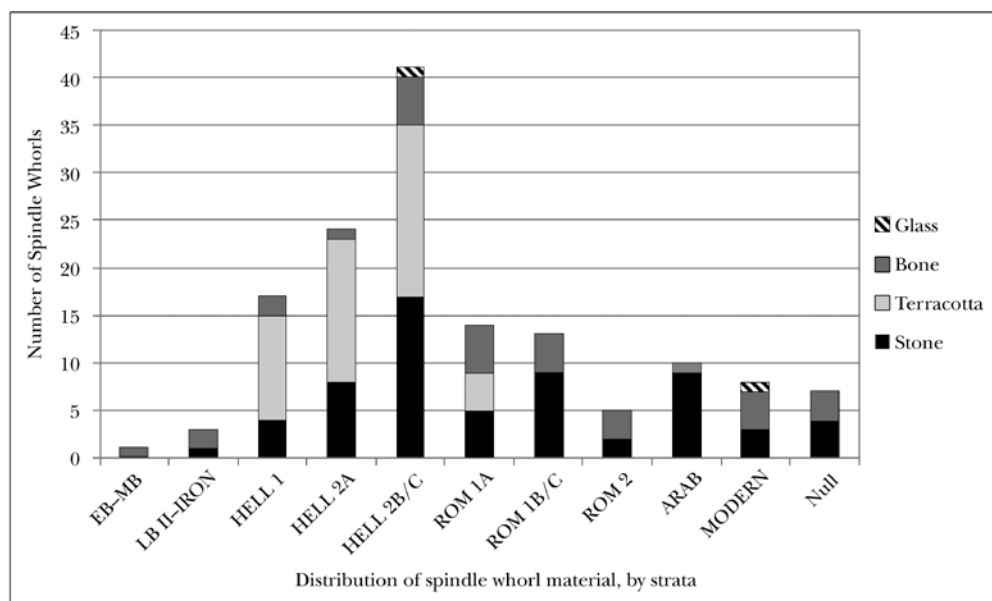
### SHAPE

As noted by Crewe, individual typological classes of whorl shape are somewhat arbitrary as they usually fail to reflect significant differences in the way a whorl functioned; the difference between a conical or hemispherical whorl is merely “a few millimeters of curvature” and relatively arbitrary to define.<sup>76</sup> Diameter and how the weight of the whorl is centered affect the way the whorl operates more than a strictly defined shape. However, diameter and weight distribution are loosely connected to general shape categories, rendering shape a useful category. In the catalogue table, bicone and spheroid whorls, with a diameter to height ratio of approximately 1:1, conical and hemispherical, diameter to height ratio of approximately 2:1, and discoid, with the height of the whorl being less than a third its diameter,<sup>77</sup> are grouped together.

The whorls from Tel Anafa display a close correlation between material and shape. Twenty-six of the forty-seven stone whorls with known shape (55 percent) are conical/hemispherical. In terracotta whorls, bicone/spheroid heavily dominates the terracotta whorls with known shape, with forty-three out of forty-seven (91 percent) displaying that profile. In bone, nine of seventeen (53 percent) of whorls with known shape are discs. Most likely, this relationship corresponds to ease of manufacture and the specific properties of the material. The most durable bone whorls, for instance, would come from flatter bones, which would be easiest to smooth into the desired shape. Terracotta would hold its form best in balled lumps of clay, resulting in the bicone/spheroid shape. Weight and diameter ratio may also have been a factor in shape preference. For example, terracotta whorls, used for spinning thick woolens, are generally heavier, and the bicone/spheroid shape best centers and distributes that weight both vertically and horizontally. The disc shape of bone whorls maximizes the weight to diameter ratio, generating the most possible angular momentum for a slight weight. Spinners could spin very lightweight thread on a light bone whorl with maximum efficiency and speed.

<sup>76</sup> Crewe 2002, 21–22.

<sup>77</sup> Crewe 2002, 217–218.



Material of whorls from Tel Anafa, by strata.  
Figure 11.

Stone whorl **WT 16** is an unusual shape. It is roughly conical, with one wide and one narrow end, but instead of straight, evenly angled sides, it has a sharply concave profile, flaring out at the wider end. This whorl, one of the lightest of the stone whorls at only 4 g, must have been used to spin lightweight thread. It is paralleled by two whorls from the Harvard Excavations at Samaria.<sup>78</sup> **WT 42** also appears to be unique in the Tel Anafa assemblage, with three stepped levels shown in profile. A bone whorl found at Samaria has a similar shape.<sup>79</sup>

### MATERIAL

The spindle whorls from Tel Anafa occur in five materials: stone (41.3 percent), terracotta (35.3 percent), bone (20.0 percent), and glass (1.3 percent), in addition to the three metal whorls (2.0 percent) published by Merker.<sup>80</sup>

While stone whorls at Tel Anafa represent the plurality, they are not nearly as dominant in the assemblage as at Jebel Khalid, where they comprise 87 percent of whorls,<sup>81</sup> or at Masada.<sup>82</sup> Reasons for this discrepancy may reflect availability of material or personal preference of the Anafa spinners. Further identification of stone type was not able to be determined aside from the information provided on original inventory cards, which commonly describe whorls as steatite or soapstone, basalt, or by color. No precious or semi-precious stones appear to have been used for whorls. Steatite, or soapstone, is the most commonly identified material for whorls, with fourteen examples. This soft, metamorphic rock was regionally available and would have been relatively easy to shape but durable enough to withstand repeated use. None of the stone tools and only two stone seals (**BD 6** and **BD 7**, both dated to the Bronze Age) from Tel Anafa have been identified as steatite, indicating that the material was almost exclusively used for whorls at Anafa. Six whorls were manufactured from basalt, the most common material for other stone tools at Anafa.<sup>83</sup>

Stone whorls occur in roughly even ratios in all strata except Hellenistic, when terracotta is used in greater proportion (fig. 11). The use of terracotta whorls appears to have been strictly limited to the Hellenistic period, with a few

<sup>78</sup> Reisner 1924, fig. 216.3.9.

<sup>79</sup> Crowfoot 1957, fig. 92a.21.

<sup>80</sup> Merker TA II, ii, 231, **M 50**, **M 50a**, and **M 51**.

<sup>81</sup> Crewe 2002, 217. Crewe interprets another thirty-seven spherical and biconical terracotta objects as loom weights, noting that they are asymmetrically pierced and would not have functioned as whorls (p. 235).

<sup>82</sup> Stone whorls, numbering 384 objects, were published by Reich (2007). Bone and glass whorls also occur at Masada in unknown quantities (Sheffer and Granger-Taylor 1994, 227).

<sup>83</sup> Wells et al. TA II, ii, 300.

objects found in the transient ROM 1A period but none before or after. Significantly, terracotta whorls are also the largest and heaviest in the assemblage, indicating that longer staple materials or heavier thread was being spun in this period than in the later Roman occupation. Vegetal materials such as flax produce longer fibers than animal hair from sheep or goats and accordingly require heavier whorls to spin effectively. In his analysis of the faunal material from Tel Anafa, Redding suggested that sheep flocks were maximized for wool production in ROM 1A/B, but the high mortality rate of sheep from HELL 1/2A implies that sheep were raised more for food consumption than for wool production.<sup>84</sup> This analysis appears to be contrary to the data provided by the weaving tools, which offer greater evidence for textile production in the Hellenistic than Roman occupation. However, if the residents of Late Hellenistic Tel Anafa were spinning more plant fibers in the earlier period, as indicated by their use of heavier terracotta whorls, this discrepancy between faunal and weaving materials would be at least somewhat reconciled. It should be noted, however, that of the terracotta whorls that could be weighed, only one (**WT 73**) exceeds 60 g, the minimum weight for spinning flax.<sup>85</sup>

Terracotta whorls are also the most crudely made of the whorls found at Anafa. Like the loom weights, these basic objects are most likely to have been manufactured very near the site. The basic shape is biconical, with gradations toward more rounded spherical objects. The ubiquity of the bicone shape in terracotta suggests the practicality and stability of the form for manufacture and use; bicone is the natural shape malleable material assumes when rolled between palms of the hands.<sup>86</sup> Biconical terracotta whorls are found in varying quantities throughout the Levant, including at Bronze Age Megiddo, Iron Age and Persian Jerusalem, and Hellenistic Jebel Khalid and Samaria.<sup>87</sup> They are typically poorly fired, unevenly shaped, and pierced from one side with a sharp implement, often, it seems, unsuccessfully. At least three (**WT 71**, **WT 82**, and **WT 83**) of the eleven terracotta whorls from Tel Anafa that were available for analysis had perforations sufficiently off-center to impair the spinning process significantly. An extra perforation hole on **WT 74** and wide markings around one end of the perforation on **WT 83** indicate that the hole was punctured free-hand. If this quick operation resulted in a crooked or off-center perforation, the hole would be re-bored, widened, or otherwise fixed. Crewe argues that similar objects found at Jebel Khalid are more likely loom weights, as most are asymmetrically pierced.<sup>88</sup> Such objects of imperfect manufacture may have originally been intended to serve as whorls, but were adopted for weaving when they proved unusable as whorls; better-made pieces may even have been used as both whorls and weights. However, because such terracotta objects are more similar to stone whorls than ceramic loom weights in weight and size, and they provide evidence for whorls in the important weight range of 25–55 g necessary to produce heavier woolens, they are here analyzed primarily as whorls, not weights.

The third most common material for the Anafa whorls is bone, which occurs in higher percentages in the Early Bronze and Iron Age occupation of the site and in Roman contexts. With none of the weighed objects heavier than 6 g (see fig. 10), bone whorls are invariably the lightest in the assemblage, due in part to the low density of the material and in part to their narrow disc shape, which maximizes the diameter-to-weight ratio. Bone whorls occur in small quantities at Jebel Khalid, Samaria, and the City of David.<sup>89</sup> Davidson classifies several bone perforated discs with similar shape and decorative pattern from the Hellenistic period at Corinth as buttons, which would have been affixed to clothing items with a toggle,<sup>90</sup> and the possibility remains that the majority of lightweight bone whorls may have been used as buttons.

Additionally, the perforation diameters of the bone whorls closely mirror those of the bone spindles, further identifying them as whorls rather than buttons. Although none of the spindles are fully preserved, general observation of their size and shape indicates that most likely tapered from a maximum of about 1.0 cm to a minimum of 0.2 cm at the narrowest end. Of the recorded measurements of spindles,<sup>91</sup> most cluster around 0.7–0.8 cm (see

<sup>84</sup> Redding TA I, i, 287–288.

<sup>85</sup> Crewe 1998, 29.

<sup>86</sup> Thanks to Andrea Berlin for this insight.

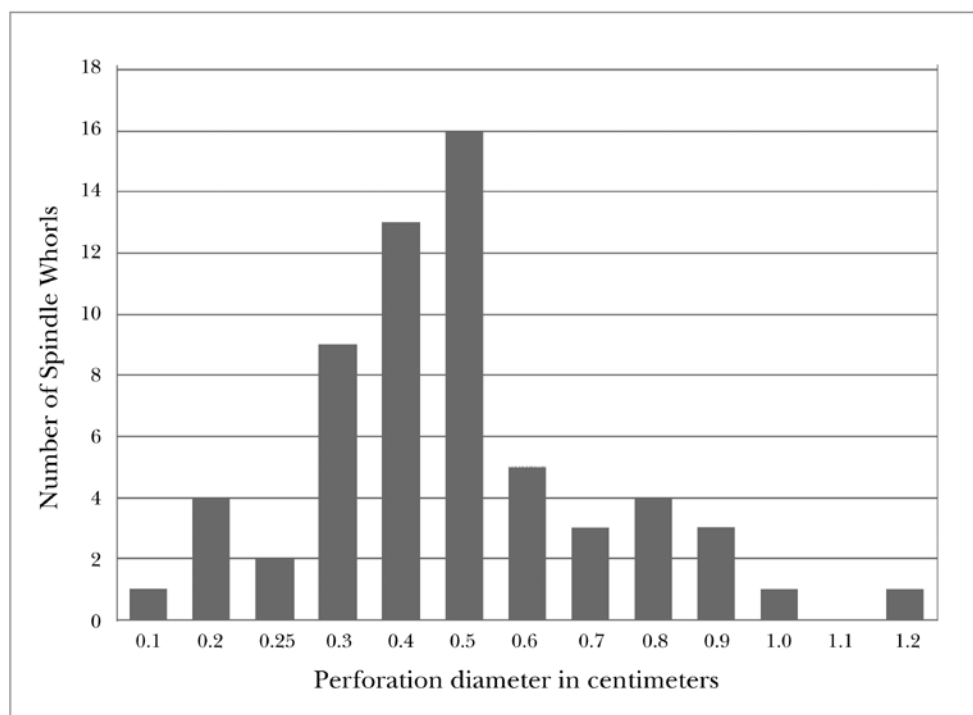
<sup>87</sup> Guy 1938, fig. 175.2,3; Shamir 1996, 149, fig. 21.18; Crewe 2002, JK SW.63, 64, fig. 7 inv. 91.550; Crowfoot 1957, fig. 92a.4.

<sup>88</sup> Crewe 2002, 235.

<sup>89</sup> Crewe 2002, JK SW.69; Crowfoot 1957, fig. 92a.18,19; Ariel 1990, BI 159–168. Ariel follows Davidson in identifying these objects as buttons.

<sup>90</sup> Davidson 1952, 297.2519–2521.

<sup>91</sup> Only three spindles were available for firsthand study and measurement. Generally only one diameter measurement was included in original inventory information, but it is unclear whether the measurement is of the widest or narrowest end of the tapered pieces. See below, “Bone Spindles,” for further discussion.



Size of whorl perforations.  
Figure 12

fig. 15). This maximum, minimum, and mode are similar to the data set that would be expected from the known perforation diameters of the Tel Anafa whorls, which range from 1.2 cm (**WT 125**) to 0.1 cm (**WT 126**), with the majority around 0.4–0.5 cm (fig. 12). The tapered shape of the spindle would have allowed the whorl to wedge tightly onto it, creating a more secure fit as well as lessening the difficulty in trying to exactly match perforation and diameter size. We identify the bone spindles found at the site as the high whorl type, the same way Merker identified the metal spindles; this is the form typical of Egyptian and Near Eastern tradition rather than Anatolian and European.<sup>92</sup>

One bone whorl found in a stratum dated to the first half of the first century CE, **WT 128**, preserves the fragment of a small metal pin stuck to the interior perforation. This find confirms that metal spindles were used in the Levant during the site's main occupation period. Merker identified one bronze spindle, **M 49**, among the metal finds and dated its use to the end of the second century BCE.<sup>93</sup> Reisner also thinks that metal spindles were used at Samaria, perhaps with the hook and spindle united into one solid piece.<sup>94</sup> This arrangement would have been more durable than the more generally assumed configuration of metal hook inserted into wooden spindle. A similar whorl from Jebel Khalid also shows traces of corroded metal in the interior of the perforation, suggesting use of a metal spindle.<sup>95</sup> Reich notes that metal spindles have not been found in southern Israel, even in the well-preserved spinning kits from the Judean caves. He suggests metal spindles may have been imported from Greece.<sup>96</sup> Use of a metal spindle then may be related to trade availability or simply preference of the residents of Tel Anafa and Jebel Khalid, and perhaps of Samaria, but not Judea.

A few bone objects catalogued here, particularly **WT 123** and **WT 124**, are especially unlikely to be whorls due to the diameter and finish of their perforations, which are much wider (relative to total diameter) than other whorls and more finely polished on the interior. A spindle large enough to fit these whorls would be so heavy that the minor

<sup>92</sup> Merker TA II, ii, 230, and further, below. On regional development of spinning traditions, Barber 1991, 53–67.

<sup>93</sup> Merker TA II, ii, 231. The metal type of the preserved pin in **WT 128** is unknown.

<sup>94</sup> Reisner et al. 1924, 341.

<sup>95</sup> Crewe 2002, 219, JK SW.59.

<sup>96</sup> Reich 2007, 192.

addition of whorl weight would not substantially affect the spindle's rotational inertia. The polish and wear in the interior perforation also points to alternative use, as a whorl would have been securely fitted into place on a spindle and therefore would not generate the friction necessary to create this pattern of wear. Several similar bone objects with uneven carving and wide perforations from fifth–second-century BCE Corinth and the City of David have been identified as buttons. Davidson suggests that they were specifically crafted for use on a chiton, a function also possible for similar objects from Tel Anafa.<sup>97</sup>

Two glass whorls complete the assemblage. Both are rod formed and relatively small. Glass whorls appear fairly regularly at Samaria<sup>98</sup> but have not been observed in publication of whorls from other Levantine sites.

Almost certainly, site residents also used whorls made of wood or other perishable materials that have not survived in the archaeological record. Potentially, this absence in the material record biases the interpretation of the spinning industry in favor of lighter and smaller bone and stone whorls. Crewe, noting that a vast majority of the whorls from Jebel Khalid are very small, speculates that larger wooden whorls may have been used to spin heavier material.<sup>99</sup> The only known wooden spindle whorls from the ancient Levant were found in excavations in the Dead Sea region and dated to the second century CE. These several pieces have diameters ranging from 1 to 4 cm, a size comparable to whorls in other materials found throughout the region.<sup>100</sup> A few wooden whorls weighing around 5 g were found at Roman-period Mo'a, in the 'Arava Valley.<sup>101</sup> While the differences in time and culture between Hellenistic and Roman Tel Anafa and the southern desert must limit comparison, composition of whorls and their utilitarian aspects are slow to change. Therefore, large wooden whorls seem unlikely to have composed a significant part of the Tel Anafa assemblage.

#### DECORATION

About 21 percent of the whorls found at Tel Anafa are decorated, roughly the same proportion as at Jebel Khalid.<sup>102</sup> This relatively small amount of decoration is appropriate to the Late Hellenistic and Early Roman eras, when whorls tend to be less ornate. Whorls from Bronze Age Cyprus and the fifth- and fourth-century BCE Pnyx at Athens are commonly decorated with incised geometric patterns and fine glaze, respectively.<sup>103</sup> Whorls from pre-Columbian Central and South America, Islamic-period Afghanistan, and contemporary Africa bear various decorative motifs, including incisions, stamps, and slips with animal, vegetal, and geometric themes.<sup>104</sup> By contrast, with the exception of a couple of bone objects, whorls found at the City of David and Masada contain little, if any, decoration.<sup>105</sup> Several, but far from all, whorls found at Samaria contain simple decorative elements similar to the decorated Jebel Khalid and Anafa objects, most frequently two to three concentric lines on stone whorls or dotted "eyes" on bone whorls.<sup>106</sup> Lack of decoration on Judean whorls may be associated with an iconoclast tradition in the lower levels of society in this period, but such an explanation does not extend to Tel Anafa, which had a stronger decorative tradition in material goods ranging from architectural stucco to small beads and pendants. The relative paucity and simplicity of decorated whorls may indicate their lack of economic or cultural value; like utilitarian pottery, they would have been considered unworthy of the time and energy necessary to add ornamentation. The decorated 20 percent could represent bridal or dowry gifts to women, more symbolically significant pieces that would have held a more prominent position in the woman's spinning trousseau.

<sup>97</sup> Davidson 1952, 296. nos. 2514–2518; Ariel 1990, BI 159–163.

<sup>98</sup> Crowfoot 1957, fig. 92a.15,17.

<sup>99</sup> Crewe 2002, 219.

<sup>100</sup> Aharoni 192, pl. 25c–d; Avigad 178–179, fig. 7.1–2. At least six wooden whorls were found at Masada, but their dimensions have not been published (Liphschitz 1998, 332, 338, 342).

<sup>101</sup> Shamir 2005, 109–110.

<sup>102</sup> Seventeen out of seventy-one whorls (23 percent) from Jebel Khalid are decorated (Crewe 2002, 219).

<sup>103</sup> Crewe 1998, 43–46; Davidson and Thompson 1943, 95.

<sup>104</sup> Liu 1978, 93–97.

<sup>105</sup> Decoration figures into neither Shamir's nor Reich's discussions or descriptions, suggesting it was not an important feature in whorls from these two sites. Shamir's figures show no decorated whorls (1996, figs. 21, 22). Stone whorls from Masada, the only type fully published to date, are not illustrated (Reich 2007).

<sup>106</sup> Reisner et al. 1924, figs. 216, 242; Crowfoot 1957, fig. 92a.



Stone whorls are the most commonly adorned, with twenty-six out of sixty-four pieces (41 percent) having some form of decoration, typically one or two incised lines encircling the center perforation, spaced at irregular distances along the sides of the whorl. The closest comparisons to these come from Samaria and Jebel Khalid.<sup>107</sup> Wooden whorls found in the southern desert at Mo'a have similar concentric incised motifs.<sup>108</sup> Stone whorl **WT 4**, from a modern topsoil layer, has several concentric grooved lines; it may postdate the Late Hellenistic/Early Roman occupation of the site. **WT 33** has several indistinct incision hatches on both sides. Single objects of similar description were also found at Jebel Khalid and at Masada. Crewe interprets the scratches as ornamentation on a pendant; Reich suggests they are use marks from insertion of the spindle into the whorl.<sup>109</sup>

Three bone whorls, **WT 118**, **WT 119**, and **WT 137**, are ornamented with more complex patterns of lines and circles with center dots. Whorls decorated with such eye spots have been found regularly but in small quantities at Jebel Khalid, Samaria, and Jerusalem.<sup>110</sup> Davidson considered similar objects from the Byzantine period to be buttons.<sup>111</sup> All three of the Tel Anafa bone whorls were found in modern topsoil strata and may be from later occupation of the site.<sup>112</sup>

**WT 147**, a glass whorl also from a modern topsoil context, has a series of feathered, light-colored trailed lines around the circumference. Parallels for its scalloped pattern, which was formed in identical fashion to feathered beads, are found in Late Hellenistic and Early Roman contexts at sites in Israel and Lebanon. Crowfoot attributes a similar whorl from Samaria to the Roman period; Spaer extends the horizon back into the Hellenistic period and posits a local manufacture.<sup>113</sup> Certainly, as evidenced by glass beads as well as glass vessels, the technology and fashion for feathered trail decoration existed in the Late Hellenistic eastern Mediterranean, and it is reasonable to postulate that this style would carry into even utilitarian objects such as whorls. Although the context of the Tel Anafa whorl is late, based on the distribution pattern of trailed and feathered glass beads at the site,<sup>114</sup> it may also belong to the HELL 2 (LHSB) occupation.

## CATALOGUE (WT 1–147)

In recognition of their importance as an assemblage rather than as individual objects, as well as for space considerations in publication, spindle whorls are increasingly catalogued in tables rather than as individual catalogue entries.<sup>115</sup> Whorls are particularly well suited to this format, being generally homogenous, and their important and characteristic features are well summarized by providing dimensions and a few select descriptive terms.

We have arranged the spindle whorls first by material, in order of prevalence, and then by shape when possible. These groupings almost certainly do not mirror original use patterns, which would have been dictated more by the weight and size of the whorl than by its composition.<sup>116</sup> In defense, material is a practical aspect that is readily identifiable in the field and, as noted above, shape and weight are correlated. Finally, we note that due to our inability to examine material firsthand and the fact that available photographic documentation generally showed the whorl only from above, we were not always able to determine the shape.

All measurements are in centimeters, and mass is in grams. Phase dates are those established by Herbert in TA I, i.<sup>117</sup> All whorls are intact and unmarked unless otherwise noted.

<sup>107</sup> Reisner et al. 1924, fig. 216.7,8; Crowfoot 1957, fig. 92a.11,12; Crewe 2002, JK SW.36–38, 57–59.

<sup>108</sup> Shamir 2005, 109–110.

<sup>109</sup> Crewe 2002, 228, JK SW.51; Reich 2007, 185.

<sup>110</sup> Reisner et al. 1924, fig. 242.7a; Crowfoot 1957, fig 92a.18,19; Crewe 2002, JK SW.23; Shamir 1996, fig. 22.19; Ariel 1990, BI 167–168.

<sup>111</sup> Davidson 1952, 301, nos. 2550–2570.

<sup>112</sup> Herbert TA I, i, 23.

<sup>113</sup> Crowfoot 1957, 399; Spaer 2001, 259–260.

<sup>114</sup> See Larson, "Personal Adornment," this volume, pp. 105–109.

<sup>115</sup> See Shamir 1996; Reich 2007.

<sup>116</sup> Ryder (1968, 81–82) first noted the importance of whorl weight for spinning thread, and this has been increasingly acknowledged in the last thirty or so years (Barber 1991, 52; Crewe 1998).

<sup>117</sup> Herbert TA I, i, 26.

Table 1: Spindle whorls

Cat no.	Inv no.	Loc. no.	Stratum	Material	Material description	Shape	Weight	Diameter	Height	Hole dm	Hole shape	Notes
WT 01	TA72 S60	2454	HELL. 2A/B	stone	dk gray	bicone		3.7	2.6(P)			
WT 02	TA81 S01	8335	HELL. 1/2A	stone	dk gray	bicone		3.9	3.7			
WT 03	TA69 S21	2330	HELL. 2B/C	stone	basalt	spherical, truncated (?)		5.1	3.4			
WT 04*	TA68 S29	3222A	HELL. 1/2A	stone	gray	conical	15	2.8	1.5	0.5		Two concentric incised lines at base; pl. 1
WT 05*	TA69 S01	2400	MODERN	stone	lt green	conical	6	2.6	0.9	0.3		Concentric incised grooved lines
WT 06	TA69 S06	2508	ROM 1B+	stone	greenish	conical		2.2	1			
WT 07	TA69 S11	2513A	ROM 1B	stone	dk	conical		2.7	1.1			Two-thirds preserved
WT 08	TA69 S18	2407	ARAB	stone	black	conical		2.7	0.7			Two concentric incised lines
WT 09	TA72 S15	2446	HELL. 2C	stone	gray	conical		2.8	1.4			
WT 10*	TA72 S20	21305	ARAB	stone	steatite	conical	6	2.1	0.9	0.5		Pl. 1
WT 11	TA81 S05	8339	HELL. 1/earlier	stone	dk gray	conical		1.6	0.9			One concentric incised line; pl. 1
WT 12	TA70 S74	2907	ROM 1B	stone	steatite	conical, rounded		3.1	0.8			Two concentric incised lines
WT 13*	TA69 S22	1242	HELL. 2A/B	stone		conical, truncated	15	2.8	1.9	0.9		
WT 14	TA73 S36	2014	HELL. 2C+	stone	steatite	conical, truncated		2.2	1.4			
WT 15	TA79 S03	5420	HELL. 1/2A	stone		conical, truncated		2.8	1.7	0.6		Several concentric incised lines; pl. 1
WT 16*	TA68 S28	3212	HELL. 2C+/ later	stone	gray	conical, concave sides	4	2.4	0.9	0.25		Pl. 1
WT 17*	TA68 S08	3211	HELL. 2C+/ later	stone	blue-gray	hemispherical	11	2.6	1.0	0.5		
WT 18*	TA68 S13	2014	HELL. 2C+	stone		hemispherical	13	2.5	1.4	0.6		
WT 19*	TA69 S02	2400	MODERN	stone	buff	hemispherical	51	4.0	2.4	0.7		Pl. 1
WT 20*	TA69 S59	2316	HELL. 2C+	stone		hemispherical	20	3.1	1.5	0.7		
WT 21*	TA70 S72	1339	HELL. 2B/C	stone	gray	hemispherical	16	2.6	1.5	0.4		Pl. 1
WT 22*	TA72 S39	2454	HELL. 2A/B	stone	steatite	hemispherical	16	3.1	1.3	0.5		Pl. 1
WT 23	TA73 S20	3.3	cleaning	stone	steatite	hemispherical		2.6	1.2			Three concentric incised lines
WT 24*	TA73 S27	2549	HELL. 2B/C	stone	steatite	hemispherical	15	2.7	1.7			Two concentric incised lines at base; pl. 1
WT 25	TA81 S03	21115	ROM 1A	stone	dk gray	hemispherical		3.2	1.5			
WT 26	TA81 S06	7936	HELL. 2C	stone	dk gray	hemispherical		1.2	1.1			One concentric incised line; pl. 1

Cat no.	Inv no.	Loc. no.	Stratum	Material	Material description	Shape	Weight	Diameter	Height	Hole dm	Hole shape	Notes
WT 27	TA72 S07	2928	HELL. 2B/C	stone	gray	hemispherical		2.1	1.2			One concentric incised line
WT 28*	TA70 S73	2526	HELL. 2C	stone	steatite	hemispherical, truncated	4	1.6	1.0	0.6		Pl. 1
WT 29*	TA72 S50	3523	HELL. 2A	stone	steatite	hemispherical, truncated	20	3.1	1.5	0.8		Two concentric incised lines at base
WT 30	TA72 S44	3350.1	LBII/Iron I contam.	stone	basalt	cylindrical		3.4	1.6			
WT 31*	TA68 S05	3006	ROM IC	stone		disc	12	3.0	0.7	0.5		Two concentric incised lines
WT 32*	TA69 S05	2407	ARAB	stone	greenish	disc	16	3.0	0.8	0.3		Two concentric incised lines
WT 33*	TA70 S64	3344	HELL. 2A	stone	blue-gray	disc	8	3.2	0.7	0.3		Irregular scratches, both sides; pl. 1
WT 34	TA72 S126	1280	HELL. 2A/B	stone	basalt	disc		11.2	5.5	0.25	biconical	One-half preserved; bored from both sides
WT 35*	TA73 S04	2465	HELL. 2A	stone	steatite	disc	10	3.1	0.8	0.3		Two concentric incised lines; pl. 1
WT 36*	TA73 S15	5200	MODERN	stone	dk purple-brown	disc	12	3.0	0.8	0.3		One concentric incised line
WT 37*	TA73 S34	5203		stone	steatite	disc	15	2.8	0.7	0.5		Two concentric incised lines
WT 38	TA79 S04	5408	ARAB 1	stone	steatite	disc		3.1	0.5	0.4		Two concentric incised lines; pl. 1
WT 39	TA79 S22	5421	ROM IA	stone		disc		3.5	1.0			One-half preserved
WT 40	TA79 S23	8207	ROM 2	stone	steatite	disc		3.1	0.8	0.5		Two concentric incised lines
WT 41	TA79 S24	8209	ROM 2	stone	steatite	disc		3.3	0.8	0.4		Two concentric incised lines
WT 42	TA80 S02	7405.1	ROM IC	stone		disc, stepped		3.2	0.8	0.4		Three steps in profile, appearing as two grooves from above; pl. 1
WT 43*	TA68 TC01	Inv. card missing?		stone	buff pink	disc		4.0	5.0	0.3	two	One-third preserved; probably not whorl; pl. 1
WT 44	TA72 S33	21311	ROM IA/B	stone	steatite	disc, conical		2.8	0.6			One concentric incised line
WT 45*	TA72 S34	3431	HELL. 2A/C	stone	soapstone	disc, conical	11	3.2	1.0	0.4		
WT 46*	TA69 S04	2407	ARAB	stone	gray	disc, hemispherical	9	2.9	0.7	0.4		Two concentric incised lines; base slightly concave
WT 47	TA72 S22	21305	ARAB	stone	gray-green	disc, rounded		3.1	0.9			One concentric incised line
WT 48*	TA69 S03	2407	ARAB	stone	gray	disc, slightly bicone	9	2.8	0.8	0.3		Pl. 1
WT 49	TA73 S82	21304	ARAB 1	stone	basalt			4.1	1.9			One-half preserved
WT 50	TA79 S02	5408	ARAB 1	stone								Pl. 1
WT 51	TA79 S18	2931	HELL. 1	stone				2.6	1.2	0.8		Two concentric incised lines
WT 52	TA79 S19	2929	HELL. 2A	stone				2.8	1.9	0.6		

Table 1: Spindle whorls (continued)

Cat no.	Inv no.	Loc. no.	Stratum	Material	Material description	Shape	Weight	Diameter	Height	Hole dm	Hole shape	Notes
WT 53	TA79 S20	2931	HELL 1	stone				2.2	1.2	0.6		
WT 54	TA79 S32	5316	ROM 1A contam.	stone	lt blue			2.4	1.2	0.7		Pl. 1
WT 55	TA79 S33	5318	HELL 2A	stone	soapstone			2.2	0.8	0.5		One concentric incised line
WT 56	TA79 S36	7634	HELL 1?	stone				2.6	1.7	0.5		
WT 57	TA79 S37	5 3	balk	stone	black			2.5	1.4	0.5		Pl. 1
WT 58	TA80 S04	7828	ROM 1B	stone	gray-green			2.1	0.9	0.5		Pl. 1
WT 59	TA80 S05	7917	ROM 1A	stone	basalt			2.1	1.1	0.4		One concentric incised line; pl. 1
WT 60	TA80 S06	7915	ROM 1B	stone	basalt			1.9	1.1	0.5		Pl. 1
WT 61	TA80 S08	7 9	balk	stone				2.5	1.6			
WT 62	TA86 S04	1603	ROM 1B	stone				3.2				Two concentric incised lines
WT 63	TA86 S05	9503	ROM 1A	stone				2.7				
WT 64	TA79 T11	2829	HELL 1A	terracotta	gray	conical		4.8	3.0			
WT 65	TA69 TC09	2417	ROM 1B+	terracotta		hemispherical		4.2(P)	3.3(P)			Two-thirds preserved
WT 66	TA80 T14	7923	HELL 2A	terracotta	lt orange-brown	hemispherical		3.7(P)	2.3			One-half preserved
WT 67	TA69 TC08	1245	HELL 2A/B	terracotta		bicone		4.6	2.8			
WT 68*	TA69 TC08	1245	HELL 2A/B	terracotta		bicone		4.6	2.8			
WT 69	TA69 TC09	2112	HELL 2C+	terracotta		bicone		3.0	2.6			One-half preserved
WT 70	TA69 TC09	2417	HELL 2C/2C+	terracotta		bicone		4.2	3.3(P)			
WT 71*	TA69 TC12	1251	HELL 1A	terracotta	brown	bicone	30	3.6	3.2	0.3	straight	Pl. 2
WT 72*	TA70 T10	1349	HELL 2B/C	terracotta	gray	bicone	36	4.0	3.4	0.3/0.4	angled, off center	
WT 73*	TA70 T12	3425.1		terracotta	gray	bicone	67	4.9	3.9	0.3/0.5	conical	
WT 74*	TA70 T13	2029	HELL 2A	terracotta	red, uneven firing	bicone	53	4.4	3.5	0.5/0.8	conical	Extra perforation hole, at angle to main; pl. 2
WT 75	TA70 T14	2029	HELL 2A	terracotta	black, red	bicone		3.4	2.8			
WT 76	TA70 T22	3421	HELL 2A contam.	terracotta	buff	bicone		5.3	3.0			
WT 77	TA70 T24	2029	HELL 2A	terracotta		bicone		3.3	2.8			
WT 78*	TA72 T10	5108	HELL 2C	terracotta		bicone	26	3.5	2.8	0.6/0.8	conical	Pl. 2
WT 79	TA72 T12	2341	HELL 2B/C	terracotta	red-buff	bicone		4.0	3.1			
WT 80	TA72 T13	2453	HELL 2A/B	terracotta	gray-buff	bicone		4.7	3.1			

Cat no.	Inv no.	Loc. no.	Stratum	Material	Material description	Shape	Weight	Diameter	Height	Hole dm	Hole shape	Notes
WT 81	TA72 T15	2453	HELL 2A/B	terracotta	dk gray-brown	bicone		4.9	4.1			
WT 82*	TA72 T18	1359	HELL 2B/C	terracotta	gray	bicone	48	4.4	3.3	0.3/0.4	angled, off center	
WT 83*	TA72 T20	5112	HELL 2C+/ROM 1A	terracotta	dk gray-brown	bicone	39	4.1	2.9	0.1/0.5	off center	marks of perforation process?; pl. 2
WT 84	TA72 T24	2356	HELL 2A	terracotta	gray	bicone		4.0	3.0			
WT 85*	TA72 T36	3352.1	HELL 1/earlier	terracotta	lt brown, dk gray	bicone	59	4.5	3.5	0.4/0.5	straight	
WT 86	TA72 T38	2453	HELL 2A/B	terracotta	gray-brown	bicone		3.9	3.3			
WT 87*	TA72 T40	3352.1	HELL 1/earlier	terracotta	dk gray-brown	bicone		3.7	3.9	0.5	straight	Pl. 2
WT 88	TA72 T41	2457	HELL 2B/C	terracotta	dk gray-brown	bicone		3.8	2.2			
WT 89	TA72 T43	2359	HELL 2B/C	terracotta	gray-brown	bicone		3.9	3.4			
WT 90	TA72 T44	21204	HELL 1/earlier	terracotta	brown	bicone		4.2	3.7			
WT 91	TA72 T46	3524	HELL 2A	terracotta	gray-brown	bicone		3.9	2.9			
WT 92	TA72 T47	1287	HELL 2B/C	terracotta	dk gray-brown	bicone		3.8	3.1(P)			Two-thirds preserved
WT 93*	TA73 T10	2456	HELL 2A/earlier	terracotta	dk gray-brown	bicone	54	4.7	3.7	0.4	straight	Pl. 2
WT 94	TA73 T12	2388	HELL 1/2A	terracotta	brown	bicone		4.7	2.7			Pl. 2
WT 95	TA73 T18	2360	HELL 2B/C	terracotta	gray-brown	bicone	48	4.7	3.4			
WT 96*	TA73 T25	21321	ROM 1A	terracotta	dk gray-brown	bicone	40	4.1	2.8	0.4	angled	
WT 97	TA73 T29	12106	HELL 1B	terracotta	gray-brown	bicone		3.2	3.3			Pl. 2
WT 98	TA73 T32	1250	HELL 1A	terracotta	dk gray-brown	bicone		3.7	2.9			
WT 99	TA79 T16	5318	HELL 2A	terracotta	unbaked	bicone		3.2	2.0			
WT 100	TA80 T11	5557	HELL 2A	terracotta		bicone		5.7(P)	4.5(P)			
WT 101	TA80 T13	7920	HELL 2B/C	terracotta	lt brown	bicone		4.7	4.0		angled	
WT 102	TA80 T20	5426	ARAB 1	terracotta	dk gray-brown	bicone		3.5	2.9			
WT 103	TA81 T01	8302	HELL 2A- ROM 1C	terracotta		bicone		3.9	3.3			
WT 104	TA81 T02	8336	HELL 1	terracotta	dk gray-brown	bicone		4.1	3.2			

Table 1: Spindle whorls (continued)

Cat no.	Inv no.	Loc. no.	Stratum	Material	Material description	Shape	Weight	Diameter	Height	Hole dm	Hole shape	Notes
WT 105	TA81 T20	9132	HELL 1	terracotta	dk gray	bicone		5.7	4.4			
WT 106	TA81 T31	5879	HELL 2A	terracotta	brown	bicone		4.5	3.3			
WT 107	TA81 T24	9126	HELL 2A	terracotta	dk gray	spherical		3.4	3.3			
WT 108	TA81 T32	8333	HELL 2A	terracotta	gray-brown	spherical		3.0	2.7			
WT 109	TA73 T14	2470	HELL 2A/ earlier	terracotta	brown	spherical, flattened		6.4	5.2			
WT 110	TA70 T16	2540	HELL 2B/C	terracotta	unbaked	cylindrical		7.7	4.3		two	Probably not whorl
WT 111*	TA70 T29	21104		terracotta		disc, irregular		2.9	1.5	0.4	two	Rough clay around one end of each hole; probably not whorl; pl. 2
WT 112	TA70 T30	1274	HELL 2B/C	terracotta								One-third preserved
WT 113	TA79 T07	53	balk	terracotta	dk brown			4.2(P)	3.4(P)			
WT 114	TA79 T08	5320	HELL 1	terracotta	pale brown			3.8	2.6			
WT 115	TA79 T15	5320	HELL 1	terracotta	unbaked			3.0	1.8			
WT 116*	TA68 B11	2112	HELL 2C+	bone		conical	2	2.0		0.2		Uneven edge; pl. 2
WT 117	TA73 B17	21412	Iron	bone		conical		2.5	0.75			Pl. 2
WT 118	TA80 B15	7200	MODERN	bone		conical		2.7	1.0			Incised triangles, raised circles with central dots; pl. 2
WT 119*	TA68 B03	2104	ARAB/MOD- ERN	bone		hemispherical	4	2.5		0.3		Incised spokes, patterned with incised circles and dots; pl. 2
WT 120*	TA69 B16	2711	HELL 2C	bone		hemispherical	6	2.8	0.9	0.4	conical	Pl. 2
WT 121	TA70 B07	27	—	bone		hemispherical		2.1	0.75			Pl. 2
WT 122*	TA70 B08	2018	HELL 2A-C	bone		hemispherical	2	2.35	0.65	0.2		Pl. 2
WT 123*	TA80 B06	7834	HELL 2A-B	bone		hemispherical		2.3	0.8	0.9		Pl. 2
WT 124*	TA69 B06	3319	ROM 1A con- tam.	bone		disc	3	2.4	0.5	0.9		Probably not whorl; pl. 2
WT 125	TA70 B27	2526	HELL 2C	bone		disc		2.45	0.4	1.2		Pl. 2
WT 126*	TA73 B01	2456	HELL 2A/ earlier	bone		disc	4	2.7	0.6	0.1		Hole off-center; probably not whorl; pl. 2
WT 127	TA80 B01	—	contam.	bone		disc		2.5	0.5			Pl. 2
WT 128	TA81 B03	9104	ROM 1A/C	bone		disc, convex		2.5	0.8			One-half preserved; preserved metal pin in perforation; pl. 2
WT 129*	TA70 B26	21103	ROM 1A con- tam.	bone		disc, hemi- spherical	3	2.45	0.5	0.2		Pl. 3
WT 130*	TA72 B20	3352.1	HELL 1/earlier	bone		disc, hemi- spherical	3	2.6	0.7	0.2		Pl. 3

Cat no.	Inv no.	Loc. no.	Stratum	Material	Material description	Shape	Weight	Diameter	Height	Hole dm	Hole shape	Notes
WT 131	TA73 B02	21313	ROM 1A	bone		disc?		3.3				
WT 132	TA73 B11	21417	EB/MB contemporary.	bone		disc?, ovoid		1.7				Pl. 3
WT 133	TA69 B08	2409	ROM 1B+	bone				2.7	0.5	~0.1		Pl. 3
WT 134	TA72 B21	3350	LBII/IRON 1	bone				4.3	1.4			
WT 135	TA73 B03	1416	MODERN	bone				2.5				One-half preserved; pl. 3
WT 136	TA73 B05	1420	ARAB/MOD-ERN	bone				2.4	0.4			Pl. 3
WT 137	TA73 B08	5201	ARAB/MOD-ERN	bone				2.1	0.75			Nineteen incised circles with center dot, three incised lines; pl. 3
WT 138	TA73 B12	1423	ROM 1	bone				2.2				Pl. 3
WT 139	TA73 B14	2562	HELL 1/2A	bone				4.3?	0.7			Pl. 3
WT 140	TA73 B16	3509	—	bone				4.0	1.8			Pl. 3
WT 141	TA79 B19	7315	ROM 2A+	bone				2.0	0.4			One-half preserved; pl. 3
WT 142	TA79 B22	7315	ROM 2A+	bone				3.4	0.5			Raised lines one side, incised lines on other
WT 143	TA80 B12	5623	ROM 1A+	bone				2.3	0.7			One-half preserved
WT 144	TA80 B14	5712	ROM 1A?	bone				1.7	0.3			One-half preserved; pl. 3
WT 145	TA86 B02	1614	ROM 1C/later	bone				2.9				
WT 146	TA72 G20	2347	HELL 2A or B	glass	lt aqua blue	conical		1.9	1.2(P)			One-third preserved
WT 147	TA73 G36	5100	MODERN	glass	black with white	conical		2.4	1.3			Feathered trail lines; pl. 3

\*Objects housed in the University of Missouri Collections, observed and documented by the authors.

### III. LOOM WEIGHTS

#### OVERVIEW<sup>118</sup>

In excavations at Tel Anafa 157 ceramic loom weights (**WT 148–304**) were identified. All are poorly fired or unfired and made from coarse clay with few inclusions, ranging in color from gray to brown to orange. The most dominant shape is pyramidal, with 119 (75.7 percent) examples, followed by conical with 22 (14.0 percent) and doughnut with 6 (3.8 percent). Ten objects identified here as loom weights are too fragmentary to determine their original shape. Four stone weights (**S 109, S 113–115**) may also have been used on looms.<sup>119</sup> We were able to examine firsthand the ten loom weights (**WT 203, WT 208, WT 211, WT 213, WT 216, WT 233, WT 262, WT 269, WT 295, and WT 302**) that are housed at the University of Missouri Museum of Art and Archaeology. Information regarding the remaining weights was extracted from excavation inventory cards and photographs.

After thread is spun, it is woven by interlacing threads on a loom. Prior to the invention of the two-beam vertical loom in the late first century CE,<sup>120</sup> the vast majority of weaving in the ancient Mediterranean world took place on a warp-weighted loom, so named because the vertical warp threads were tied to objects that weighted them down. As looms themselves were primarily made of wood, which is seldom preserved, loom weights are a critical archaeological relic for evidence of weaving.<sup>121</sup> Weights of assorted shapes, sizes, and materials were tied to clusters of threads that hung from the top bar, called a heading band. These warp threads are often thicker and coarser than the horizontal weft threads, which are interlaced perpendicular to the warp in an over-under pattern. Additional features of the loom itself that facilitated the weaving of complex and large textiles are the heddle, a bar used to lift selected warp threads and thus allow the weaver to easily pass the weft under and over multiple threads simultaneously, and the roller beam, a support at the top used to wind up finished cloth, thus keeping the area to be woven at comfortable eye level.<sup>122</sup> It is likely that weavers at Tel Anafa used simple warp-weighted looms with both of these features.

The earliest known loom weights come from Early Neolithic Swiss lake dwellings, but in Anatolia, Syria, and Palestine loom weights do not appear in the archaeological record until the Middle Bronze Age.<sup>123</sup> In cities with long occupation histories, such as Jerusalem, Corinth, and Athens, loom weights are abundant in the first millennium BCE but disappear in strata dated later than the first century CE, likely due to the invention of the two-beam vertical loom.<sup>124</sup> Loom weights have also been found and published from several other Hellenistic and Early Roman sites throughout the eastern Mediterranean, including Olynthus, Jebel Khalid, Samaria, and Masada. Valuable ethnographic evidence on warp-weighted weaving comes from the Lappish peoples of Scandinavia, where the warp-weighted loom is still in common use.<sup>125</sup>

#### SHAPE TYPOLOGY

The most prevalent shape of loom weight found at Anafa is pyramidal, with 119 examples, or 75.7 percent of the total number. This shape is defined by a square or rectangular base, with four flattened sides and a flattened top. The sides are often of unequal angle and size, resulting in a lopsided appearance. Usually a single perforation is centrally located in the top third of the weight, although weights with two suspension holes also exist (**WT 250, WT 259**). Multiple perforations may have narrowed the distortion of the angle of the hanging warp threads, thereby allowing more threads to be attached to the weight.

<sup>118</sup> This section on Loom Weights was written by Katherine A. Larson.

<sup>119</sup> Wells et al. TA II, ii, 328–330.

<sup>120</sup> Barber 1991, 116; Davidson 1952, 147; Wild 2002, 11.

<sup>121</sup> One Levantine example of a wooden, partially burned, warp-weighted loom was found at Masada (Netzer 1991, 564–565).

<sup>122</sup> On the history and elements of the warp-weighted loom, see Barber 1991, 91–113.

<sup>123</sup> Roth 1913, 36; Barber 1991, 124. For a summary of MB II–Iron Age weights found in Anatolia and the Levant, see Shamir 1996, 139–141.

<sup>124</sup> Shamir 1996, 148; Davidson and Thompson 1943, 71.

<sup>125</sup> See Hoffman 1974.



Pyramidal loom weights occur most commonly in Hellenistic and Roman loci; no weights of this shape occur in contexts earlier than HELL 1. All of the loom weights found in the two HELL 1 *in situ* groups, **WT 152–166** and **WT 169–175**, were pyramidal, indicating that shape's popularity in this period and also demonstrating that weights of the same shape were used on one loom.

Tel Anafa has the popularity of pyramidal loom weights in common with other sites in the southern Levant. At Samaria, excavators note forty-six fired pyramidal loom weights from Hellenistic and Roman deposits, although they do not describe the total corpus.<sup>126</sup> Fifteen of the forty-three fired loom weights from the City of David are pyramidal. Shamir attributes all to the Hellenistic and Early Roman phases of occupation based on parallels and comparanda and identifies other fired and unfired shapes as earlier.<sup>127</sup> Pyramidal loom weights are the most common type at Masada, where they comprise 50 percent of the total studied.<sup>128</sup>

The pyramidal shape is less dominant elsewhere. At Hellenistic Jebel Khalid, pyramidal loom weights comprise only about 2 percent of the total number (ten out of 387 weights).<sup>129</sup> Davidson identified no pyramidal loom weights among the Hellenistic material from Corinth, although they did occur infrequently prior to the third century BCE and afterward, in the first century CE.<sup>130</sup> Pyramidal loom weights were found in some quantity at Olynthus,<sup>131</sup> but the destruction of the town in 348 BCE means we lack information about the continuation of the shape into the Hellenistic period there.

The Tel Anafa corpus also includes conical loom weights, which comprise 14.0 percent of the total assemblage. The conical weights have a circular or ovoid base and a rounded body, tapering to a domed top, and are roughly the same dimensions as pyramidal ones. Several of the conical weights, such as **WT 198**, have convex bottoms that prohibit them from resting properly on a flat surface, thus verifying their use as suspended weights. Four examples (**WT 271**, **WT 278**, **WT 280**, and **WT 286**) have a flared, bell-like bottom, an attribute that Davidson employed to develop a typological sequence for the loom weights from Corinth;<sup>132</sup> however, our sample size is too small to attempt a similar sequencing. Like pyramidal weights, conical weights possess a single perforation hole centrally pierced in the top third of the weight. Nineteen of the twenty-two conical weights come from loci dated to the HELL 1 and HELL 2 phases of occupation.

Six doughnut-shaped loom weights (3.8 percent) were also found. As the name implies, this shape is circular, with a central hole and a diameter greater than its height. The single pre-Hellenistic loom weight from the site, **WT 289**, from an MB I locus, belongs to this category. Crudely made doughnut-shaped loom weights are common at Bronze–Iron Age Levantine sites, including the City of David, where 59.2 percent of IRON II weights belong to this shape class.<sup>133</sup>

### EVIDENCE FOR TEXTILE PRODUCTION

Unlike spindle whorls, whose weights are closely linked with the type of thread to be spun, loom weights have proven difficult to correlate with size or heft of fabric. First of all, the number of weights used on a loom and the number of threads attached to an individual weight are highly variable. In her analysis of loom weights found in sets or in a line from collapsed looms, Barber estimates six to thirty or more weights per loom.<sup>134</sup> At Olynthus, most *in situ* groups range between ten and twenty-five weights per loom, but one line of forty-three weights almost certainly belonging to a single loom was found in Villa CC.<sup>135</sup> The two HELL 1 groups found at Tel Anafa comprised fifteen (**WT 152–166**) and seven (**WT 169–175**) weights, with no certainty that these represent full sets used on single looms.<sup>136</sup> Depictions on sixth- and

<sup>126</sup> Crowfoot et al. 1957, 399.

<sup>127</sup> Shamir 1996, 146–148.

<sup>128</sup> Shamir 1994, 265–266.

<sup>129</sup> Crewe 2002, 235–237. Crewe hypothesizes that pyramidal loom weights are overrepresented in the literature compared to the less aesthetically pleasing and poorly preserved spherical weights, but a comparison of the finds from Jebel Khalid and Tel Anafa, where all identifiable loom weights were analyzed and published, clearly shows the residents of these two sites had different traditions and/or preferences.

<sup>130</sup> Davidson 1952, 162, nos. 1192–1204.

<sup>131</sup> Wilson 1930, 120.

<sup>132</sup> Davidson 1952, 148–152, fig. 23.

<sup>133</sup> Shamir 1996, 136. Sheffer verified the viability of these objects as loom weights by successfully weaving with replicas of the weights found at Tel Beer-Sheba (Sheffer 1981). Alternatively, at several Levantine sites from the first millennium BCE, doughnut-shaped terracotta objects have been identified as fermentation stoppers in storage jars rather than loom weights; see Gal 1989.

<sup>134</sup> Barber 1991, 387.

<sup>135</sup> Cahill 2002, 171–174, fig. 39.

<sup>136</sup> An additional cluster of 4 loom weights (**WT 148–151**) was found adjacent to the set of 15, suggesting a larger loom of nearly 20 weights.

fifth-century BCE Attic vases are similarly vague; representations of warp-weighted looms show anywhere from ten to fifty weights per loom.<sup>137</sup> Any estimate of number of looms in use at Tel Anafa based on number of weights, therefore, could be off by a factor of up to five. One probable reason for the wide variability is the width of the fabric woven, since fewer weights would be needed for a narrower cloth. When weaving a wide item such as a blanket, a “full” set of loom weights may have been required, but if working on a narrower garment, the weaver could have left some weights in storage.

Secondly, the mass of loom weights is not as closely related to the heft of the weave as is the weight of a spindle whorl to the thickness of the thread. Shamir conducted experiments based on the range of weights from the City of David assemblage and found that only a difference of more than 200 g among weights would cause distortion in the textile and that variability among weights could be partially equalized by attaching more warp threads to heavier weights, thereby redistributing the mass of the weight.<sup>138</sup> This conclusion is contradicted by more recent experiments by Mårtensson, Nosch, and Andersson Strand, who argue that weight has an impact on the ease of the weaving process as well as the evenness of the textile.<sup>139</sup> However, they base the effect of weight on tension per warp thread instead of the total mass of the loom weight (i.e., ten threads on a 200 g weight produces a tension per thread of 20 g, while twenty threads on the same loom weight only have a 10 g tension per thread). Since the tension per thread is easily corrected for by using loom weights of different masses, they do not fully counter Shamir’s argument. It appears, therefore, that despite the varied mass of the intact weights found at Tel Anafa, from 112 g (**WT 269**) to 300 g (**WT 244**), they could have been used together on the same loom with little effect on the quality of the textile.<sup>140</sup> Nonetheless, heavier weights are better suited for heavier and denser fabrics, while lighter weights make finer and looser weaves. The masses of the loom weights from Tel Anafa do not trend toward either of these extremes; at about 100–200 g, they could easily have been used to produce mid-weight woolens.

The known masses of the Tel Anafa weights are wholly typical of the Hellenistic period. Hellenistic loom weights from the City of David are primarily between 100 and 200 g; those from Samaria, 56 to 226 g; pyramidal weights at Jebel Khalid, 60 to 223 g.<sup>141</sup> Unlike the Iron Age weights from the City of David, which have a high degree of variability in weight, from 22.8 to 805 g, the homogeneity of weights from the later period indicates a greater standardization of weaving. Shamir has noted that Iron Age loom weights typically weigh between 300 and 500 g, while the loom weights from Roman Masada average  $159.3 \pm 48.8$  g; he sensibly suggests that in the Roman period more delicate textiles produced from finer threads were being woven.<sup>142</sup> The weight class of 100–200 g must have been optimal for producing the desired heft of the completed fabric in the first centuries BCE/CE, based on the ubiquity of weights from this period, Tel Anafa included.

Weavers at Tel Anafa would almost certainly have used some sort of intermediary material to attach the vertical warp threads to the suspended loom weights. As observed by Shamir, the typical perforation size of 0.3–0.8 cm is too small for a group of warp threads,<sup>143</sup> necessitating the use of fiber strings or metal or wooden rods to which warp threads would have been tied. In the desert environment of Masada, loops of linen, goat hair, and date-palm fibers were found preserved in the loom weights.<sup>144</sup> A few unfired loom weights from Jebel Khalid show evidence of similar use, based on the string wear perpendicular to the perforation, indicating the weights were hung vertically from a single cord.<sup>145</sup> In mainland Greece, rods seem to have been the preferred method of suspension: a common loom weight stamp from Corinth depicts a conical loom weight with a straight rod through the perforation, and two loom weights found at Nemea preserve such wooden dowels.<sup>146</sup> Finally, a weight of unknown provenance, now in the British Museum, has a metal loop in the perforation.<sup>147</sup> Fiber and wood are rarely preserved archaeologically, and small

<sup>137</sup> See Barber 2002, 242–243, for discussion.

<sup>138</sup> Shamir 1996, 143–144.

<sup>139</sup> Mårtensson, Nosch, and Andersson Strand 2009, 382.

<sup>140</sup> Only 23 loom weights from Tel Anafa have a recorded mass, a small percentage of the 157 weights found. **WT 262**, at 68 g, and **WT 162**, at 100 g, are both chipped, so their original weight is unknown. **WT 295**, discussed below, weighs only 15 g but would not have been used on the warp-weighted loom.

<sup>141</sup> Shamir 1996, 151; Crowfoot 1957, 399–400; Crewe 2002, 235. Crewe interprets thirty-seven spherical and biconical, centrally pierced ceramic objects, weighing between 39 and 147 g, as loom weights. We have included such objects from Tel Anafa among the spindle whorls, as they bear more similarity in shape and weight to whorls than to loom weights. This does not, however, rule out their potential use as loom weights. See discussion above.

<sup>142</sup> Shamir 1994, 270–271. This average weight excludes the six objects found that weigh over 300 g; their inclusion brings the average weight up to  $180.7 \pm 90$  g.

<sup>143</sup> Shamir 1996, 147.

<sup>144</sup> Shamir 1994, 271–272.

<sup>145</sup> Crewe 2002, 237, inv. 89.687, inv. 90.357, inv. 87.235.

<sup>146</sup> Davidson 1952, fig. 25.1145, fig. 27.1153, 1163–1165; McLaughlin 1981, 79.

<sup>147</sup> Davidson and Thompson 1943, fig. 29.

metal rings, when found, are difficult to correlate with this function. Based on apparent regional preference and likely cost, the weavers at Tel Anafa probably used string, or perhaps wood, to attach their loom weights to the warp threads. Such a system would have alleviated strain on the friable clay and helped distribute the warp threads and prevent them from bunching as tightly near the bottom.

### LOOM WEIGHT MANUFACTURE

Ceramic loom weights are most often manufactured by hand or in a mold. The sharp edges and flat sides of pyramidal weights indicate they were likely produced in a mold or open form, perhaps by a similar technique to that used in mudbrick manufacture.<sup>148</sup> Such a mold could be easily put together with wooden boards and reused, ensuring some degree of size and shape standardization in production of a set. Replacement of the molds over time coupled with hurried production would account for size variability at a site, as individual weights broke, were lost, or otherwise had to be replaced. The conical weights, however, are rather crudely and irregularly shaped and appear to have been formed by hand, similar to terracotta spindle whorls.

Hand- and mold-made weights manufactured from local clays occur at Jebel Khalid, Jerusalem, and Masada, suggesting that small-scale local production of loom weights, perhaps even within the home, is typical of the Hellenistic Levant.<sup>149</sup> This is strikingly different from Classical and Hellenistic Corinthian and Athenian assemblages, which contain well-fired, mass-produced loom weights. Davidson claims that the Corinthian weights were manufactured in the Potters' Quarter and at roof tile factories, as "secondary products in establishments intended chiefly for making other merchandise."<sup>150</sup> Perhaps the flourishing ceramic industries in Corinth and Athens, and possibly the higher status accorded to woven goods and the tools used in their production, facilitated more industrialized production.

Three pyramidal weights found at Tel Anafa have small, partially drilled holes scattered about the weight. **WT 186** has four half-drilled holes; **WT 201**, two small holes near the suspension hole; and **WT 187**, a single partially drilled hole near the bottom. This modification also occurs in pyramidal weights from the Pnyx and in Hellenistic weights from the City of David. Shamir follows Davidson and Thompson in thinking these holes were used to help prevent cracking of the weight during firing.<sup>151</sup> However, as such a small number of weights possess the trait, this alteration must not always have been necessary, leaving the question of why it occurs when it does. The three examples from Anafa are no smaller or larger than other weights, nor do they all come from one particular phase. The sample size is too small to hazard any valid hypotheses.

Several weights have finger depressions, typically on the top of the weight, which are perhaps remnants of the manufacturing process. **WT 174**, **WT 193**, **WT 194**, **WT 213**, **WT 214**, **WT 222**, **WT 232**, **WT 240**, **WT 245**, and **WT 254**, all pyramidal weights, have such depressions on their narrow square tops.<sup>152</sup> **WT 249**, also a pyramidal weight, and **WT 298**, a fragmentary weight of unknown shape, bear fingerprints on their faces. **WT 285** is the only conical weight with a finger mark. Alternatively, fingerprint impressions may have served to identify the weights belonging to a particular weaver, although based on the rarity of these marks, such branding would have been relatively uncommon.

### CONTEXT AND USE

Due to the site's multiple building phases and the regular redeposition of fill, most loom weights were found removed from their primary use contexts, either individually or in small groups of two to four. Only two clusters, both dating to the HELL 1 phase (332–125 BCE), might suggest specific locations of textile production. Fifteen pyramidal weights from Room 3 (locus 2817) (**WT 152–166**) were piled on an earthen floor in a corner, adjacent to a kitchen courtyard containing three brick ovens (Room 1/2). This spot would have allowed women to oversee work in the

<sup>148</sup> See Oates 1990, 388–391. The technique of forming bricks in an open mold dates to at least the fifth millennium BCE in Mesopotamia and would have been basic technology known to and easily employed by the Tel Anafa occupants.

<sup>149</sup> Crewe 2002, 235; Shamir 1996, 136; 1994, 270.

<sup>150</sup> Davidson 1952, 146; see also Davidson and Thompson 1943, 71–72.

<sup>151</sup> Shamir 1996, 147–148; Davidson and Thompson 1943, 72.

<sup>152</sup> Of the loom weights with markings recorded in the inventory information, only **WT 203** and **WT 213** were personally examined in preparation of this chapter. Other markings may be finger or ring impressions.

kitchen while weaving. The second cluster, seven pyramidal weights (**WT 169–175**) from Room 6 (locus 9132), came from inside a large tanur containing miscellaneous ash and Early Hellenistic coarse ware ceramics, two fragments of bone pick-up sticks (**WT 347, 358**), and a terracotta spindle whorl (**WT 102**). It is important to note, however, that both groups were found in clusters instead of in a line as if set up on a destroyed loom, and thus were in storage between uses. Crewe suggests that upon site abandonment at Jebel Khalid, looms were dismantled and taken along with other household goods, but unfired loom weights were discarded because they were inexpensive and easy to replace but bulky and heavy to transport.<sup>153</sup> A similar situation seems likely for the abandonment of the HELL 1 occupation phase at Tel Anafa.

Also of note is that both weight clusters contained a single shape, pyramidal. At Jebel Khalid, no more than two pyramidal weights were ever found together in a single group of weights, leading Crewe to suggest that pyramidal weights were used only for the selvage threads at the ends of the loom.<sup>154</sup> While this may have been the case at Jebel Khalid, the HELL 1 period weavers at Tel Anafa apparently used pyramidal weights across the entire garment.

At least three weights have impressions on their tops, apparently made from signet rings during the manufacturing process. The best preserved is **WT 220**, which shows a woman's head in profile facing to the right within an oval frame. **WT 179** also bears an oval-shaped impression, and the stamp on **WT 203** was made with an eye-shaped ring, but the figures on both are too poorly preserved to identify. All three come from the LHSB HELL 2 phase of occupation (125–75 BCE). They may indicate a set or possession by an individual, as suggested by Davidson and Thompson.<sup>155</sup> Illegible seal or ring impressions are recorded on twenty-three loom weights from the Harvard Excavations at Samaria, although none are published in the later publication of the Joint Expedition.<sup>156</sup>

**WT 295** is a tombstone-shaped object with a relatively wide perforation hole, made from a fine gray clay. It is 3.9 cm tall and 3.6 cm wide but only weighs 15 g. We know of no ancient comparanda, but members of the Weaver's Guild of Minnesota suggested that it is a band weight, used to weave narrow strips of cloth such as belts or, more likely, the finished edge used at the top of warp-weighted looms to anchor the warp threads. The weft of this starting border became the warp of the loom. A potential representation of such a device occurs on a *tintinnabulum* from Bolonga from about 600 BCE. The bell-shaped bronze object contains four sequential scenes of the textile production process in *repoussé* relief. The third scene shows two women partially obscured behind a vertical support working on a project, with a horizontally stretched line of threads behind them. Barber, and Gleba after her, have interpreted this scene as the weaving of the starting border, with the horizontal threads as the future weft of the warp-weighted loom and the band hidden behind the vertical beam.<sup>157</sup> A weight such as **WT 295** could have been used to suspend the band vertically as it was woven, as a sort of small-scale warp-weighted loom. Starting borders could also have been woven with tablets,<sup>158</sup> although no evidence for such has been identified at Tel Anafa. **WT 295** is thus the only object representing this important stage of textile production found at the site and one of the few identified anywhere from the ancient world.

#### CATALOGUE (**WT 148–304**)

Like spindle whorls, loom weights are well suited to publication in tabular form, which allows documentation of their important features in an easy-to-reference format that requires minimal space. All loom weights found at Tel Anafa are included in table 2, organized by shape, phase, and locus. All measurements are in centimeters and grams, and all widths and diameters are from the widest part of the weight, generally the base. Different measurements were taken over the site's many excavation seasons, resulting in a disparity of available data. While mass is arguably the most important feature of loom weights in terms of functionality, we know this measurement for only 23 of the 157 weights published here. These include eleven weights from the set of fifteen (**WT 152–166**), **WT 244**, **WT 286**, and the ten weights that are housed at the University of Missouri; these weights are noted with an asterisk (\*). Unless otherwise specified, the weights are intact and unmarked.

<sup>153</sup> Crewe 2002, 239.

<sup>154</sup> Crewe 2002, 239.

<sup>155</sup> Davidson and Thompson 1943, 74.

<sup>156</sup> Reisner et al. 1924, 343; Crowfoot 1957, 399.

<sup>157</sup> Barber 1991, 116–118, fig. 3.32; Gleba 2008, 28–29, fig. 8.

<sup>158</sup> Barber 1991, 118–122; Gleba 2008, 123.

Table 2: Loom weights

Cat. no.	Inv. no.	Locus	Stratum	Type	Height	Width base	Width top	Diameter	Weight	Description
WT 148	TA86 T01	2614.1	HELL 1	pyramidal	3.1 (P)					Two fragments (bottom)
WT 149	TA86 T02	2614.1	HELL 1	pyramidal	3.9 (P)					Fragment
WT 150	TA86 T03	2614.1	HELL 1	pyramidal	3.5 (P)					Fragment (bottom)
WT 151	TA86 T04	2614.1	HELL 1	pyramidal	2.1 (P)					Fragment
WT 152	TA78 T03	2817	HELL 1	pyramidal	8.5	4.0 × 4.5	2.0 × 2.5		200	Pl. 3
WT 153	TA78 T04	2817	HELL 1	pyramidal	8.5	4.5 × 4.7	2.0 × 2.5		200	Pl. 3
WT 154	TA78 T05	2817	HELL 1	pyramidal	8.0	4.5 × 5.0	2.2 × 3.0		200	Pl. 3
WT 155	TA78 T06	2817	HELL 1	pyramidal	8.0	4.5 × 4.7	2.2 × 2.5		200	Pl. 3
WT 156	TA78 T07	2817	HELL 1	pyramidal	8.0	4.2 × 5	2.5		200	Pl. 3
WT 157	TA78 T08	2817	HELL 1	pyramidal	7.8	4.5 × 5	2.5 × 2.8		200	Pl. 3
WT 158	TA78 T09	2817	HELL 1	pyramidal	8.0	4.2	2.1 × 3.0		175	Pl. 3
WT 159	TA78 T10	2817	HELL 1	pyramidal	7.5	4.5 × 5	2.5		200	Pl. 3
WT 160	TA78 T11	2817	HELL 1	pyramidal	7.5	4.0 × 4.2	2.1 × 2.5		150	Pl. 3
WT 161	TA78 T12	2817	HELL 1	pyramidal	7.0	4.0 × 4.2	2.1 × 2.5		150	Pl. 3
WT 162	TA78 T13	2817	HELL 1	pyramidal	7.0	4.5	2.0 × 2.2		100	Chipped; pl. 4
WT 163	TA78 T14	2817	HELL 1	pyramidal	5.5 (P)	4.0 × 4.3				Three joining fragments; pl. 4
WT 164	TA78 T15	2817	HELL 1	pyramidal	5.5 (P)	4.0 × 4.5				Several joining fragments (bottom); pl. 4
WT 165	TA78 T16	2817	HELL 1	pyramidal	5.7 (P)		2.0 × 2.3			Two joining fragments (top); pl. 4
WT 166	TA78 T17	2817	HELL 1	pyramidal	5.7 (P)		2.0 × 2.3			Fragment (top); pl. 4
WT 167	TA79 T09	5320	HELL 1	pyramidal	7.0	4.7	2.0			
WT 168	TA79 T20	5320	HELL 1	pyramidal	2.9 (P)	4.0 × 2.9 (P)				
WT 169	TA81 T17	9132	HELL 1	pyramidal	4.5 (P)	4.2 × 4.1 (P)				Fragment (bottom)
WT 170	TA81 T18	9132	HELL 1	pyramidal	2.2 (P)	5.0 × 4.6 (P)				Fragment (bottom)
WT 171	TA81 T19	9132	HELL 1	pyramidal	2.9 (P)	4.3 × 3.9 (P)				Fragment (bottom)
WT 172	TA81 T21	9132	HELL 1	pyramidal	3.7 (P)	3.8 × 3.8 (P)				Fragment (top)
WT 173	TA81 T22	9132	HELL 1	pyramidal	4.8 (P)	4.2 × 4.0 (P)				Fragment
WT 174	TA81 T29	9132	HELL 1	pyramidal	7.8 (P)	6.8 × 6.5 (P)				Depression on top, large circular grooves on two sides at base; pl. 4
WT 175	TA81 T30	9132	HELL 1	pyramidal	4.4 (P)	4.4 × 4.1 (P)				
WT 176	TA79 T04	2932	HELL 1/2	pyramidal	6.0	4.4 (P)	1.9 (P)			Chipped
WT 177	TA72 T29	2561	HELL 1/2A	pyramidal	5.0 (P)	5.9 × 3.3				Fragment
WT 178	TA72 T30	2561	HELL 1/2A	pyramidal	6.5 (P)					Fragment

Table 2: Loom weights (continued)

Cat. no.	Inv. no.	Locus	Stratum	Type	Height	Width base	Width top	Diameter	Weight	Description
WT 179	TA72 T34	1247	HELL 1/2A/B	pyramidal	3.3 (P)					Fragment, oval seal impression on top
WT 180	TA70 T15	2029	HELL 2A	pyramidal	6.0 (P)					
WT 181	TA73 T03	2465	HELL 2A	pyramidal	7.1	4.3				Pl. 4
WT 182	TA72 T39	2554	HELL 2A	pyramidal	4.1 (P)	4.4 × 3.9				Fragment (bottom)
WT 183	TA72 T23	2560	HELL 2A	pyramidal	4.06 (P)	4.3 (P)				
WT 184	TA68 T12	3023	HELL 2A	pyramidal	5.5 (P)	3.9 (P)				Fragment (top)
WT 185	TA68 T13	3023	HELL 2A	pyramidal	5.8 (P)	5.0				Fragment (top missing)
WT 186	TA79 T13	5318	HELL 2A	pyramidal	4.9 (P)	2.7 × 3.0 (P)				Convex top, four small half-drilled holes
WT 187	TA79 T22	5318	HELL 2A	pyramidal	5.1 (P)	4.2 × 3.7 (P)				Partially drilled hole near bottom of front face
WT 188	TA80 T04	5419	HELL 2A	pyramidal	2.3 (P)	2.6 (P)	1.9 (P)			Fragment (top)
WT 189	TA80 T05	5557	HELL 2A	pyramidal	6.0 (P)	4.7 (P)	3.0 (P)			Several mended fragments
WT 190	TA80 T06	5557	HELL 2A	pyramidal	5.0 (P)	4.0 (P)	2.7 (P)			Fragment (bottom)
WT 191	TA80 T12	5557	HELL 2A	pyramidal	5.1 (P)					Three mended fragments (top)
WT 192	TA80 T23	5557	HELL 2A	pyramidal	6.3 (P)	3.6 (P)	1.8 (P)			Several fragments
WT 193	TA80 T15	5613	HELL 2A	pyramidal	6.4 (P)	3.7 (P)				Fragment (top), circular depression on top
WT 194	TA80 T16	5613.1	HELL 2A	pyramidal	6.7 (P)	4.3 (P)	2.0 (P)			Chipped, circular depression on top
WT 195	TA81 T13	7118	HELL 2A	pyramidal	7.9 (P)	5.1 × 5.1 (P)				Three mended fragments
WT 196	TA81 T23	7333	HELL 2A	pyramidal	5.2 (P)	3.9 × 3.2 (P)				Fragment
WT 197	TA81 T26	7451	HELL 2A	pyramidal	5.3 (P)	3.9 × 3.2 (P)				Portion of base missing
WT 198	TA81 T04	8333	HELL 2A	pyramidal	5.8	5.4				Convex base
WT 199	TA81 T06	8333	HELL 2A	pyramidal	5.8	5.2				Several mended fragments
WT 200	TA81 T12	9126	HELL 2A	pyramidal	5.3 (P)	5.5 × 3.9 (P)				Fragment
WT 201	TA81 T15	9126	HELL 2A	pyramidal	6.0 (P)	4.0 × 4.0 (P)				Two small holes on one side of suspension hole
WT 202	TA68 T17	3212a	HELL 2A	pyramidal	5.5 (P)	5.9				Fragment (bottom)
WT 203*	TA70 T05	3339.1	HELL 2A contam?	pyramidal	7.9	4.6			204	Eye-shaped ring impression at top; pl. 4
WT 204	TA69 T10	1245	HELL 2A/B	pyramidal	5.8					
WT 205	TA72 T22	1382	HELL 2A/B	pyramidal	3.0 (P)	3.2				Broken above suspension hole
WT 206	TA72 T25	1382	HELL 2A/B	pyramidal	2.8 (P)	2.7				

Table 2: Loom weights (continued)

Cat. no.	Inv. no.	Locus	Stratum	Type	Height	Width base	Width top	Diameter	Weight	Description
WT 207	TA72 T26	1382	HELL 2A/B	pyramidal	3.4 (P)	3.0				
WT 208*	TA72 T37	1387	HELL 2A/B	pyramidal	7.2	5.0 (P)			134	Fragment (missing one side of bsac)
WT 209	TA72 T50	2347A	HELL 2A/B	pyramidal	4.5 (P)	5.2				Broken above suspension hole
WT 210	TA72 T32	5117	HELL 2A-C	pyramidal	5.7	3.5 × 3.2				Pl. 4
WT 211*	TA73 T33	5119.1	HELL 2A-C	pyramidal	6.1	3.9			113	Pl. 4
WT 212	TA72 T28	2455	HELL 2A/earlier	pyramidal	8.2	4.5				
WT 213*	TA68 T08	3207	HELL 2A-C	pyramidal	8.0	5.0			211	Possible finger depression at top; pl. 4
WT 214	TA81 T27	7336	HELL 2B	pyramidal	6.6 (P)	4.1 × 4.1 (P)				Fragment (top), depression at top
WT 215	TA81 T28	7336	HELL 2B	pyramidal	3.7 (P)	5.2 × 5.0 (P)				Fragment (bottom)
WT 216*	TA72 T06	2328	HELL 2B/C	pyramidal	7.8	4.4			156	Pl. 4
WT 217	TA72 T33	2357	HELL 2B/C	pyramidal	6.1	5.3 × 4.7				Pl. 4
WT 218	TA70 T17	2432	HELL 2B/C	pyramidal	7.5	5.5				
WT 219	TA70 T18	2432	HELL 2B/C	pyramidal	8.5	6.0				
WT 220	TA72 T08	2550	HELL 2B/C	pyramidal	8.5	5.0 × 4.8				Ring stamped on top with possible female head; pl. 4
WT 221	TA68 T19	2310	HELL 2C	pyramidal	5.5 (P)					Fragment (top)
WT 222	TA69 T18	2316	HELL 2C	pyramidal	6.0 (P)					Fragment (top), depression at top
WT 223	TA72 T04	2444	HELL 2C	pyramidal	4.9 (P)	5.3 × 5.0				Fragment (bottom)
WT 224	TA68 T05	3015	HELL 2C	pyramidal	8.5	4.2				
WT 225	TA68 T06	3015	HELL 2C	pyramidal	3.7 (P)	5.0				Fragment (bottom)
WT 226	TA80 T08	8422	HELL 2C contam.	pyramidal	7.4	4.5 (P)	3.0 (P)			
WT 227	TA79 T23	7420	HELL 2C contam?	pyramidal	5.5 (P)	5.2 (P)				Fragment (bottom), concave base, two holes near base
WT 228	TA68 T03	2112	HELL 2C+	pyramidal	4.5 (P)	3.4 (P)				Fragment
WT 229	TA70 T20	2427	HELL 2C+ contam.	pyramidal	6.2	5.0				
WT 230	TA68 T16	3211	HELL 2C+/later	pyramidal	6.8	3.5				

Table 2: Loom weights (continued)

Cat. no.	Inv. no.	Locus	Stratum	Type	Height	Width base	Width top	Diameter	Weight	Description
WT 231	TA68 T14	3212	HELL 2C+/later	pyramidal	4.7 (P)	4.0				Broken above suspension hole
WT 232	TA70 T03	2417	HELL 2C or HELL 2C+/ROM 1A	pyramidal	7.5			5.5		Slight depression in top
WT 233*	TA70 T04	2417	HELL 2C or HELL 2C+/ROM 1A	pyramidal	7.4	4.6			215	Chipped; pl. 5
WT 234	TA70 T07	2417	HELL 2C or HELL 2C+/ROM 1A	pyramidal	8.4	5.0				Chipped
WT 235	TA70 T25	2417	HELL 2C or HELL 2C+/ROM 1A	pyramidal	3.6	2.9				Mended
WT 236	TA68 T04	2111	HELL 2C/ROM 1A	pyramidal	5.2	3.8				
WT 237	TA80 T19	5726	HELL 2C/ROM 1A	pyramidal	7.0 (P)	4.4 (P)				Chipped, convex top
WT 238	TA81 T16	8407	HELL 2A-ROM 1B	pyramidal	5.0 (P)	3.4 × 2.5 (P)				Fragment
WT 239	TA69 T22	1226	ROM 1	pyramidal	3.5 (P)					Fragment (top)
WT 240	TA73 T30	1428	ROM 1/later	pyramidal	6.8	4.7				Finger depression on top
WT 241	TA69 T11	2415	ROM 1A	pyramidal	6.2	4.0				Chipped
WT 242	TA70 T06	2433	ROM 1A	pyramidal	7.0	4.7				
WT 243	TA70 T19	2703	ROM 1A	pyramidal	8.7	3.7				
WT 244	TA78 T19	7215	ROM 1A	pyramidal	8.4	5.0			300	Pl. 5
WT 245	TA79 T12	7624	ROM 1A	pyramidal						Circular depression on top
WT 246	TA73 T15	21313	ROM 1A	pyramidal	6.0	5.5				
WT 247	TA73 T16	21313	ROM 1A	pyramidal	7.2	5.5				
WT 248	TA73 T23	21321	ROM 1A	pyramidal	6.7 (P)	5.7				
WT 249	TA80 T22	7446	ROM 1A/B	pyramidal	2.7 (P)	4.0 × 3.4 (P)				Fragment, finger impression on face
WT 250	TA68 T15	2309	ROM 1B	pyramidal	8.3	5.0				Two suspension holes
WT 251	TA69 T03	2409	ROM 1B+	pyramidal	8.4					
WT 252	TA69 T07	2409	ROM 1B+	pyramidal	6.5					
WT 253	TA69 T02	2410	ARAB	pyramidal	5.5 (P)	4.0				Top missing at suspension hole



Table 2: Loom weights (continued)

Cat. no.	Inv. no.	Locus	Stratum	Type	Height	Width base	Width top	Diameter	Weight	Description
WT 254	TA80 T03	8318	ARAB	pyramidal	7.8 (P)	5.4 (P)				Circular depression at top; pl. 5
WT 255	TA72 T05	21205	ARAB	pyramidal	6.5	4.6				Surface blackened from fire; pl. 5
WT 256	TA81 T07	9105	ARAB 2	pyramidal	7.7 (P)	5.3 × 5.4				
WT 257	TA79 T01	N/A	N/A	pyramidal	7.7 (P)	4.7 (P)				Pl. 5
WT 258	TA69 T23	2311	N/A	pyramidal	2.4 (P)					Fragment (top)
WT 259	TA69 T24	2311	N/A	pyramidal	2.0 (P)					Fragment (top), two suspension holes
WT 260	TA69 T25	2311	N/A	pyramidal	7.4					Three joining fragments
WT 261	TA70 T23	2430	N/A	pyramidal	4.8 (P)	5.4				Fragment (bottom)
WT 262*	TA70 T26	3354	N/A	pyramidal	6.3	3.6			68	
WT 263	TA68 T11	2013	MODERN	pyramidal	4.0	3.0				Broken above suspension hole
WT 264	TA69 T21	2307	MODERN	pyramidal	4.8 (P)	4.5				Three joining fragments
WT 265	TA79 T06	5.3	balk trim	pyramidal	0.5 (P)					Three fragments
WT 266	TA72 T03	3.3	cleaning	pyramidal	4.3 (P)	5.6 (P)				Fragment (top)
WT 267	TA73 T05	2367	HELL 1/earlier	conical	4.2 (P)			4.5		
WT 268	TA73 T04	2367	HELL 1/earlier	conical	5.9 (P)			4.2		
WT 269*	TA73 T06	2464	HELL 1	conical	5.2			4.7	112	Pl. 5
WT 270	TA79 T14	5320	HELL 1	conical	6.5 (P)			5.6 (P)		
WT 271	TA79 T21	5320	HELL 1	conical	6.3 (P)			5.7 (P)		Bell-shaped flare at base
WT 272	TA72 T21	5323	HELL 1	conical	5.0			5.3		Convex base, chipped
WT 273	TA81 T03	8336	HELL 1	conical	6.5			5.2		Convex base
WT 274	TA81 T05	8336	HELL 1	conical	7.6			6.3		Convex base, part of top broken
WT 275	TA79 T05	2932	HELL 1/2	conical	5.1			4.8 (P)		Fragment
WT 276	TA73 T26	2476	HELL 1/2A	conical	4.3 (P)			5.9		Fragment (bottom)
WT 277	TA72 T31	2561	HELL 1/2A	conical						Fragment (bottom)
WT 278	TA81 T09	7939	HELL 1/2A	conical	3.8 (P)			3.5		Bell-shaped flare at base, convex top and base
WT 279	TA73 T07	2377	HELL 1/2B	conical	4.1 (P)			4.6		Fragment (bottom)
WT 280	TA72 T35	1388	HELL 1A	conical	6.5			4.8		Bell-shaped flare at base
WT 281	TA72 T45	1388	HELL 1A	conical	4.4 (P)			4.1 (P)		Fragment (top)
WT 282	TA73 T22	12103	HELL 1B	conical	3.9 (P)			4.8		Fragment (bottom)

Table 2: Loom weights (continued)

Cat. no.	Inv. no.	Locus	Stratum	Type	Height	Width base	Width top	Diameter	Weight	Description
WT 283	TA72 T27	3523	HELL 2A	conical	5.6 (P)			7.5		Fragment (bottom)
WT 284	TA72 T14	2348	HELL 2A/B	conical	5.7			5.3		
WT 285	TA72 T49	2446	HELL 2C	conical	4.2 (P)					Fragment (top), finger impression on top
WT 286	TA78 T18	7120	ROM 1C+/2	conical	5.9			5.0	150	Bell-shaped flare at base, slip on surface; pl. 5
WT 287	TA72 T02	3500	MODERN	conical	4.5 (P)			5.4		Fragment
WT 288	TA72 T09	3511	N/A	conical	7.4			9.0		
WT 289	TA73 T35	23104	MB I	doughnut	4.2			5.3		Pl. 5
WT 290	TA78 T20	13104	HELL 1B	doughnut	6.0 (P)					Fragment (top)
WT 291	TA80 T10	5536	ROM 1A/C	doughnut	4.4 (P)			5.5		Fragment
WT 292	TA80 T09	7915	ROM 1B	doughnut	3.5			8.0 (P)		
WT 293	TA69 T04	3202	ROM 1B/C	doughnut	5.5			7.5		Two joining fragments
WT 294	TA69 T05	3204	ROM 1B/C	doughnut	3.5 (P)					Fragment
WT 295*	TA68 T02	2014	HELL 2C+	band	3.9	3.6 × 1.4			15	Pl. 5
WT 296	TA73 T19	1278	HELL 1B/2A	unknown	4.6			5.6		
WT 297	TA79 T17	5318	HELL 2A	unknown	5.1 (P)			4.0 (P)		Fragment (top)
WT 298	TA79 T19	5318	HELL 2A	unknown	2.8 (P)	6.3 (P)				Small circular depression on one face
WT 299	TA81 T25	7844	HELL 2A/B	unknown				5.1 (P)		Fragments
WT 300	TA70 T16	2540	HELL 2B/C	unknown	4.3			7.7		Two perforations along widest side
WT 301	TA81 T14	21102	HELL 2C	unknown	2.0 (P)	2.5 × 2.8 (P)				Fragment (top)
WT 302*	TA68 T10	2014	HELL 2C+	unknown	4.8			5.4	128	
WT 303	TA80 T02	8318	ARAB	unknown	4.1 (P)			3.4 (P)		Fragment
WT 304	TA79 T18	5315	MODERN	unknown	5.8 (P)	4.3 (P)				Fragment

\*Objects housed in the University of Missouri Collections, observed and documented by the authors.

## IV. BONE TOOLS

### OVERVIEW<sup>159</sup>

A total of 112 objects of bone, ivory, and horn have been identified as hand-held tools for sewing or weaving (**WT 305–WT 386**). Ninety-six of these date to the Hellenistic and Roman periods; nine are probably from the Arab-period occupation. Most of the bone tools that we could examine firsthand seem to have been made from rib bones; a few long bones are represented as well.<sup>160</sup> Many of the objects have a highly polished smooth surface, probably from the manufacturing process rather than from use; smooth surfaces would have been vital in the working process.

Bone tools are found across the Mediterranean and Levant. While many scholars identify most of these objects as related to weaving, we found little explanation as to how many of the tools were actually used.<sup>161</sup> In this section we attempt to fill this gap. We base our analysis on inventory cards, drawings, and photographs, along with firsthand study of twenty-three objects housed at the University of Missouri Museum of Art and Archaeology. We relied as well on the studies of bone tools from Megiddo (Lamon and Shipton 1939), Samaria (Kenyon 1957), Jerusalem (Ariel 1990), and Corinth (Davidson 1952) as well as many discussions with members of the Weavers Guild of Minnesota. The result is a new typology based upon specific attributes of shape and size that can be correlated with different tasks.

We classify the bone implements into seven types (table 3). Three of these—spindles, pins or needles, and a needle case—are related to the production of thread and the production and repair of textiles. The remaining four types—pick-up sticks, pin beaters, weft beaters, and a comb beater—are specifically connected with weaving, meaning the production of textiles on a loom. The evidence of the loom weights found at the site indicates that warp-weighted looms were used. Such looms consist of a rectangular frame with two long vertical sides and a narrower horizontal top. Along the top is a horizontal bar to which is tied a hand-woven band of cloth with long vertical warp threads. About halfway down the frame is a horizontal bar called the heddle. Facing the loom, the weaver can pull the heddle forward or push it back toward the frame to separate the vertical warp threads and so make a workable space to weave the horizontal (weft) threads through. Once the weaver has worked a row of weft thread through to the far edge, s/he then pushes that entire row upward, thus creating a finished row. S/he then moves the heddle to bring an alternate set of warp threads forward. The process continues with alternating warp threads until the desired length has been achieved.

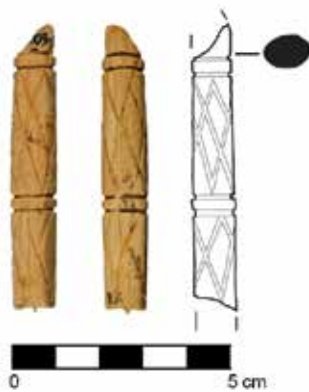
Function	Type	Total	% of total assemblage
Tools for thread production	spindles	21	18.80%
Tools used on the loom to facilitate weaving	pick-up sticks	70	62.50%
	pin beaters	11	9.80%
	weft beaters	5	4.50%
	comb?	1	0.85%
Tools for textile production and repair	pins (or needles)	3	2.70%
	needle case	1	0.85%
<b>TOTAL</b>		112	100.00%

Bone tool types.  
Table 3

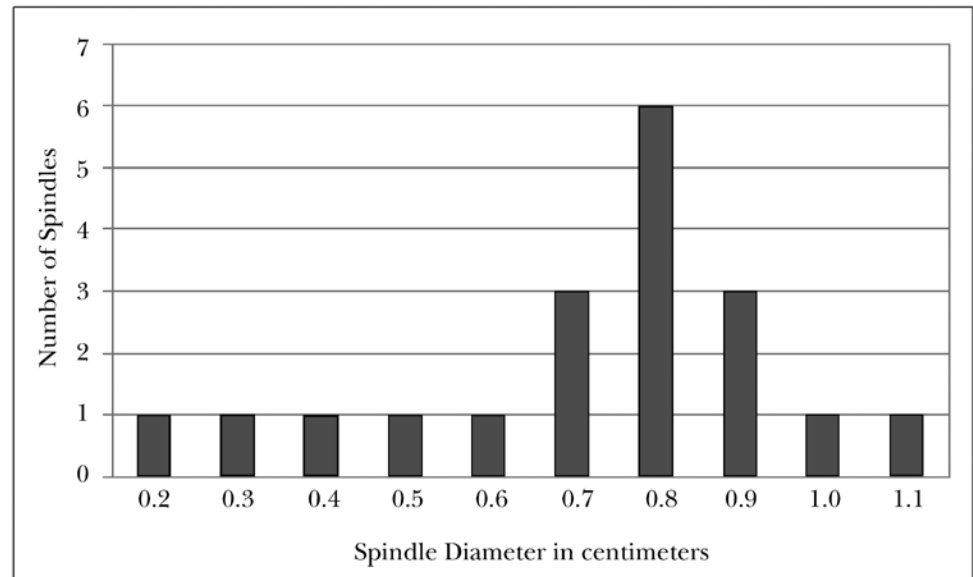
<sup>159</sup> This section on “Bone Implements” was written by Katherine M. Erdman.

<sup>160</sup> The worked nature of the bones makes it difficult to identify these with absolute certainty, though some visible morphological and structural identifiers, such as the slight curve and occasional presence of the interior cancellous surface of rib bones, and the thickness and length of long bones, indicate that these were the bones utilized. The bones came from large animals of any of the following genera: *Bos*, *Equus*, *Camelus*, or *Cervus*. See Redding 1994 for detailed faunal data.

<sup>161</sup> Lamon and Shipton 1939; Davidson 1952; Kenyon 1957.



Front and back views of spindle (WT 315).  
Figure 13



Average diameters of spindles.  
Figure 14

The use of specialized tools greatly facilitates various parts of the weaving process. We have identified four such tools: pick-up sticks, pin beaters, weft beaters, and a comb beater. Weavers use pick-up sticks to pull forward the vertical-hanging warp yarns in order to make space for the weft to be woven. Pin, weft, and comb beaters were used to push the weft up against the previous row to make the weave tight. Other tools, attested elsewhere but missing from our assemblage, are the weaving sword, which functioned as a very long beater for pushing up a large section of the weft,<sup>162</sup> and the shuttle.<sup>163</sup> Their absence may be the result of preservation or because another tool fulfilled their functions.

Below we describe each type of implement and then discuss the overall assemblage. At the end of this section is a catalogue of individual objects, divided by type and subtype when applicable, and then by phase.

## TPOLOGY

### SPINDLES

A spindle is a long, narrow rod, round in section (fig. 13). One end tapers to a blunt point; the other, known as the “flange,” is swollen, providing a resting spot for the whorl. The shaft is frequently decorated with inscribed X’s, grooves, diagonal lines, or other designs. Fragments of twenty-one bone spindles were found at the site, making it the second most common bone tool. They resemble two whole bone spindles from Megiddo dating to the Late Bronze

<sup>162</sup> Weaving swords are the best known of the tool types due to their depiction in ancient art (Hoffman 1974 and Clark 1984 provide detailed discussions of ancient depictions of weaving). It has been suggested that these were made of wood, bone, or metal (MacGregor 1985, 188). Using bone for an object that is estimated to be 25 to 75 cm in length seems improbable due to the amount of time and difficulty it would take to make it thin enough while remaining strong for repeated use. (An exception to this could be in the Nordic countries where whale bone is often used for sword beaters; Hoffman 1974.) If weaving swords were used at Tel Anafa, they are thought to have been made of wood or possibly metal.

<sup>163</sup> The shuttle was wrapped with the weft yarn and passed through the warp to create horizontal rows. It is depicted on the Amasis Painter lekythos as a long, narrow rod wrapped with yarn, though the material for crafting these is unknown. It is possible that the shuttle was a piece of wood or bone. Another possibility is that spindles served as shuttles before a separate tool was designed for this purpose, on which see further below, under “Spindles.” Objects designed solely to be shuttles do not appear until much later and not until the tenth century CE in the Mediterranean (Barber 1991, 85).

Age I in shape, size, and decoration.<sup>164</sup> The difference in time between the spindles from Megiddo and those from Tel Anafa is of little concern when we consider that these ancient examples are equally similar to modern spindles, attesting to the design's functionality. In addition to the bone examples, one copper alloy spindle was also found (**M 49**).<sup>165</sup>

None of the spindles found at Tel Anafa were complete. Based on ancient examples, MacGregor's research suggests a complete spindle ranges from 12 to 25 cm in length.<sup>166</sup> The smallest bone spindle fragment in our assemblage is 1.7 cm in length, and the longest is 15 cm. On the preserved lengths the shaft tapers from 1 cm at the widest point to 0.2 cm at the tip, with the average diameters clustered between 0.7 and 0.9 cm (fig. 14). The measurements of the copper alloy spindle (**M 49**) are similar: a preserved length of 11.5 cm and 0.4 cm diameter.<sup>167</sup>

A comparison between the average diameter of the spindles and the perforated diameter of the whorls reveals a satisfying correlation. Whorl openings range from 1.2 cm (**WT 125**) to 0.1 cm (**WT 126**), with the majority around 0.4–0.5 cm (see fig. 12). The tapered spindle shaft would have allowed the whorl to be wedged tightly, creating a secure fit as well as lessening the difficulty in trying to exactly match perforation and diameter size. Two objects, here classified only as "possible spindles," have diameters significantly greater than 1.1 cm. The diameter of **WT 318** is 1.7 cm and that of **WT 320** is 3.5 cm. These objects differ in form and size from other spindles found at the site, and there is no evidence of whorls with perforated diameters of that size. It is possible that they could have accommodated whorls of perishable material such as wood.

Barber notes that, just as the weight of the whorl is important, so too the weight of the spindle must be considered.<sup>168</sup> A lighter spindle would be used for finer fibers like wool, while a heavier spindle would be used for heavier fibers like flax.<sup>169</sup> Weights are not included in this analysis due to the fragmentary nature of the objects. Bone is a relatively light material, especially compared to wood or metal, and most of the whorls found at Anafa are relatively light weight as well (see fig. 10), suggesting that this equipment was used to spin finer fibers.

The spindles' shafts regularly carry inscribed notches, diagonal lines, and X-shaped grooves. These may have been seen as decorative, but they were almost surely functional. The notches could have acted essentially as a ruler to determine yarn spacing for patterns or for counting the length of yarn for a project. The grooves around the tops of the spindles could have held a half-hitch knot to secure the thread around the spindle in place for drop-spinning.<sup>170</sup> In the same vein, Merker suggested that the "horizontal channels" on **M 49** were used to anchor the whorl and also to fasten the thread to the top for spinning.<sup>171</sup>

The diagonal lines and X-shaped grooves would have helped hold the yarn on the spindle.<sup>172</sup> Regional spinning traditions are based on the natural twist of the fibers used. In India, for example, cotton spins to the right (Z-twist), resulting in a regional trend of right-spinning, while in Egypt and the Mediterranean flax used to produce linen spins to the left (S-twist).<sup>173</sup> On the other hand, the lack of natural spin direction and scaly nature of woolen fibers allow it to be spun in both directions.<sup>174</sup> Based on the site's location, we would postulate a left-spinning tradition (S-twists) if flax was the material. Spindle **WT 315** has X-shaped grooves, which would hold both "S" and "Z" twists. Spindle **WT 317** has diagonal lines from the upper left of the shaft to the lower right, capable of holding only "S" twists. However, as noted above, the relatively light bone whorls and spindles found at the site would have been best suited for spinning wool.

<sup>164</sup> Guy 1938, 170–171; Lamon and Shipton 1939, pl. 95, no. 38. The spindles from Megiddo were identified as such because they were found with two conical whorls facing each other on their flat sides. Each is made up of two long, narrow cylindrical shafts joined in the middle by a metal pin. Items similar to spindles are sometimes otherwise identified as "handles," "pins/hairpins," or "rods"; their similarity to the spindles from Tel Anafa might suggest otherwise. See, e.g., Lamon and Shipton 1939, pl. 96, nos. 10–13, 23; Kenyon 1957, 459–461, fig. 114, nos. 28–37; Ariel 1990, 140–141, figs. 20–21, nos. BI 173, BI 177–183.

<sup>165</sup> Merker TA II, ii, 231.

<sup>166</sup> MacGregor 1985, 185.

<sup>167</sup> Merker TA II, ii, 231.

<sup>168</sup> Barber 1991, 43.

<sup>169</sup> Barber 1991, 53.

<sup>170</sup> So Barber 1991, 59. Barber notes that grooves around the tops are found on high spindles, which happens to be the type common in the ancient and modern Middle East (Barber 1991, 54). This usage was also confirmed by members of the Weavers Guild of Minnesota.

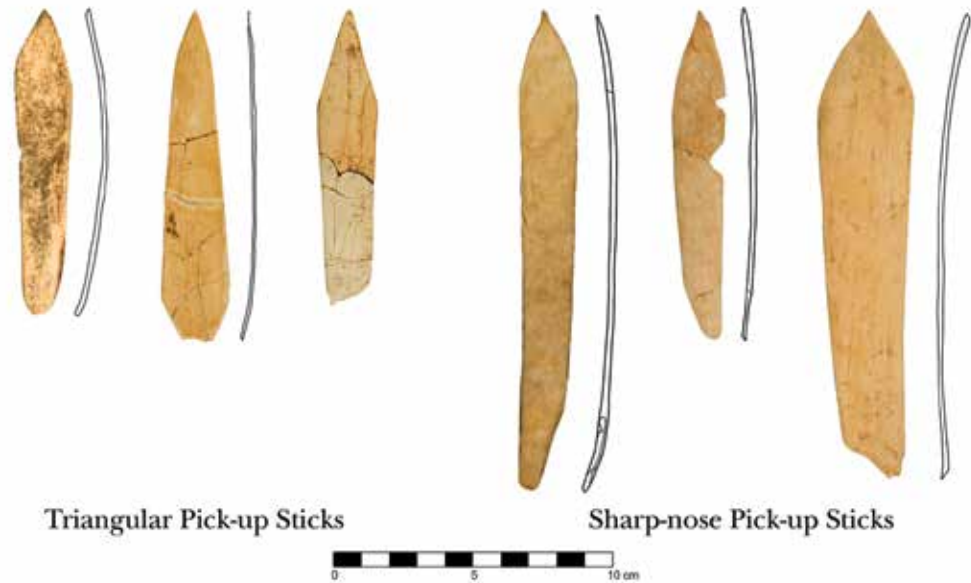
<sup>171</sup> Merker TA II, ii, 230.

<sup>172</sup> Barber 1991, 58.

<sup>173</sup> Pfister 1945, 1–2.

<sup>174</sup> Barber 1991, 20.

Ancient pick-up sticks,  
the nose at top, and the  
base at bottom.  
Figure 15



Modern pick-up stick,  
with the base at left and  
the nose at right.  
Figure 16



Finally, it is possible that spindles were also used as shuttles during weaving. On the famous lekythos by the Amasis Painter women weave at a warp-weighted loom by passing a shuttle back and forth under alternating warp threads to create the weft rows.<sup>175</sup> The shuttle appears as a long, narrow rod wrapped with yarn.<sup>176</sup> On this basis, Barber has argued that after spinning, excess yarn could have been wrapped around the spindle and passed through the warp, in effect using the spindle as a shuttle before a separate tool was designed for this task.<sup>177</sup> Such a use would also save time from winding and unwinding yarn onto different tools.

### PICK-UP STICKS

Pick-up sticks are the most abundant type of bone tool found at the site (seventy total, comprising 62.5 percent of the assemblage; fig. 15). Pick-up sticks are thin and smooth, flat in section, with a sharp point (the nose) on one end and a round, flat, or bluntly pointed opposite end (the base).<sup>178</sup> The widest area tends to be at the rear of the nose, from which the tool gradually narrows toward the base, though a few maintain an even width for the entire length.<sup>179</sup> All surfaces of these tools are highly polished, apparently as an intentional step in the manufacturing process rather than as a result of heavy use.<sup>180</sup> If the polish was due to use, it would be isolated to only a few places on the tool. A smooth surface is necessary for working with threads or yarns to prevent fibers from being snagged.

<sup>175</sup> Amasis Painter, *Lekythos* (shoulder type), New York, The Metropolitan Museum of Art, 31.11.10, Fletcher Fund, 1931 (Von Bothmer 1985, 185–187).

<sup>176</sup> Several clay objects have been suggested as bobbins or shuttles, but Barber believes the shapes of some of these would have been too difficult to work with efficiently. Instead, she suggests this rod was likely made of bone or wood (1991, 107).

<sup>177</sup> Barber 1991, 107, 305. While evidence for spindles can be found as early as the third millennium BCE in the Near East and Anatolia (1991, 56–65, figs. 2.19, 20, 24), objects designed solely to be shuttles do not appear until much later and not until the tenth century CE in the Mediterranean (1991, 85).

<sup>178</sup> In one case, **WT 326**, the opposite end has a very sharp point.

<sup>179</sup> Some examples from City of David are narrowest in the middle or just below the shoulders, which is likely the result of heavy use (Ariel 1990, 131, BI 60; 133, BI 111–113).

<sup>180</sup> This observation is consistent with the “spatulas” from the City of David excavations. Ariel also notes that “fine transverse striations, which are evidence of use, are often visible at the spatulas’ points,” providing evidence of wear patterns (Ariel 1990, 127–128), but this would not account for the entirety of the object being evenly polished.

Scholars have identified objects of this form as “spatulas” or “weaving picks.”<sup>181</sup> Here we adopt the term used by modern weavers for tools of this shape (fig. 16). During weaving, weavers use pick-up sticks to clear a space between the vertical-hanging warp yarns in order to facilitate weaving the horizontal weft yarn through them. The weaver inserts the pointed nose between the warp yarns then turns it sideways 90 degrees, thereby creating an opening. A weaver can also use the pointed nose end to pick a particular piece of weft yarn out of a woven row to create patterns.<sup>182</sup>

Two clear variations of nose shape exist within the group of pick-up sticks: triangular and sharp-nose. Of the seventy pick-up sticks found at Tel Anafa, fifty-one have preserved nose ends. The most common variant is triangular, of which there are thirty-nine (76 percent of those with preserved ends). Triangular pick-up sticks have a short pointed nose like the apex of a triangle followed by a gradual tapering toward the base (e.g., **WT 331**). The bases tend to be rounded or be formed into a blunt point. Less common are sharp-nose pick-up sticks, of which there are twelve (24 percent of those with preserved ends). Sharp-nose pick-up sticks have a pronounced, narrow tip with rounded shoulders, somewhat resembling a swordfish, and most often a rounded base (e.g., **WT 349**). They tend to be uniform in width, though some narrow at the base. These two variations in nose shape seem to be related to the type of yarn being woven. The more pronounced tip of the sharp-nose pick-up stick is better for plucking out finer yarn, such as light wool. The wider pointed end of the triangular type is better for coarser fibers, such as wool or bast fibers, meaning fibers removed from the skins surrounding the stems of plants, such as flax.<sup>183</sup>

Pick-up sticks were easily broken, usually in the middle or near the top. The motion of turning the stick on its side while in the warp is the likely cause since they are thin—only about 0.1–0.2 cm in thickness. Complete and nearly complete pick-up sticks vary in length and width. Triangular pick-up sticks range from 11.3 to 19 cm, and the widths range from 1.8 to 3 cm. There are two outliers: **WT 323** is very short, at 7.6 cm in length, while **WT 337** is very long, at 26.2 cm in length. Sharp-nose pick-up sticks tend to be shorter, from 7.7 to 18 cm in length and 1.9 to 3.4 cm in width. Their size and shape suggest manufacture from the rib bones of large mammals. Cancellous bone still visible on some examples indicates that the rib was sectioned lengthwise and then worked and polished into its present shape.

The two variations found at Tel Anafa—triangular and sharp-nose—also appear in the assemblages of bone objects found at other sites, although different terms are used in the publications. Most of the bone implements from Megiddo seem to be triangular pick-up sticks and illustrate the same variations at the base and handle width seen at Tel Anafa.<sup>184</sup> At Samaria, Kenyon identified three “spatula” types that also fit within our suggested typology.<sup>185</sup> Her “rounded shoulder” form is quite similar to our sharp-nose subtype and is probably a variant with a shorter tip. The “spatula with shoulder” appears to be our triangular type, as does the “spatula with long point,” as the image presented is a pointed base missing its nose. At the City of David, Jerusalem, Ariel distinguished five types dating to Iron Age II based on shoulder shape.<sup>186</sup> The illustrated examples include both the triangular and sharp-nose types, as well as fragments that appear to be broken bases.<sup>187</sup> Davidson illustrated two examples of “weaving picks” from Corinth.<sup>188</sup> One appears to be a small version of a sharp-nose pick-up stick; it has a very long tip and a wider body, though the shoulders are not as round and the tip is longer than that of any Tel Anafa example.

#### *PIN BEATERS*

Pin beaters are cigar-shaped objects, round in section and tapering to a sharp point at both ends (fig. 17). The end points were highly polished during manufacturing to prevent snagging fibers while working with the yarn. In some

<sup>181</sup> For spatulas see Lamon and Shipton 1939; Van Beek and Van Beek 1990; Kenyon 1957, 461–462; Ariel 1990, 128. For the term “weaving pick,” see Davidson 1952, 174–175, 177.

<sup>182</sup> Patterns may be achieved through the use of different color threads, or by alternating counts of warp and weft threads.

<sup>183</sup> During the initial analysis, it was thought that the sharp-nose type might be a heavily worn triangular type. Now that the use of the tool is better understood, wear patterns of this nature are unlikely, and it is clear that the tool was simply shaped differently.

<sup>184</sup> Lamon and Shipton 1939, pl. 95.39–45, 47–52, 55, 56, 58, pl. 96.8, 9.

<sup>185</sup> Kenyon 1957, 461–462, fig. 115.4–6.

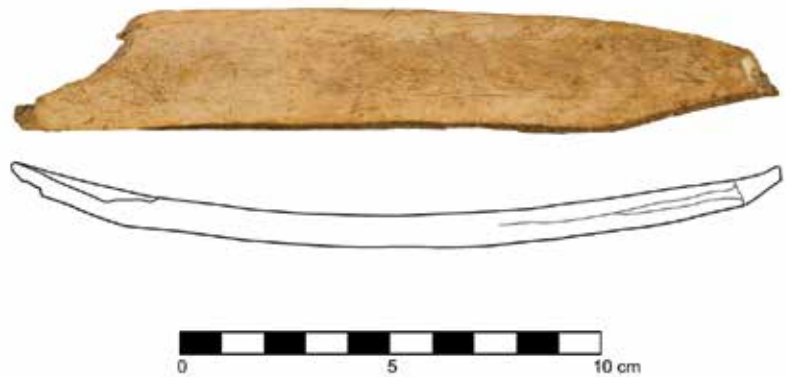
<sup>186</sup> Ariel 1990, 128.

<sup>187</sup> Ariel 1990, 131: BI 69 (triangular), 133: BI 110 (sharp-nose). Ariel’s types 4 and 5 actually appear to be bases, a point that the author himself already recognized (1990, 128).

<sup>188</sup> Davidson 1952, 174–175, 177, pl. 79.1271 (similar to sharp-nose), 1272.



Pin beater (WT 373).  
Figure 17



Weft beater (WT 381).  
Figure 18

cases one end may be unfinished or left crudely cut (e.g., **WT 369**). The name is modern, though it has been used already to classify ancient bone implements.<sup>189</sup>

Pin beaters are multipurpose tools. Weavers use them to push a single piece of the horizontal weft into place or drag them over the vertical warp threads to keep them untangled.<sup>190</sup> Pin beaters are distinct from pick-up sticks as their thick cigar shape does not allow them to be used to make room for the weft between the warp. Unlike weft beaters (discussed below), which can push multiple sections of the weft into place between the warp, pin beaters are relatively small and can only push a single piece of the weft at a time.

We have identified eleven pin beaters: nine of bone, one of horn, and one of tusk. Complete examples are between 9 and 10 cm long and 1.25 cm or less in diameter. Since weavers used this tool for pushing the weft into place between the weighted warp threads, it needed to be dense and durable. Most of the bone pin beaters were made from long bones. Horn and tusk would have worked well because their shape naturally conformed to that of the finished form of the tool, thus requiring little in the way of modification beyond smoothing and polishing. This earliest of our pin beaters occurs in an Iron Age stratum (**WT 369**); almost all the rest come from the LHSB (HELL 2) phase of occupation.

We have not found pin beaters identified at other sites in Greece or the southern Levant. It may be that they have been classified as another tool type, such as an awl, whose general shape is similar. The use wear patterns would differ significantly, however, and we suggest that this aspect be considered in the future.

#### WEFT BEATERS

Weft beaters are the most substantial of the weaving tools, being thick rectangular pieces of bone, flat or slightly curved in section, with rounded, straight, or angled ends (fig. 18). Weavers use weft beaters to push, or “beat,” the horizontal weft into place, thus ensuring an even row. In this their function is similar to pin beaters, but weft beaters are longer, uniform in width rather than tapering, and with notably flat narrow edges. These features allow them to push a wider stretch of the weft into place with a single thrust, in contrast to a pin beater, which can only push one piece between the warp at a time.

There are fragments of five weft beaters from Tel Anafa, none complete. The longest preserved length is 17 cm. Fragments range in thickness from 0.3 cm to 0.7 cm. Based on their size, they seem to have been manufactured from the rib bones of a large mammal.

As with the pin beaters, we did not find published parallels. It is possible that similar objects have been identified simply as worked bone.

<sup>189</sup> MacGregor (1985, 188–189) describes different forms and their temporal span (Iron Age through the medieval period). Wild also used the term “pin beaters” and mentions their function in his work on Roman Britain (2002, 11).

<sup>190</sup> Personal communication, Weavers Guild of Minnesota; Wild 2002, 11.



*COMB BEATER*

The assemblage includes one possible comb beater (**WT 382**). This object was made of shell and is 7 cm in diameter. One side of the shell was worked into the short teeth of a comb. Weavers use comb beaters to even up a short woven section by fitting the teeth between the vertical warp threads and then moving the tool up against the horizontal weft, thereby “combing” multiple threads into an even row. Several examples of weaving combs have been identified at Corinth,<sup>191</sup> though none are exactly like our example. It is possible that this object was a hair comb or decorative accessory, though the preserved length of the teeth is too short either to cling to hair or to comb it.

*PINS OR NEEDLES*

Pins are narrow objects, round in section, widest at the head and tapering to a pointed tip. Needles differ from pins in that they have a hole through the top of the rod, called an “eye.” Both pins and needles could be used to hold together pieces of fabric; needles were designed to draw thread through one or more pieces of fabric and sew them together. Fragments of three bone pins or needles were found, none complete. **WT 383** is a possible head of a pin similar to one from Samaria, which has a tear-drop-shaped point atop two stacked rings.<sup>192</sup> The other two examples, **WT 384** and **WT 385**, are broken where the eye or head would be, making it impossible to determine whether these were needles or pins, though the preserved length of **WT 385** (18.9 cm) seems too long for maneuvering while sewing. In addition to these bone examples, two metal needles were found at the site in contexts of the Early Hellenistic (HELL 1) occupation. **M53**, a long, straight needle, has a preserved length of 13.8 cm. **M54** is a short, curved example of only 3.2 cm.

*NEEDLE CASE*

One cylindrical bone needle case (**WT 386**; fig. 19) was found in an early medieval context (locus 2401). It is a hollow rounded tube with an opening at one end. At the top of the wall is a short, narrow flanged projection that would have provided purchase for a lid. The case is 4.4 cm high, and the diameter is 1.3 cm. The height of the object indicates that straight needles of at least 4 cm could have been stored inside. Marks on the exterior may be inscribed decoration but could also be the result of calcareous buildup. We have not found any parallels for this shape.



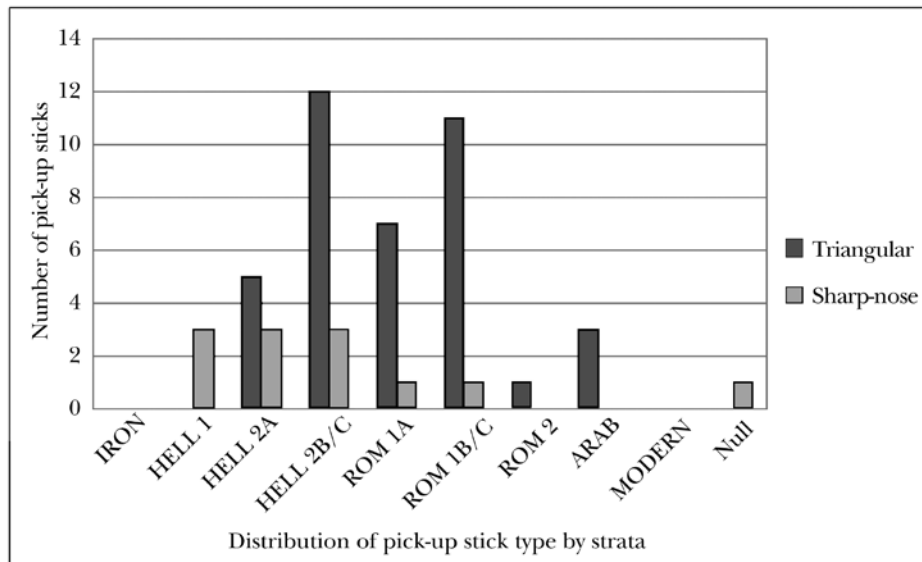
Needle case (**WT 386**).  
Figure 19

## DISCUSSION

The bone tools, being wholly functional objects, were not subject to stylistic change over time. The lack of change is partially the result of the materials used; for example, rib bones can only be modified so much due to their original size and shape. The primary reason, however, is that no further modifications were necessary for the tool to function more efficiently. This is evident from looking at modern weaving tools such as wooden pick-up sticks (see fig. 16). While the material has changed from bone to wood, the shape remains essentially identical.

<sup>191</sup> Davidson 1952, 173, pl. 78.1229–1233.

<sup>192</sup> Examples from Samaria have heads decorated in various geometric or anthropomorphic styles: Kenyon 1957, 459, fig. 114.9–27,38–40.



Types of pick-up sticks by phase.

Figure 20

The only implement that occurs in sufficient quantity and typological variety to suggest possible changes in practice or production is the pick-up stick. Of the seventy examples found at the site, we can identify fifty-one as either triangular or sharp-nose. Sharp-nose pick-up sticks, used for picking up thinner threads such as light wool, are the only type that appear in HELL 1 (fig. 20). Of the twelve total examples of this type, three occur in HELL 1 contexts, another three in HELL 2A, and another three in HELL 2B/C. Those found in later contexts are probably residual either from the HELL 1 or HELL 2 occupations. The triangular sticks, used to produce thicker, more utilitarian textiles, first appear in the earliest of the LHSB occupation phases; of the thirty-nine total examples, five come from HELL 2A contexts and another twelve from HELL 2B/C.

These numbers might suggest that the site's early Hellenistic residents focused on the production of woolens, while during the period of the LHSB occupation, weavers produced both finer and coarser products. It might also be the case that the relatively low numbers of sharp-nose pick-up sticks in the LHSB phase indicates that those wealthier inhabitants were able to acquire more of their finer woolens from elsewhere, and that they were using triangular pick-up sticks to manufacture thicker, more utilitarian textiles as an item of exchange.

## CATALOGUE

Of the 112 objects identified as bone tools from the excavations, we catalogued eighty-two items. These date from the Iron Age to the modern period, with the majority from the site's three main occupation periods. These eighty-two items comprise forty-five pick-up sticks, eighteen spindles, ten pin beaters, four beaters, three pins, one possible comb beater, and one needle case.

Objects were selected based on quality of preservation, uniqueness of shape, or other special feature, such as decoration. Omitted items were counted and are included in the totals for each type. Those items designated with an asterisk (\*) represent objects housed at the University of Missouri that we were able to examine firsthand. In those cases where the locus number is missing, it was not available on the inventory card, or the card had been lost.

*SPINDLES (WT 305–317)*

**WT 305** TA79 B18  
Loc. 7.6.117 balk trim  
Bone. One end broken, one end tapered. P.L. 4.0, D. 0.6. Incised: three horizontal rings on broad end. Similar: Samaria (Kenyon 1957, 459, fig. 114.32).

**WT 306** TA79 B28  
Loc. 5322 HELL 1  
Bone. One end broken, widest at center tapering to other end with worn point. P.L. 11.1, D. 0.82.

**WT 307** TA70 B14  
Loc. 2413 HELL 2C  
Bone. Broken at both ends. P.L. 2.8, D. 0.8. Incised: three alternating horizontal rings and smooth bands. Similar: Samaria (Kenyon 1957, 459, fig. 114.35).

**WT 308** TA72 B13  
Loc. 1235/36 HELL 2C+/ROM 1  
Bone. Broken near rivet hole for attachment. P.L. 9.8, D. 0.9. Incised: two horizontal rings near one end, four parallel diagonal lines.

**WT 309** TA70 B9  
Loc. 1333 HELL 2C+/ROM 1A  
Ivory. Both ends broken. P.L. 3.3, W. 0.8. Incised: two alternating horizontal rings and smooth bands. Similar: Samaria (Kenyon 1957, 459, fig. 114.35).

**WT 310** TA70 B23  
Loc. 21004 HELL 2C+/ROM 1A  
Ivory or bone. Both ends broken. P.L. 1.9, W. 0.7. Incised: two alternating horizontal rings and curved bands. Similar: Samaria (Kenyon 1957, 459, fig. 114.3).

**WT 311** TA79 B27  
Loc. 7714 HELL 2C+/ROM 1A  
Bone. One end broken, one end tapered. P.L. 8.3, D. 0.2. Incised: alternating horizontal rings and X-shaped lines. Similar: City of David (Ariel 1990, 141, fig. 21: BI 180)

**WT 312** TA70 B1  
Loc. 3405 ROM 1A  
Ivory. One end broken. P.L. 9.0, W. 0.8. Incised: two alternating horizontal rings and smooth bands. Similar: Samaria (Kenyon 1957, 459, fig. 114.35).

**WT 313** TA70 B22  
Loc. 2326 ROM 1B  
Bone. Both ends broken. P.L. 2.5, W. 0.7. Incised: two alternating horizontal rings and smooth bands. Similar: Samaria (Kenyon 1957, 459, fig. 114.35).

**WT 314\*** TA68 B19 Pl. 6  
Loc. 2303 ROM 1B  
Bone. Both ends broken. P.L. 3.8, W. 0.5. Incised: two horizontal rings. Similar: Samaria (Kenyon 1957, fig. 114.25); City of David (Ariel 1990, 141, fig. 21: BI 176).

**WT 315\*** TA68 B18 Pl. 6  
Loc. 3202 ROM 1B/C  
Bone. Both ends broken. P.L. 6.3, D. 0.9. Incised: two alternating horizontal rings and vertical X-shaped lines.

**WT 316** TA80 B7 ARAB  
Loc. 8318  
Bone. One end broken. P.L. 5.7, D. 0.7. Incised: Two horizontal rings and one double spiral.

**WT 317\*** TA68 B21 Pl. 6  
Loc. 2301 MODERN  
Bone. Both ends broken. P.L. 2.4, W. 0.6. Incised: two alternating horizontal rings and three parallel diagonal lines.

*POSSIBLE SPINDLES (WT 318–322)*

**WT 318** TA70 B41 MODERN  
Loc. 2700  
Bone. One end broken. Bone stem wrapped with some bronze at intact end. P.L. of bone 10.3, P.L. with bronze 10.9, D. 1.7.

**WT 319** TA70 B16 HELL 1/2A  
Loc. 3341.1  
Bone. Cylinder with two small holes partly pierced through one side. P.L. 3.2, D. 1.1. Decorative grooves and top, slight projection.

**WT 320** TA81 B24 HELL 2A  
Loc. 8333  
Bone. Intact with wear? L. 1.5, D. 3.5. Hollow, oval in section. Incised: two sets of five carved bands and five single rings at intervals.

**WT 321** TA78 B7 ROM 1A  
Loc. 7215  
Bone. Intact polished cylinder pierced at one end but not all the way through, two punctures on surface. L. 1.7, D. 0.8. Incised: two lines around one end, small projection.

**WT 322** TA70 B19 Pl. 6  
Loc. 2321 ARAB 1  
Bone. Cylinder with hole pierced through and slight projection at one end, broken. P.L. 2.0, D. 1.0.

<i>PICK-UP STICKS—TRIANGULAR (WT 323–346)</i>			<b>WT 335*</b>	TA68 B29	Pl. 6
			Loc. 2310		HELL 2C
<b>WT 323</b>	TA68 B23		Bone. Tip only, very tip chipped, sides broken, currently diamond shaped. P.L. 6.7, W. 3.1, Th. 0.15.		
Loc. 3222a		HELL 1/2A			
Bone. Complete. L. 7.6, W. 1.9.					
<b>WT 324</b>	TA78 B2		<b>WT 336*</b>	TA69 B18	Pl. 6
Loc. 13103		HELL 1B	Loc. 2112		HELL 2C+
Bone. One end broken. P.L. 9.8, W. 2.5, Th. 0.2.					
<b>WT 325</b>	TA78 B8		<b>WT 337</b>	TA70 B25	
Loc. 2816		HELL 2A	Loc. 2427		HELL 2C+ contam.
Bone. One end broken, chip on side. P.L. 7.1, W. 2.0, Th. 0.2.					
<b>WT 326</b>	TA79 B10		<b>WT 338*</b>	TA69 B3	Pl. 6
Loc. 8228		HELL 2A	Loc. 1233		ROM 1
Bone. Nearly complete, one end missing piece. P.L. 14.9, W. 2.7, Th. 0.2.					
<b>WT 327</b>	TA79 B7		<b>WT 339</b>	TA79 B15	
Loc. 8229		HELL 2A	Loc. 2902		ROM 1B
Bone. Multiple pieces, one end missing. P.L. 9.5, W. 2.4, Th. 0.2.					
<b>WT 328</b>	TA70 B11		<b>WT 340*</b>	TA68 B5b	
Loc. 3339.1		HELL 2A contam?	Loc. 2303		ROM 1B
Bone. One end broken. P.L. 6.2, W. 2.0.					
<b>WT 329*</b>	TA72 B9		<b>WT 341</b>	TA69 B15	Pl. 6
Loc. 2348		HELL 2A/B	Loc. 2405		ROM 1B+
Bone. Nearly complete, two fragments with chips on sides. L. 12.6, W. 1.9.					
<b>WT 330*</b>	TA72 B3	Pl. 6	<b>WT 342*</b>	TA68 B7a–c	Pl. 6
Loc. 2328		HELL 2B/C	Loc. 3205		ROM 1B/C
Bone. Complete, mended. L. 16.7, W. 2.0.					
<b>WT 331*</b>	TA70 B35	Pl. 6	<b>WT 343*</b>	TA68 B14	Pl. 6
Loc. 2423		HELL 2B/C	Loc. 3213		ROM 1B/C
Bone. Complete. L. 11.3, W. 1.9.					
<b>WT 332</b>	TA72 B18		<b>WT 344</b>	TA68 B1	Pl. 6
Loc. 2557		HELL 2B/C	Loc. 3004		ROM 1B/C
Bone. Only tip. P.L. 7.1, W. 2.5.					
<b>WT 333</b>	TA69 B7		<b>WT 345*</b>	TA68 B6a&b	
Loc. 2316		HELL 2C	Loc. 2104		ARAB
Bone. Complete. L. 15.0, W. 2.2, Th. 0.2.					
<b>WT 334</b>	TA69 B 17	Pl. 6	Bone. Two fragments: (a) broken on side and end, (b) too small to provide useful data. Triangular in cross section, possibly from a long bone. (a) P.L. 9.3, W. 1.7, (b) P.L. 2.7 W. 1.3.		
Loc. 2526		HELL 2C	<b>WT 346*</b>	TA69 B5	Pl. 6
Bone. One end broken. P.L. 12.1, W. 2.0, Th. 0.2.					
			Loc. 2410		ARAB
Bone. One end broken. P.L. 10.8, W. 2.2, Th. 0.2.					

*PICK-UP STICKS—SHARP-NOSE (WT 347–356)*

**WT 347** TA81 B9 Pl. 7  
Loc. 9132 HELL 1  
Bone. Complete. L. 18.0, W. 2.6, Th. 0.2.

**WT 348** TA78 B1  
Loc. 13106 HELL 1A  
Bone. Complete. L. 9.6, W. 1.9, Th. 0.2.

**WT 349\*** TA68 B24 Pl. 7  
Loc. 3212a HELL 2A  
Bone. Nearly complete, mended, tip chipped. L. 7.7, W. 2.6.

**WT 350** TA81 B17  
Loc. 7118 HELL 2A  
Bone. One end broken. P.L. 6.5, W. 2.6, Th. 0.2.

**WT 351** TA81 B20  
Loc. 9126 HELL 2A  
Bone. One end broken, one side worn into a slight curve. P.L. 10.2, W. 1.7, Th. 0.2.

**WT 352** TA72 B17  
Loc. 3504 HELL 2A–ROM 1C  
Bone. Complete, mended. L. 12.0, W. 2.4.

**WT 353\*** TA72 B10 Pl. 7  
Loc. 2352 HELL 2B/C  
Bone. Complete, mended. One side of blunt end very worn. L. 17.4, W. 2.1.

**WT 354\*** TA68 B8 joined with TA68 B15 Pl. 7  
Loc. 3015 HELL 2C  
Bone. Nearly complete, mended: tip and sides chipped. L. 12.0, W. 2.0.

**WT 355\*** TA70 B33 Pl. 7  
Loc. 2415 ROM 1A  
Bone. One end broken. P.L. 16.6, W. 3.4.

**WT 356** TA78 B4  
Loc. 3213 ROM 1B/C  
Bone. Complete. No other information available.

*UNKNOWN TYPE OF PICK-UP STICK  
(BASES WITHOUT NOSES) (WT 357–367)*

**WT 357** TA72 B2  
Loc. 2442 00  
Bone. Broken, rounded end only, groove down center of tip. P.L. 3.6, W. 2.1.

**WT 358** TA81 B23 Pl. 7  
Loc. 9132 HELL 1  
Bone. Broken, rounded end only. P.L. 5.2, W. 3.1, Th. 0.14.

**WT 359** TA73 B7 Pl. 7  
Loc. 5120 HELL 2A  
Bone. Broken, rounded end only, highly polished. P.L. 5.7, W. 1.8.

**WT 360** TA80 B8 Pl. 7  
Loc. 8323 HELL 2C  
Bone. Broken, rounded end only. P.L. 4.8, W. 2.5, Th. 0.2.

**WT 361** TA68 B2 Pl. 7  
Loc. 3209 ROM 1A/B  
Bone. Broken, rounded end only. Incised design at top. P.L. 5.5, W. 1.9.

**WT 362** TA80 B10 Pl. 7  
Loc. 5536 ROM 1A–C  
Bone. Broken, flat end only. P.L. 9.9, W. 2.3, Th. 0.3.

**WT 363** TA78 B5  
Loc. 2303 ROM 1B  
Bone. Broken, angled end only. No other information available.

**WT 364** TA79 B2 Pl. 7  
Loc. 7708 ROM 1B  
Bone. Broken, rounded end only. L. 9.4, W. 1.9, Th. 0.3.

**WT 365** TA80 B4 Pl. 7  
Loc. 7915 ROM 1B  
Bone. Broken, rounded end only. P.L. 6.4, W. 1.5, Th. 0.3.

**WT 366** TA80 B3 Pl. 7  
Loc. 5532 ROM 1B/C  
Bone. Broken, rounded end only. P.L. 5.8, W. 2.0, Th. 0.2.

**WT 367** TA81 B19  
Loc. 9110 ARAB  
Bone. Broken, rounded end only. P.L. 10.4, W. 2.6, Th. 0.3.

*PIN BEATERS (WT 368–377)*

**WT 368** TA69 B9 Pl. 8  
No locus 00  
Bone. One end broken. P.L. 3.2, D. 0.6.

**WT 369** TA73 B9  
Loc. 3439.1 IRON  
Bone. One end crudely cut. P.L. 4.3, D. 0.8.

<b>WT 370</b>	TA72 B22		<b>WT 379</b>	TA69 B11	Pl. 8
Loc. 21206		HELL	Loc. 2532		ROM 1B
Bone. One end broken. P.L. 7.6, D. 1.3.			Bone. Broken at both ends, two joining pieces, curved notch on one side. P.L. 9.2, W. 1.8, Th. 0.3.		
<b>WT 371</b>	TA72 B15		<b>WT 380*</b>	TA68 B5a	Pl. 8
Loc. 1282		HELL 2+	Loc. 2303		ROM 1B
Tusk or horn. One end broken, saw marks. P.L. 5.6, D. 1.1.			Bone. Broken at both ends, missing pieces on sides. P.L. 17.8, W. 2.0.		
<b>WT 372*</b>	TA68 B13		<b>WT 381*</b>	TA68 B4	Pl. 8
Loc. 3020a		HELL 2A	Loc. 3213		ROM 1B/C
Bone. Only tip. P.L. 5.7, D. 1.4.			Bone. One end broken, tip chipped. P.L. 18.6, W. 3.1, Th. 0.7.		
<b>WT 373*</b>	TA72 B14		<b>COMB BEATER?</b>		
Loc. 1375		HELL 2A/B	<b>WT 382</b>	TA70 B38	HELL 2B/C
Bone. Complete. L. 9.7, D. 0.9.			Loc. 2423		
<b>WT 374</b>	TA70 B10		Shell. Broken, with worked edge. D. 7.2.		
Loc. 2417		HELL 2C or HELL 2C+/ROM 1A	<i>PINS, NEEDLES, NEEDLE CASE (WT 383–386)</i>		
Bone. One end broken. P.L. 9.2, D. 0.6.			<b>WT 383</b>	TA72 B4	HELL 2C
<b>WT 375</b>	TA72 B8		Loc. 7428		
Loc. 2539		HELL 2C+/ROM 1A	Pin or handle. Bone. Possible head only. Conical stem with reel and bead at point; lathe point on flat end. P.L. 5.7, D. 1.1.		
Horn. Chips missing from worked end, two nicks underside of horn, saw marks. L. 6.4, D. 1.5.			<b>WT 384</b>	TA80 B5	ROM 1B
<b>WT 376</b>	TA68 B12		Loc. 7440		
Loc. 3205		ROM 1B/C	Possible pin, needle, or stylus. Bone. One end broken. Tapered point, head missing. P.L. 9.3, D. 0.5.		
Bone. Appears complete. L. 10.7.			<b>WT 385</b>	TA70 B21	Pl. 8
<b>WT 377</b>	TA86 B3		Loc. 2907		ROM 1B
Loc. 1611		ARAB	Possible pin, needle, or stylus. Bone. Nearly complete with tapered point, head missing. P.L. 18.9.		
Bone. Only tip. Engraved line on top. P.L. 3.8.			<b>WT 386*</b>	TA69 B1	Pl. 8
<i>WEFT BEATERS (WT 378–382)</i>			Loc. 2401		ARAB 1
<b>WT 378</b>	TA70 B39		Needle case. Bone. Complete, hollow tube with narrower projection at one end, possibly inscribed. L. 4.4, D. 1.3.		
Loc. 2427		HELL 2C+ contam.			
Bone. One end broken, chip in middle. P.L. 14.5.					

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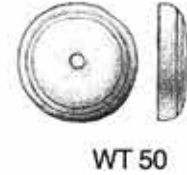
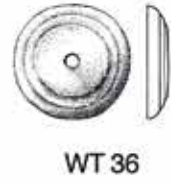
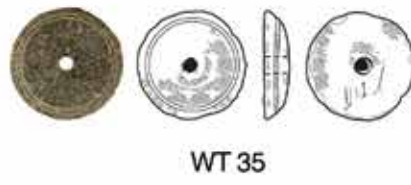
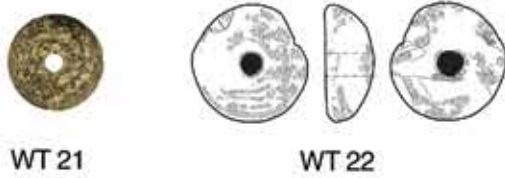
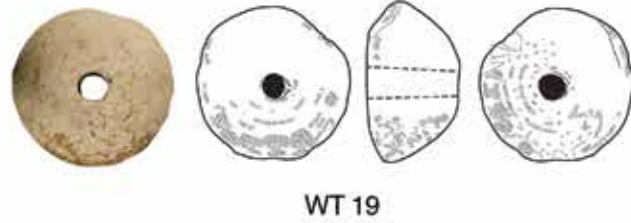
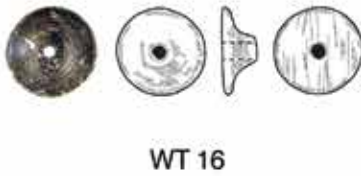
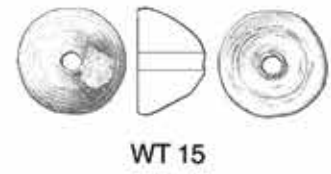
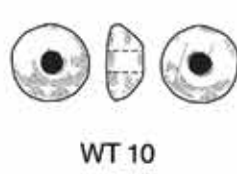
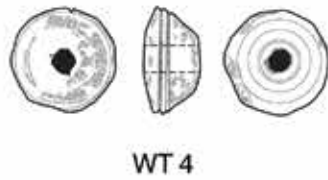
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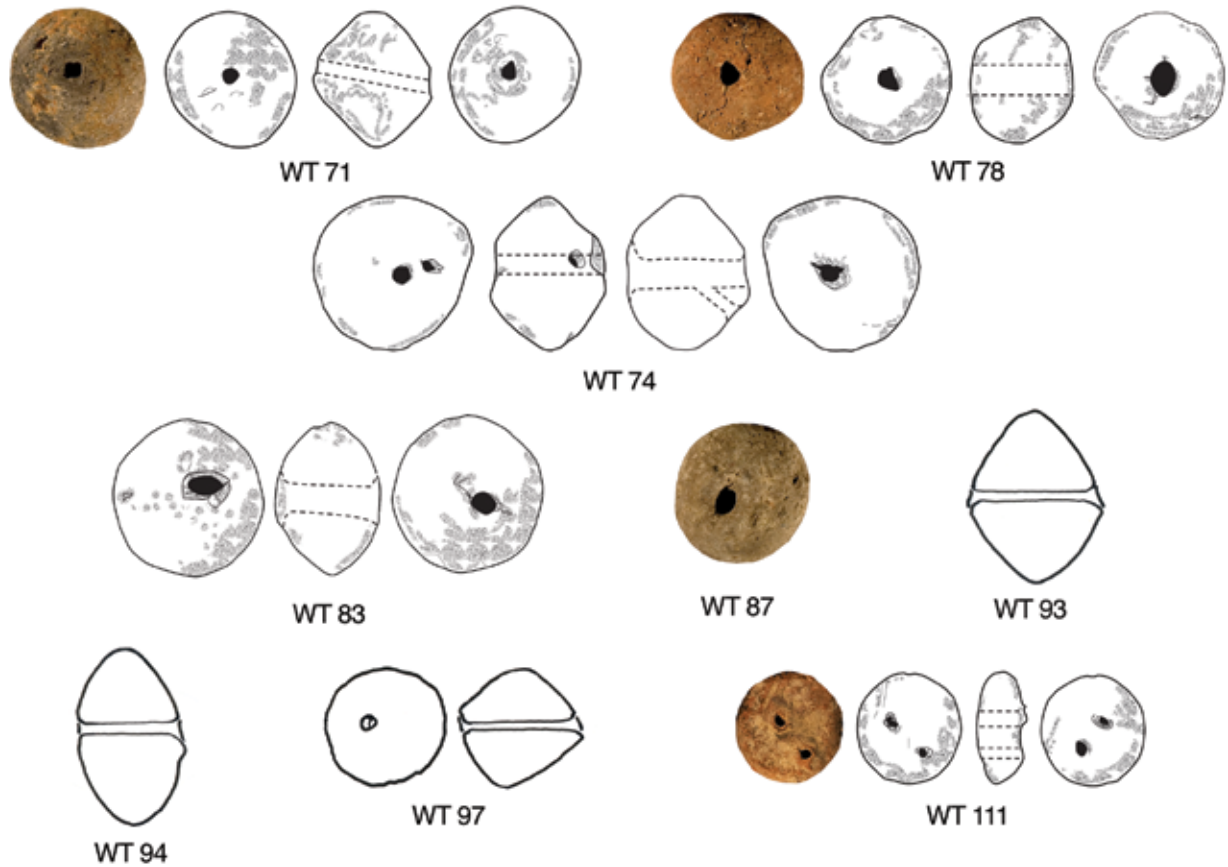
PLATE 1: TOOLS FOR TEXTILE MANUFACTURE



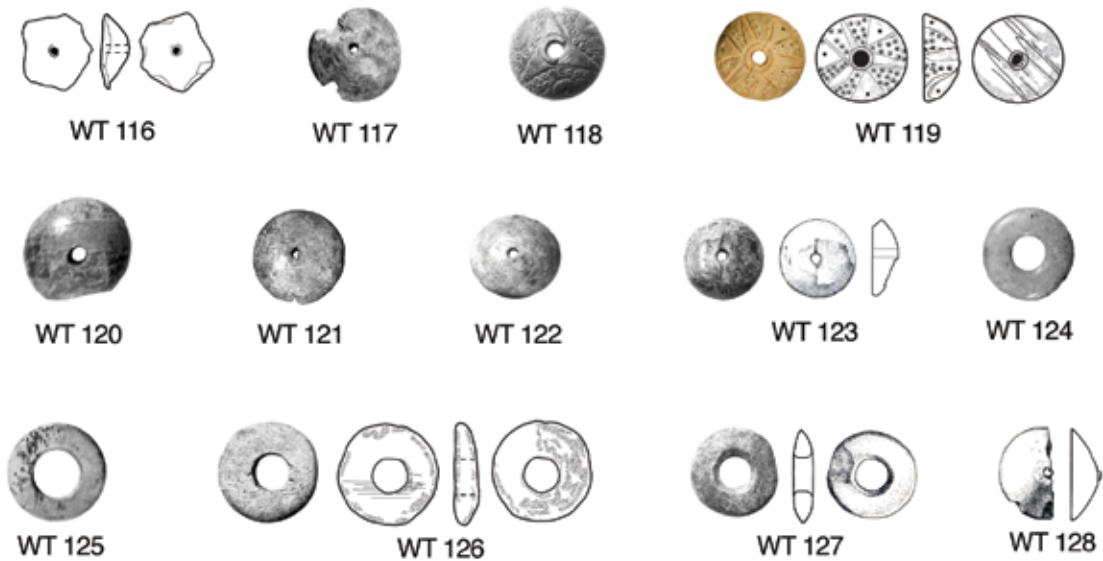
Stone Spindle Whorls



PLATE 2: TOOLS FOR TEXTILE MANUFACTURE



Terracotta Spindle Whorls



Bone Spindle Whorls

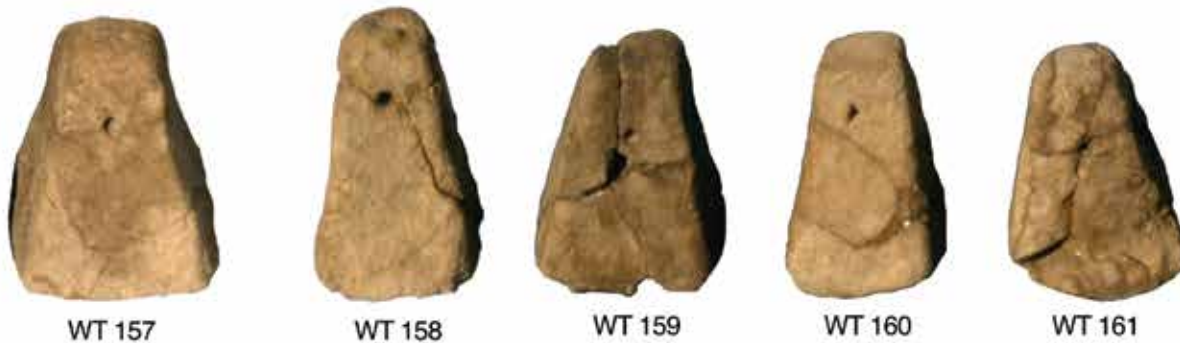




Bone Spindle Whorls



Glass Spindle Whorl



Pyramidal Loom Weights



PLATE 4: TOOLS FOR TEXTILE MANUFACTURE



WT 162



WT 163



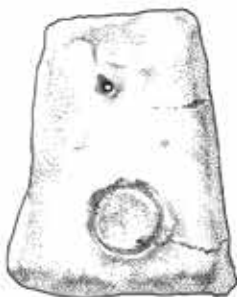
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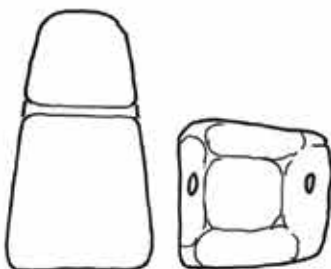
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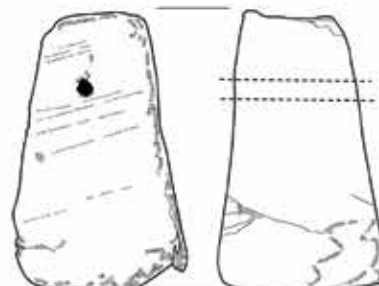
WT 166



WT 174



WT 181



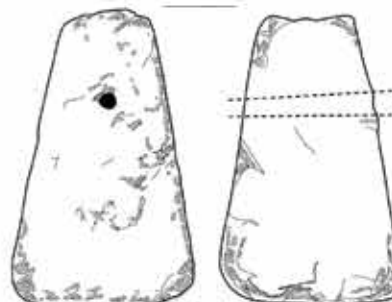
WT 203



WT 210



WT 211



WT 213



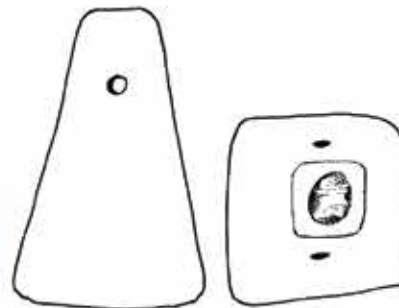
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WT 217



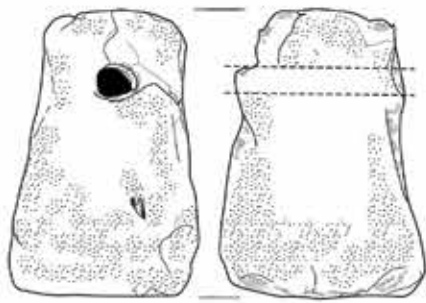
WT 220



Pyramidal Loom Weights



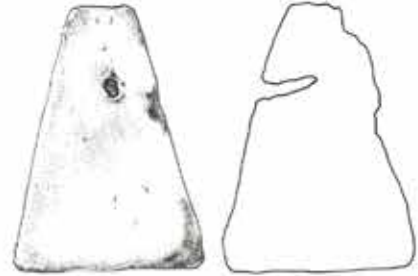




WT 233



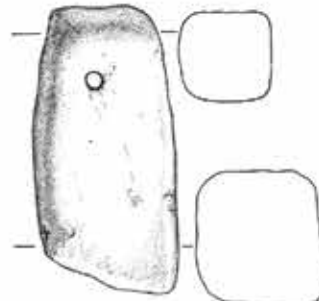
WT 244



WT 254

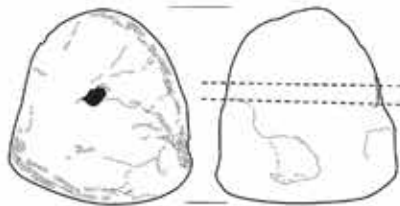


WT 255



WT 257

Pyramidal Loom Weights



WT 269



WT 286

Conical Loom Weights

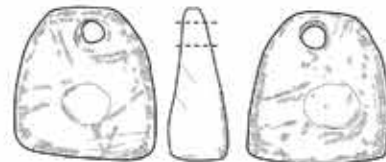


WT 289

Donut Loom Weight



WT 295



Band Loom Weight



PLATE 6: TOOLS FOR TEXTILE MANUFACTURE



WT 314



WT 315



WT 317



WT 322

Spindles

Possible Spindle



WT 330



WT 331



WT 334



WT 335



WT 336



WT 338



WT 341



WT 342



WT 343



WT 344



WT 346

Triangular Pick-up Sticks







WT 347



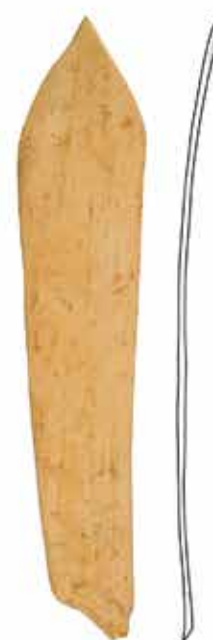
WT 349



WT 353



WT 354



WT 355

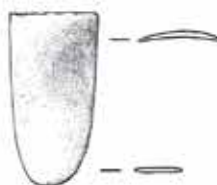
Sharp-nose Pick-up Sticks



WT 358



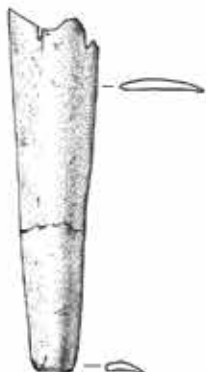
WT 359



WT 360



WT 361



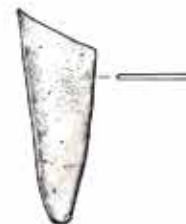
WT 362



WT 364



WT 365

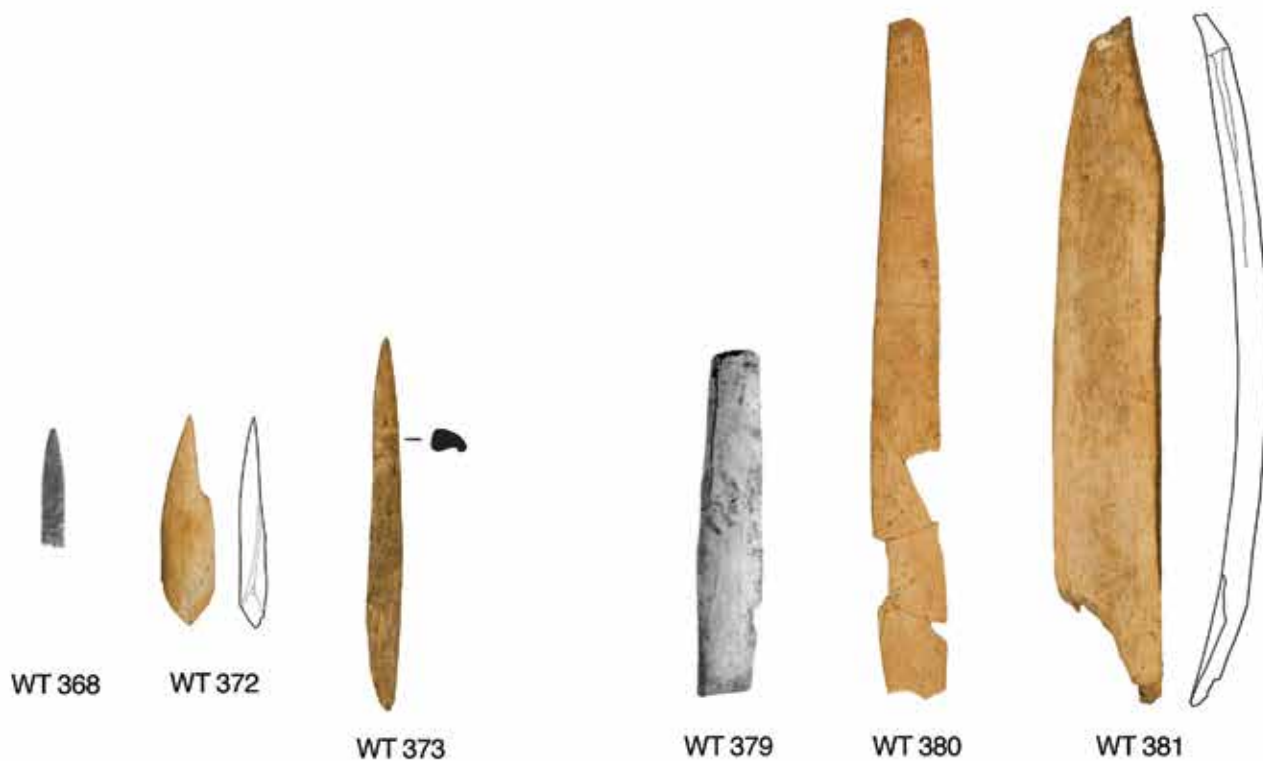


WT 366

Pick-up Stick Bases without Noses: Unknown Types



PLATE 8: TOOLS FOR TEXTILE MANUFACTURE



Pin Beaters

Weft Beaters



Pins, Needles, Needle Case



# APPENDIX: CATALOGUE OF MISCELLANEOUS BONE OBJECTS

by Katherine M. Erdman

In this appendix we present fifty-two objects of bone, ivory, tusk, or shell that were not associated with textile manufacture (**BI 1–BI 52**). We have divided these into seven broad functional groups (table 4). Twelve items are housed in the University of Missouri Museum of Art and Archaeology, and we were able to examine these firsthand; those are noted in the catalogue by an asterisk (\*).

Category	Total no.
astragaloi	7
handles	10
tools	13
misc. bone objects	10
worked bone, unidentified	9
possible worked bone	3
<b>TOTAL</b>	52

Bone objects.  
Table 4

## ASTRAGALOI (**BI 1–7**)

**BI 1** TA70 B5  
Loc. 2432

Bone. Complete; burned and chipped. L. 2.7, W. 1.4.

**BI 2** TA72 B26  
Loc. 2546

Bone. Complete, slightly chipped. L. 4.6.

**BI 3** TA72 B27  
Loc. 2542a

Bone. Complete, from small animal. L. 3.0.

**BI 4** TA72 B28  
Loc. 2542a

Bone. Complete, from small animal. L. 3.0.

**BI 5** TA70 B4  
Loc. 2433

Bone. Complete, both sides shaved. L. 3.1, W. 1.1.

**BI 6** TA69 B22  
Loc. 2500

Bone. Complete. L. 2.4.

**BI 7\*** TA68 B9  
Loc. 2016

Bone. Cut end with hole drilled through center. L. 2.3, W. 1.7, Th. 0.9. Similar: Lamon and Shipton: Megiddo, pl. 77.10.

## HANDLES

### BLADE HANDLES (**BI 8–12**)

**BI 8** TA70 B17  
Loc. 2330

Bone. Broken at one end. Part of bone handle for blade; two iron rivets preserved. P.L. 6.9, W. 1.4.

**BI 9** TA79 B24  
Loc. 7627

Bone. One end preserved. Polished bone tool with hole drilled at one end and part of second hole at broken edge; cross section rectangular with rounded corners. P.L. 3.0, Th. 0.3.

Pl. 1  
MODERN

Pl. 1  
HELL 2B/C

HELL 2B/C

HELL 2C+/ROM 1A

HELL 2C+/ROM 1A

Pl. 1  
ROM 1A

Pl. 1  
HELL 2B/C

Pl. 1  
HELL 2C+/ROM 1A

**BI 10** TA81 B6 Pl. 1  
Loc. 7915 ROM 1B  
Bone. Complete. Rectangular fragment of polished worked bone; rough on one side; polished with rounded edges on the other; small hole drilled through thickness along one edge. L. 2.5, W. 1.7, Th. 0.7.

**BI 11\*** TA68 B20 Pl. 1  
Loc. 3205 ROM 1B/C  
Bone. Broken at one end. One side of handle with three rivet holes; smooth on one side; hook feature near one end possibly for carrying attachment, likely a knife. P.L. 6.4, W. 3.0, Th. 0.5. Similar: Merker, TA II, ii, **M 22**.

**BI 12** TA69 B10 Pl. 1  
No locus  
Bone. Nearly complete. One hole, possibly two, for rivets; remains of metal insert. P.L. 3.1, Th. 0.7.

*POSSIBLE BLADE HANDLES (BI 13–15)*

**BI 13** TA81 B8 Pl. 1  
Loc. 7845 HELL 2A  
Bone or ivory. Mended from two pieces. Irregularly shaped piece with three drill holes 0.4 cm in diameter. L. 3.5, W. 1.6, Th. 0.9.

**BI 14** TA72 B7 Pl. 1  
Loc. 2548 HELL 2+/ROM 1A  
Bone. Complete. Leg bone pierced with large hole at either end. L. 17.2.

**BI 15** TA79 B4 Pl. 1  
Balk trim No stratum  
Bone. Width preserved, one end broken off; cracked down center with edge of bone broken off. Polished rectangular fragment with three pierced holes, one partially missing. P.L. 2.4, W. 0.7.

*OTHER HANDLES (BI 16–17)*

**BI 16** TA81 B5 Pl. 1  
Loc. 8436 ROM 1B/C  
Bone. Cracked on one side; portion missing from topmost section; iron badly corroded. Bone finial composed of spherical knob above two small and one large section. Finial drilled and mounted on corroded iron mass with tip protruding above spherical knob. P.L. 4.65, D. of metal 1.3, D. of finial 1.16.

**BI 17** TA72 B19 Pl. 1  
Loc. 3423 00  
Bone. Broken at one end. Rib bone with plug cut at one end for insertion into socket; other end has cut lines, at second of which break occurs. P.L. 14.5, W. 1.7.

TOOLS

*AWLS (BI 18–19)*

**BI 18** TA79 B8 Pl. 1  
Loc. 2925 ROM 1B  
Bone. Tip preserved. Smoothed and polished triangular point; convex upper surface; lower surface with central rib; concave on one side and convex on other. P.L. 4.7, W. 2.5, Th. 1.2.

**BI 19** TA69 B2 Pl. 1  
Loc. 2405 ROM 1B+  
Tooth. Complete. Worked tooth, possible awl or other tool. H. 3.4, Th. 0.5.

*FISH HOOK (BI 20)*

**BI 20\*** TA68 B16 Pl. 1  
Loc. 2102, 2103 ROM 1A–C and ARAB 1  
Bone. Broken at one end. Triangular hook end; four notches on stem/handle. P.L. 5.5, W. 0.9, Th. 0.2.

*POSSIBLE BLADE (BI 21)*

**BI 21** TA70 B12 Pl. 1  
Loc. 2017 ROM 1B  
Bone. Broken at one end. P.L. 2.5, Th. 0.7.

*SCRAPERS (BI 22–23)*

**BI 22** TA79 B26 Pl. 1  
Loc. 7601 ARAB  
Bone. Broken at one end. Single fragment, triangular in section, edge worked. P.L. 2.3, Th. 0.2.

**BI 23** TA86 B4 Pl. 1  
Loc. 9215 HELL 2C+/ROM 1A  
Bone. Complete. If not a scraper, possibly part of a bone box. L. 4.1, Th. 0.3.

*FRAGMENTS OF POSSIBLE TOOLS (BI 24–30)*

**BI 24** TA69 B13 Pl. 1  
Loc. 1250 HELL 1A  
Bone. One end broken. P.L. 4.9, Th. 0.2.

**BI 25\*** TA68 B22 Pl. 1  
Loc. 3212a HELL 2A  
Bone. One end broken. P.L. 3.8, W. 2.1, Th. 0.2.

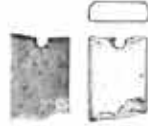
**BI 26** TA79 B11 Pl. 1  
Loc. 2929 HELL 2A  
Bone. Tip preserved, chipped. P.L. 6.1, W. 2.5, Th. 0.2.

- BI 27\*** TA68 B28 Pl. 1 *PARTS OF A BOX? (BI 35–36)*  
 Loc. 2310 HELL 2C  
 Bone. Broken. P.L. 3.0, W. 1.5, Th. 0.2.
- BI 28\*** TA68 B31 Pl. 1  
 Loc. 3211 HELL 2C+/later  
 Bone. Fragment broken in multiple places with a small notch. P.L. 4.5, W. 0.85, Th. 0.15.
- BI 29** TA79 B20 Pl. 1  
 Loc. 7519 ROM 1A  
 Bone. One end broken. P.L. 4.0, Th. 0.1.
- BI 30** TA79 B6 Pl. 1  
 Loc. 5421 ROM 1A  
 Bone. Worked fragment. P.L. 3.7, W. 2.5, Th. 0.4.
- MISCELLANEOUS BONE OBJECTS**
- COUNTER OR INLAY (BI 31)*
- BI 31** TA70 B30 Pl. 2  
 Loc. 2427 HELL 2C+ contam.  
 Bone or ivory. Complete. Convex on top. L. 1.5, H. 0.4.
- POSSIBLE COSMETIC INSTRUMENT (BI 32)*
- BI 32** TA70 B24 Pl. 2  
 Loc. 2112 HELL 2C+  
 Bone. Broken at one end. Tip perhaps burned; rectangular base, long handle, triangular tip. P.L. 10.7.
- JOINT (BI 33)*
- BI 33** TA72 B24 Pl. 2  
 Loc. 21308 ROM 1A/B  
 Bone. Complete. Joint from small chest or furniture; cylindrical with peg at one end, hole at other and hole on side. H. 0.85, D. 0.7.
- SPOON (BI 34)*
- BI 34\*** TA68 B10 Pl. 2  
 Loc. 3212a HELL 2A  
 Ivory. Broken near handle end. Triangular decoration near handle end; small notch near base of spoon basin before handle; horizontally carved line at basin/handle junction. P.L. 6.7, W. 2.0, Th. 0.3.
- BI 35** TA70 B36 Pl. 2  
 Loc. 21103 ROM 1A contam.  
 Bone. Broken. Slightly rounded with evidence of a rim, and wheel marks on interior. P.H. 3.8, P.W. 2.5.
- BI 36\*** TA68 B27 Pl. 2  
 Loc. 2304 ROM 1B  
 Ivory. Broken on both ends. Rectangular in section, overall rectangular shape; sides smooth and parallel. P.L. 6.7, P.W. 0.95, Th. 0.45.
- CONE-SHAPED WORKED BONE (BI 37)*
- BI 37** TA69 B20 Pl. 2  
 Loc. 2413 HELL 2C  
 Bone. Broken at one end. Triangular shape. P.L. 2.1, Pres. D. 0.8.
- CYLINDER (BI 38)*
- BI 38** TA79 B13 Pl. 2  
 Loc. 5310 ARAB/MODERN  
 Bone. Complete. Small, worn and perhaps polished; possibly shaft section of bone pin. L. 1.58, D. 0.4.
- ROUND/OVULAR OBJECT (BI 39)*
- BI 39** TA69 B12 Pl. 2  
 Loc. 2415 ROM 1A  
 Bone. Complete. Appears to have a hole in center. L. 1.4, D. 0.6.
- TUBE (BI 40)*
- BI 40** TA81 B13 Pl. 2  
 Loc. 7811 ROM 1A/B  
 Bone. Complete. Tapers slightly to one end; slightly worn. L. 4.8, D. 1.5.
- WORKED BONE, TUSK, OR SHELL  
 (UNIDENTIFIED OBJECTS) (BI 41–49)**
- BI 41** TA73 B10 Pl. 2  
 Loc. 21412 IRON  
 Bone. Broken at both ends. Long bone on flat side, which has a large and a small hole drilled close together and broken between. P.L. 7.9.

- |  |          |                  |   |          |            |
|--|----------|------------------|---|----------|------------|
| <b>BI 42</b>   | TA72 B23 | Pl. 2            | <b>BI 48</b>  | TA79 B3  | Pl. 2      |
| Loc. 2456  |          | HELL 2A/earlier  | Loc. 5306   |          | MODERN     |
| Bone. Broken at one end. Piece of leg bone with polished surface; three lines incised near broken end. P.L. 7.1.   |          |                  | Bone. Broken at one end. Flat piece of bone, worked all around, one edge rounded. P.L. 2.6, W. 1.1, Th. 0.3.            |          |            |
| <b>BI 43*</b>  | TA68 B17 | Pl. 2            | <b>BI 49</b>  | TA72 B5  | Pl. 2      |
| Loc. 2112  |          | HELL 2C+         | 2.1300  |          | No stratum |
| Bone. Broken at both ends. One flat side; cut marks on one end. P.L. 9.8, P.W. 3.2.  |          |                  | Bone. Broken or cut on one end. Half of a leg bone, possibly a tibia, with three notches on shaft. P.L. 8.6.            |          |            |
| <b>BI 44</b>   | TA70 B40 | Pl. 2            | <b>POSSIBLE WORKED BONE (BI 50–52)</b>  |          |            |
| Loc. 2427  |          | HELL 2C+ contam. | <b>BI 50*</b>   | TA68 B25 | Pl. 2      |
| Shell. Complete. Mussel shell; in natural state: intact except for pitting on outside and some deposit from the metal it was found with: Merker, TA Vol. II, ii, <b>M 37, M 42d, M 58, M 145, M 165, M 211</b> . D. 5.7. |          |                  | Loc. 3222a  |          | HELL 1/2A  |
|  |          |                  | Artiodactyl metapodium. Broken in multiple places. Incised groove 0.4 cm wide lengthwise. P.L. 20.2, P.W. 2.1, Th. 0.5. |          |            |
| <b>BI 45</b>   | TA72 B1  | Pl. 2            | <b>BI 51*</b>   | TA68 B26 | Pl. 2      |
| Loc. 2539  |          | HELL 2C+/ROM 1A  | Loc. 3222a  |          | HELL 1/2A  |
| Tusk. Cut on both ends. P.L. 4.2, D. 1.7.  |          |                  | Artiodactyl metapodium. Broken in multiple places. Incised groove 0.4 cm wide lengthwise. P.L. 8.4, P.W. 1.45, Th. 0.4. |          |            |
| <b>BI 46</b>   | TA81 B21 | Pl. 2            | <b>BI 52*</b>   | TA68 B30 | Pl. 2      |
| Loc. 8439  |          | ROM 1B           | Loc. 3222a  |          | HELL 1/2A  |
| Bone. Broken in multiple places. Thin and flat, roughly triangular; deep groove across middle of finished side. P.L. 4.5, W. 2.6, Th. 1.1.   |          |                  | Artiodactyl metapodium. Broken on both ends. Incised groove 0.5 cm wide lengthwise. P.L. 5.56, P.W. 1.9, Th. 0.4.       |          |            |
| <b>BI 47</b>   | TA81 B22 | Pl. 2            |   |          |            |
| Loc. 5923  |          | ROM 1B           |   |          |            |
| Bone. Complete. Small rectangle: polished with one finished edge. L. 3.7, W. 1.1, Th. 0.3.   |          |                  |   |          |            |



Astragali



Blade Handles



B14



B17

Other Handles



Awls



Fish  
Hook



Possible  
Blade

Possible Blade Handles



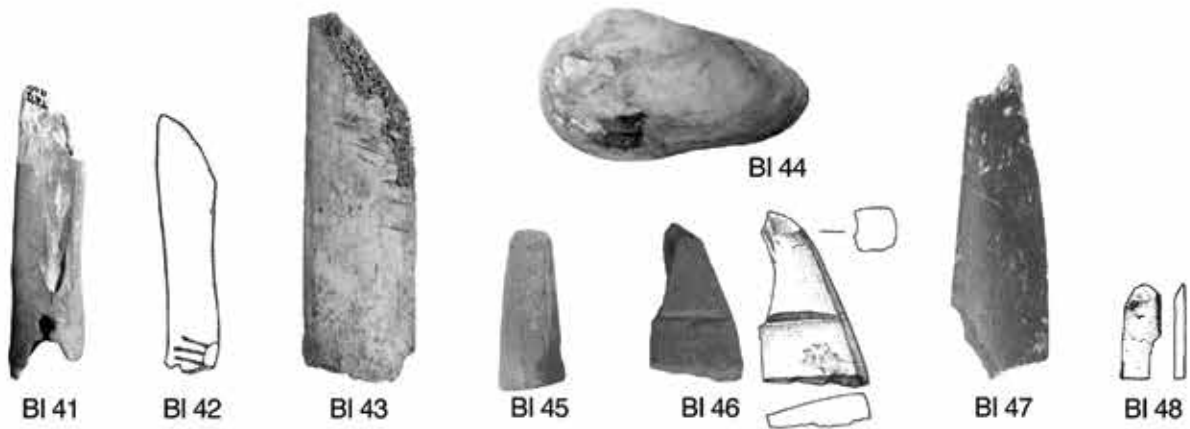
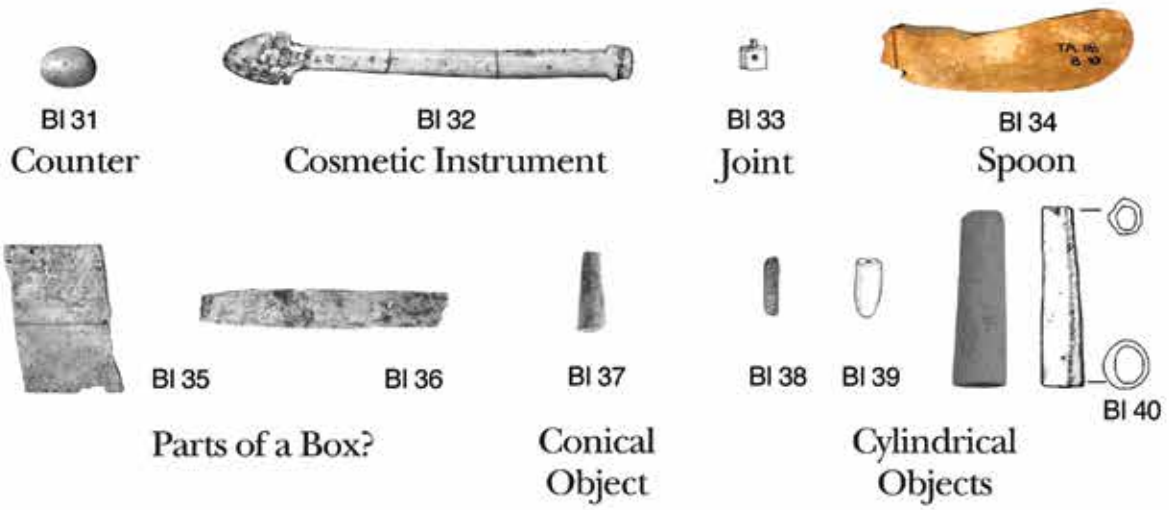
Scrapers



Fragments of Possible Tools



Plate 2: Miscellaneous Bone Objects



Unidentified Objects of Bone, Tusk, or Shell



Possible Worked Bone





## **5. TERRACOTTA AND STONE FIGURINES**

**by Adi Erlich**



# CONTENTS

Acknowledgments . . . . .	221
I Introduction . . . . .	222
II Early Figurines (Mostly Late Bronze and Iron Age I) . . . . .	223
Context and Dating . . . . .	223
Technique and Fabric . . . . .	223
Human Figures ( <b>TF 1–4</b> ) . . . . .	223
Zoomorphic Figures ( <b>TF 5–9</b> ) . . . . .	224
Catalogue of Figurines of the Bronze and Iron Age Periods ( <b>TF 1–9</b> ) . . . . .	227
III Terracotta Figurines of the Persian Period . . . . .	230
Context and Dating . . . . .	230
Technique and Fabric . . . . .	230
Typology . . . . .	230
Catalogue of Persian-period Figurines ( <b>TF 10–12</b> ) . . . . .	230
IV Terracotta Figurines of the Hellenistic Period . . . . .	232
Context and Dating . . . . .	232
Technique and Fabric <sup>232</sup> . . . . .	232
Human Figures ( <b>TF 13–29</b> ) . . . . .	233
Animals ( <b>TF 30–31</b> ) . . . . .	236
Masks ( <b>TF 32–35</b> ) . . . . .	237
Altars ( <b>TF 36–37</b> ) . . . . .	237
Catalogue of Hellenistic-period Figurines ( <b>TF 13–37</b> ) . . . . .	237
V Stone Figurines ( <b>SF 1–2</b> ) . . . . .	246
VI Summary and Conclusions . . . . .	248
Context Concordance . . . . .	250
Bibliography . . . . .	252



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I would like to extend my gratitude to the curators of the Israel Antiquity Authority (IAA), who have helped me examine figurines from Anafa and other sites at the Beth Shemesh storehouse, to the director of the national treasures storerooms Michael Sebbane, and especially to the curator of the Hellenistic and Roman periods Adi Ziv, the curator of the Iron Age and Persian-period Deborah Ben-Ami, and the curator of the Bronze Age Galit Litani. I am thankful to the curator of the Rockefeller Collection of the IAA Alegre Savariego, and to Daphna Tsoran, the curator of the collections of the Institute of Archaeology in the Hebrew University.

Some of the figurines are in the Museum of Art and Archaeology, University of Missouri. I would like to thank the museum's curator, Benton Kidd, and the director Alex Barker for their help. Special thanks are owed to Jeffrey B. Wilcox, registrar curator of the collections, for his patience with my ongoing questions, his assistance with technical details, and photography. I appreciate very much the willingness of the museum's staff to send the figurines to Atlanta so that I could study them in person. Thanks are also due to Oded Borowski from Emory University at Atlanta for his willingness to house the figurines temporarily and for hosting me in his office.

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I thank the following artists and photographers: John Huffstot for his drawing of **TF 1**; Jeffrey B. Wilcox of the Museum of Art and Archaeology, University of Missouri, for photographs of **TF 2**, **TF 5**, **TF 7**, **TF 8**, **TF 12**, **TF 14**, **TF 15**, **TF 32**; Avraham Hai for his photograph of **TF 19**; Yael Yulovitz of the IAA for all remaining photographs except **TF 23** and **TF 26**, which were not photographed.

Adi Erlich  
University of Haifa, Israel  
October 2015

## I. INTRODUCTION

Tel Anafa yielded over fifty terracotta and two stone figurines. Almost all are fragmentary. Thirty-seven of the terracottas were identifiable and are catalogued here (**TF 1–37**), along with both stone figurines (**SF 1–2**). Not catalogued were fourteen others, mostly tiny body fragments, some of which might belong together. Except for two small body fragments (**TF 23**, **TF 26**), all catalogued items were photographed. Most of these figurines are stored in the IAA storehouses at Bet Shemesh. The remainder are housed at the University of Missouri Museum of Art and Archaeology. One item (**TF 19**) was lent to the Bible Lands Museum at Jerusalem for a temporary exhibition on magic. I examined all objects but one (**TF 15**) in person. The figurines came from all over the mound, mostly from secondary or even later fills. Thus most precede the date of the phase in which they were found.

In this chapter these thirty-nine items are presented within four groups according to period and material: nine terracotta figurines of the Bronze or Iron Age (**TF 1–9**); three terracotta figurines of the Persian period (**TF 10–12**); twenty-five terracotta figurines of the Hellenistic and Roman periods (**TF 13–37**); and two stone figurines of the Hellenistic period (**SF 1–2**). In each group, I discuss particulars of context, technology, and typology, followed by a catalogue.<sup>1</sup> The chapter ends with an overview that includes observations on the character of the entire assemblage and its relationship to the site in its various stages of occupation.

In recent years the study of figurines from sites in Israel has intensified, and many new publications have appeared. In addition generous colleagues have shared with me much unpublished material. This relatively good state of research has made it possible for me to look at the figurines from all periods in the broader regional context of the southern Levant, and especially in relation to sites from southern Phoenicia and northern Palestine. The parallels I have provided come mainly from sites in this region, and occasionally as well from more distant sites in the eastern Mediterranean, Egypt, Syria, and Mesopotamia.

Each entry includes a catalogue number and identification, the excavation inventory number, the IAA number (if registered) or indication that the object is at the University of Missouri, the basket and locus number along with its assigned stratigraphic phase, preservation and measurements, fabric, technique of production, description, previous publication if any, parallels, and the object's date as indicated by style and/or context. Where parallels are absent, that information appears in the typological discussion. All measurements are in centimeters.

The following abbreviations are used:

H. = height; P.H. = preserved height; W. = width; and P.W. = preserved width.

TA I, i, ii = S. C. Herbert, ed. *Tel Anafa: Final Report on Ten Years of Excavations at a Hellenistic and Roman Settlement in Northern Israel*. Vol. I, i–ii (JRA suppl. 10.1). Ann Arbor: Kelsey Museum of Archaeology, 1994.

<sup>1</sup>I thank Lorene Sterner for providing locus and basket numbers. Locus locations and descriptions are based on TA I, i, and TA I, ii, appendix A.

## II. EARLY FIGURINES (MOSTLY LATE BRONZE AND IRON AGE I)

### CONTEXT AND DATING

Nine figurines date to the Bronze and Iron Ages: four human and five of various animals. Of these nine, one is a Mycenaean import (**TF 6**). The foundation of the LHSB badly damaged the early structures to which those figurines probably belonged (TA I, i, 148). Only one figurine, **TF 9**, was unearthed in a secure context, sealed under a floor of the Late Bronze II period. The rest appeared in secondary contexts all over the mound, mostly in mixed fills in buildings of the Hellenistic and Roman periods. They are dated by their type, style, and technique.

While some of these figurines clearly date to the Late Bronze period, others, especially the hand-made zoomorphic figurines, are more difficult to situate within the long span from the Early Bronze Age to Iron Age I, all periods attested at Tel Anafa. Nonetheless it seems that most, if not all, of these figurines may date to the Late Bronze II period. A few LB II houses were found on the south slope of the mound (although these had some Iron Age I contamination; see TA I, i, 153–156), and the pre-Hellenistic pottery shows a peak in the LB IIB (see ch. 6, this volume). These remains provide a comfortable context for this small group of objects.

### TECHNIQUE AND FABRIC

The early figurines are all solid. Plaque figurines **TF 1–3** are mold-made at the front and attached to a plaque or a smoothed lump of clay at the back. The crude and asymmetric modeling of human figure **TF 2** shows that it was hand-made. Animal figurines **TF 5–9** were shaped by hand and tools.

Except for **TF 6**, all of these early figurines seem to have been made locally or in nearby regions, probably somewhere in northern Israel. The fabric of **TF 4**, **TF 7**, and **TF 9** is a coarse, crumbly dark brown to reddish brown clay, with large grits and voids. The fabric of **TF 1** is the same color but denser in texture. The fabric of **TF 2**, **TF 5**, and **TF 8** is buff to light red in color, with some grits and voids. Plaque figurine **TF 3** is made of a gritty, porous light red clay; a gray core indicates that it was not fully fired. The margins of the plaque are painted in red. Both the fabric and decoration are unusual, and its technique raises questions as to its date (see below).

**TF 6** is exceptional in its technical details. It is hand-made, of a well-levigated light brown clay, and painted with black stripes. Both style and technique are Mycenaean. This figurine seems to be of Aegean origin.

### HUMAN FIGURES (**TF 1–4**)

Three of the four human figurines are so-called plaque figurines (**TF 1–3**). The figurines are not true plaques cast on the front, but rather front pieces modeled in medium to high relief and attached to a plaque at the back. These objects portray naked women in a frontal pose, a type that was popular at sites in northern Israel during the Late Bronze Age (Tadmor 1982; Moorey 2003, 35–40). Close to Anafa, plaque figurines occur at Hazor in various Late Bronze and Iron Age I contexts (Yadin et al. 1989, pl. CCCXIV.1–2; Yadin et al. 1960, 156, pl. CXC.V.7–8, which comes from the surface in Area F). One fragment from an LB II stratum at Hazor was made in a deep mold and with arms alongside the body, similar to our **TF 1** (Yadin et al. 1958, pl. LXXXIX.15, pl. CLX.1).

The enigmatic image of the naked female rendered on a plaque has been interpreted in various ways, as a goddess (Keel and Uehlinger 1998, 97–105), an ordinary mortal woman if not carrying divine attributes (Tadmor 1982), or as an agent mediating between the two (Moorey 2003, 40). The Anafa figurines may have been used in domestic cult or as apotropaic objects.

**TF 1**, which is the best preserved, belongs to the type of plaque figurine with arms hanging down the sides (Cornelius 2007, 239). It is made in high relief and is three-dimensional. The nude female is wearing an elaborate wig with grooves and two large protruding ears. Her neck and arms are adorned with bracelets and a necklace. The combination of these features—the pose, hair, and jewelry—is relatively rare among Palestinian plaque figurines. Parallels lacking the jewelry come from Gezer (Macalister 1912, 413, pl. CCXX.13), Apeh (Guzowska and Yasur-Landau 2009, 388 fig. 11.2, 411), Megiddo (Sass 2000, 398, fig. 12.35.1), and Hazor (Amnon Ben Tor, personal communication). The closest parallels to **TF 1** come from sites in the Beth Shean and Jezreel valleys: one figurine with both wig and jewelry from Tel Beth She'an (Rowe 1940, pl. LXVIII.A.3); one with similar jewelry from Tel Yossef; and two without jewelry from Tel Masad (Tzori 1958: pl. 7.1,3,4).

**TF 2** preserves only legs with two bulges on the knees. The right leg is adorned with two bracelets. The feet are turned down in a frontal pose, in a type described by Tadmor (1982, 149–161) as a woman lying on a bed. The two ridges flanking the figure may be either the signs of the mold frame, as in a figurine from the Beth She'an region (Tadmor 1982, 158, pl. 8), or the lower part of stalks of long-stemmed flowers held by the woman, as depicted in many Palestinian plaque figurines (Kamlah 1993, 122–125; Cornelius 2004, 47, 194–195 table 2, pls. 5.24–62). In most of the plaques portraying a woman holding flowers, her feet are turned to the side (either one side or turned apart), a pose that together with the flowers Tadmor considered to represent a divine female (Tadmor 1982, 161). In some cases the feet of the woman holding flowers are turning downward, similar to ours (Cornelius 2004, pl. 5.42; Kamlah 1993, Tafel 15 B).

**TF 3** also preserves only part of the legs. It is a more typical example with relatively low relief on a flat plaque. The margins of the legs are shaped as vertical grooves painted in brown. The light red fabric with a gray core is visually distinct from the majority of Late Bronze plaque figurines, as is the coloring of the margins. The brown stripes on the side recall the decoration of the Persian-period figurine **TF 7**. The fragmentary state of **TF 3** makes it difficult to date. Plaque figurines did continue to be made in Phoenicia and Syria through the Iron Age and the Persian period (Tadmor 1982; Nunn 2000, 36–37, pl. 9; Moorey 2002). Thus, while the type itself derives from the Late Bronze, it is possible that this item dates to a later period.

**TF 4** depicts two asymmetric legs, probably shaped by hand. They seem to belong to a naked figure of some kind. It resembles the pose of legs in the plaque figurines but made in a different technique.

### ZOOMORPHIC FIGURES (**TF 5–9**)

Five figurines portray animals: one an upright creature (probably a bear; **TF 5**), three bovines (**TF 6–8**), and one unidentified (**TF 9**). Two are almost certainly Late Bronze in date: **TF 6**, which is a Mycenaean bull, and **TF 9**, an unidentified animal that cannot be later than the Late Bronze Age according to its find context.

**TF 5** portrays an animal in an upright pose. The face is broken. Diagonal scratches on the neck indicate a collar, which suggests that the animal is tamed. The shape of the head and the chubby body may indicate that this represents a bear. Syrian bears were common in northern Israel until the beginning of the twentieth century. A clay figurine of a dancing bear with a bronze nose ring was found in LB/Iron Age I levels at Tel Bazi in north Syria (Einwag and Otto 2006, 125–126, Abb. 14). Another possibility is that **TF 5** portrays a monkey. Monkey figurines dating to the Early Bronze Age have been found in Byblos (Dunand 1950, pl. CLXXII; Jidejian 1986, pl. 23). The monkey figurines are, however, modeled differently than **TF 5**, which resembles a bear more than any other beast.

**TF 6** depicts a bull. It differs from our other bovine figurines, **TF 7** and **TF 8**, in its clay, which is light in color, high levigation, good firing, and also its modeling and special decoration (Ben Shlomo and Press 2009, 58–60). This figurine is an Aegean (Mycenaean) product. Its origin is most probably the Argolid, like the great majority of the Mycenaean products found in Syria-Palestine (Melissa Veters, personal communication; Leonard and Cline 1998, 5; Zuckerman et al. 2010, 411–413). It dates to the Late Helladic IIIB period, meaning the thirteenth century BCE, and represents yet another Mycenaean import found at the site (see ch. 6, this volume).

**TF 6** belongs to the linear type I of Mycenaean bull figurines (French 1971, 151 fig. II, 154–155). In this type the body decoration is rendered by five or more straight bands drawn from the neck of the animal and backward. Some



twenty examples of this type were found in the so-called Petsas house at Mycenae, together with many other figurines (Shelton 2009, 56, 60 fig. 8). It is noteworthy that most of the other bull figurines of Mycenaean imports found in Palestine are of other types, primarily linear type 2, which has fewer bands covering the body or the spine. Examples of type 2 come from the nearby sites of Tel Hazor (Yadin et al. 1989, pls. CCLXXXII.14, CCCXIV.12) and Tel Dan (Biran 1994, 119, fig. 83.9). In Leonard's index of Aegean pottery from Syria and Palestine (Leonard 1994, 138–139), there is only one figurine of the linear 1 type from the region; additional examples of Mycenaean bulls discovered since then do not change this picture. This distinction is not related to chronology, as all of these types date to the Late Helladic IIIB period (as, for example, in Phylakopi at Melos; French 1985, 261).

**TF 7** and **TF 8** are bovines of a more local or regional origin. **TF 7**, which preserves only part of the head with two horns, represents the common breed of bull (*Bos Taurus*). **TF 8** is exceptional in its species, as it shows the Asiatic zebu (humped cattle, *Bos Indicus*). The zebu is typically characterized by the hump on its back, although in our figurine this appears above the neck instead of slightly farther back, as it should be. The zebu was introduced to the southern Levant during the Late Bronze period (Guy Bar-Oz, personal communication). Although the quality of the zebu's milk and meat is low in relation to bulls, its resistance to ticks and parasites and its efficient sweat glands made it suitable to hot and humid regions (Matthews 2002, 440).

In Israel, the earliest zebu figurine in clay was found at Deir El-Balah in the northeastern Sinai, dating to the late thirteenth century BCE (Dothan and Nahmias-Lotan 2010, 203–204).<sup>2</sup> More zebu figurines in clay begin to appear in Iron Age I contexts: at sites in Philistia (Ben Shlomo 2010, 114–118); at Tel Jemmeh in the northwest Negev (Petrie 1928, 8, pl. XXXVII); and in the Shephelah at Tel Beth Shemesh (Grant 1934, 55 fig. 4.4-327, 58.415; Grant and Right 1938, pl. LI.7). Other zebu figurines in clay occur in Iron Age II or later contexts (Holland 1975, 247–248, fig. 28). Two bronze zebu figurines have been found in cult places, one at Hazor dating to the thirteenth century BCE (Yadin 1961, pl. CCCXLI; Negbi 1989, 348–357), and another at a site on Mt. Gilboa in northern Samaria, dating to the Iron Age I (Mazar 1982). Zebu figurines in bronze have also been found in Syria dating to the LB II period (Negbi 1989, 348–357) and in clay more generally in contexts of the second millennium BCE (Matthews 2002, 441–444). On the basis of its similarity to these well-dated parallels, **TF 8** should be attributed either to the Late Bronze Age IIB or perhaps to the Iron Age I.

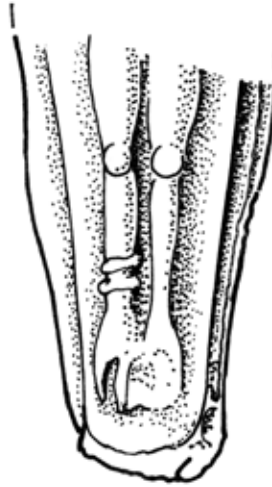
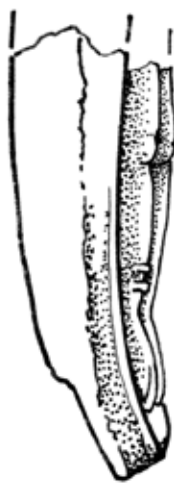
**TF 9** is a small solid figurine of an unidentified animal. It has a small, crudely modeled cylindrical body, short legs, small head, two small bumps along the lower side, and probably a short tail. This is the only figurine that was found in a secure context, sealed under a floor dated to the Late Bronze Age/Iron Age I.

<sup>2</sup>The zebu figurine from Deir El-Balah was found in locus 538, categorized as a topsoil locus. However, since the topsoil was covered by a 13-m-high dune, and since it was uncovered in an area with no Iron Age or later remains, it was attributed to the late thirteenth century, as were the loci above; see plans and sections in Dothan and Brandl 2010, and Locus list, vol. 1, 221. Dothan and Nahmias-Lotan (2010, 204) argue that this is the earliest zebu figurine. Considering the resemblance of this piece to the figurines from Tel Jemmeh, it is possible that the Jemmeh pieces are also slightly earlier than Iron Age I. In any event, a date of the late thirteenth–early twelfth century is suitable for the earlier zebu clay figurines in Palestine.

TF 1



TF 2



TF 3



TF 4



## CATALOGUE OF FIGURINES OF THE BRONZE AND IRON AGE PERIODS (TF 1–9)

**TF 1.** Naked woman (“plaque figurine”) TA78 TC1/IAA 78-1220  
Loc. 13103, basket 1.3.439, HEL11B  
LHSB, west annex (TA I, i, 164)

Upper half of plaque preserved. P.H. 7, W. 4.5. Brown clay (2.5Y 5/3 light olive brown), a few small white grits. Front mold-made, attached to a plaque at the back. Signs of burnishing on the front.

Upper torso of a naked woman with narrow waist, full breasts, and arms set alongside the body. The head is covered with an Egyptian wig. Round face with two large ears and almond-shaped eyes. The nose and mouth are worn. She wears a belt-like necklace and two double arm bracelets. The back is a roughly flattened plaque.

Previous publication: Herbert 1978, 29, fig. 14.

Parallels: Gezer (Macalister 1912, pl. CCXX.13, between the city walls); Megiddo (Sass 2000, 398, fig. 12.35.1, Late Bronze to Iron Age I); Tel Masad and Tel Yosef (Tzori 1958, pl. 7.1,3,4, Late Bronze Age); Tel Beth She’an (Rowe 1940, pl. LXVIII.A.3, Late Bronze Age); Tel Aphek (Guzowska and Yasur-Landau 2009, 388, 411, Late Bronze Age).

Date: Late Bronze Age/Iron Age I.

**TF 2.** Plaque figurine TA73 TC31  
Museum of Art and Archaeology, University of Missouri  
Loc. 21203, basket 2.12.142 ROM

Lower half preserved; surface worn. P.H. 5, P.W. 4. Light buff to light red clay. Front mold-made, attached to a plaque at the back, roughly smoothed.

Lower part of plaque figurine showing two narrow close-fitting legs with relatively large feet. The knees are marked with two small round bulges. On the right leg, near the ankle, there are two small ridges, probably marking a bracelet. Two vertical ridges flanking the figure possibly depict lotus stalks.

Parallels: Tel Gezer (Macalister 1912, pl. CCXX.21); Tel Beth Shemesh (Grant 1931, pl. XI bottom left).

Date: Late Bronze Age.

**TF 3.** Plaque figurine TA79 TC10 7938/IAA 79-1624  
Loc. 7513, basket 7.5.29 ROM 1B  
Building 6 (TA I, i, 130)

Lower portion preserved. P.H. 5, W. 3.1. Pink clay with gray core (10YR 8/4 very pale brown), many grits and voids. Front mold-made, back unmodeled and smoothed, brown strips painted along the sides of the body.

Two schematic legs of a plaque figurine.

Previous publication: Weinberg 1974, 26, no. 11d.

Parallels: Tel Abu Hawam (Hamilton 1935, 55, figs. 322–323, Late Bronze Age); Tel Beth She’an (Mazar 2009, 530–532, fig. 9.1.1, Late Bronze Age).

Date: Late Bronze Age or later.

**TF 4.** Human legs TA72 TC16/IAA 73-1409  
Loc. 21301, basket 2.13.46 ROM 1B/C  
Building 3

Lower portion preserved. P.H. 8.3, W. 4.2. Brown clay (10YR 5/6 yellowish brown), large grits and voids. Solid, hand-made.

Two crude asymmetric legs in relief.

Parallel: Byblos (Badre 1980, pl. LVII.74, Late Bronze Age?).

Date: Late Bronze Age?

**TF 5.** Animal figurine (Syrian bear?) TA68 TC18  
Museum of Art and Archaeology, University of Missouri  
Loc. 3212B, basket 3.2.131 HEL12A

Buildings on the south slope, in dark brown fill below street containing predominantly Bronze Age and Iron Age material (TA I, i, 102, 104)

Head and upper torso preserved except arms. P.H. 2.5, P.W. 1.7. Buff clay with voids and grits. Solid and hand-made.

Small figure of an animal, probably a Syrian bear. The animal is represented upright, with two forearms, broken at their base. An elongated head with two rounded ears, broken at front.

Parallels: Hazor (Yadin 1961 [1989], 257, pl. CCLXXVII.2, pl. CCCXIV.4 (area H, LB II, favissa of temple); Tel Bazi (Einwag and Otto 2006, 125–126, Abb. 14, LB or Iron Age I).

Date: Late Bronze Age.



TF 5



TF 6



TF 7



TF 8



**TF 6. Bull**

Basket 2.14.32

TA73 TC8/IAA 74-939

Balk trim

Forepart of animal is preserved, left leg, horns, and nose missing. P.H. 5.5, W. of front 3.3, P.W. of profile 4.5. Well levigated buff clay (2.5Y8/6 yellow). Black strips on head and body, probably added before firing. Solid and hand-made. Knife pared at the legs.

Forepart of a solid bull in Mycenaean style.

Previous publication: Weinberg 1974, 26, no. 11c.

Parallels: Mycenae (Shelton 2009, 60, fig. 8); Phylakopi, Melos (French 1985, 263, fig. 6.29.856, pl. 45). Mycenaean bull figurines of other types from Palestine: Tel Abu Hawam (Hamilton 1935, 54, fig. 318, Late Bronze); Tel Dan (Biran 1994, 119, fig. 83.9, Late Bronze II); Hazor (Yadin et al. 1989, pl. CCLXXXII.14, pl. CCCXIV.12, Late Bronze Age II).

Date: Late Bronze Age II.

**TF 7. Bovine head**

Museum of Art and Archaeology, University of Missouri

Loc. 2322, basket 2.3.168

TA70 TC35

HELL 2C

LHSB south annex, eastern rooms, soft brown debris in uninhabited area south of the building (TA I, i, 90)

Head, partially preserved. P.H. 2.2, P.W. 2.3. Dark brown to reddish brown clay, crude fabric with large grits. Solid and hand-made.

Two horns and back of a bull's head. Crude modeling.

Parallels: Megiddo (May 1935, pl. XXXVII.M2520, Early Bronze Age).

Date: Second millennium BCE.

**TF 8. Zebu (humped bovine)**

Museum of Art and Archaeology, University of Missouri

Loc. 2112, basket 2.2164

TA70 TC2

HELL 2C)

LHSB, South Annex, western rooms, mudbrick fall (TA I, i, 94).

Head and body preserved, legs and horns missing. P.H. 3.3, P.W. at profile 6.5. Light reddish clay with grits. Solid and hand-made.

Figurine of a humped bull. The animal has a cylindrical body with a short tail, small head, and a bump on the forepart of the body, above the front legs and just behind the head.

Parallels: Deir El-Balah (Dothan and Nahmias-Lotan 2010, 203–204, late thirteenth century BCE); Tel Jemmeh (Petrie 1928, pl. XXXVII, various periods, mostly Iron Age); Ekron/Tel Miqne and other sites in Philistia (Ben Shlomo 2010, 114–116, fig. 3.61, Iron Age I); Tel Beth Shemesh (Grant 1934, 55 fig. 4.4-327, 58.415; Grant and Right 1938, pl. LI.7, Iron Age I).

Date: Iron Age I.

**TF 9. Animal**

Loc. 3425.1, basket 3.4.138

TA70 TC2/IAA 70-1803.

LBII/IRON I

South slope, mudbrick fired and ash debris, fill sealed under 3425 (TA I, i, 156)

Body and two legs preserved. H. 2.1, P.W. of front 2.6, P.W. of profile 5.3. Crumbly brown clay (10YR 5/3), many grits and voids. Solid and hand-made.

Small cylindrical body of an unidentified animal, crudely modeled. Short legs and small head, two small bumps along the lower side, and probably a tail.

Date: no later than Late Bronze Age according to context.

TF 9



### III. TERRACOTTA FIGURINES OF THE PERSIAN PERIOD

#### CONTEXT AND DATING

Three terracotta figurines date to the Persian period. All represent standing draped women. **TF 10** depicts a local Phoenician type, whereas **TF 11** and **12** portray more Greek–Classical types. **TF 10** and **TF 11** were unearthed in pre-Hellenistic fills, along with other early finds, which confirms their date. **TF 12** was found above a late second-century BCE courtyard pavement from one of the houses on the Southern Slope.

#### TECHNIQUE AND FABRIC

All three figurines are mold-made at the front and hand modeled at their backs. The molds were worn and the details abraded. The artisans used a knife to cut the edges. **TF 10** is brittle and poorly fired, with large inclusions and cracks. **TF 11** and **TF 12** are of similar, somewhat better fabric and firing, both with gray core. **TF 11** is decorated with reddish brown stripes painted on the garment of the figure.

#### TYOLOGY

**TF 10** portrays the lower part of a standing draped figure. The crude and schematic modeling resembles figurines of standing pregnant women of the Persian period from sites in southern Phoenicia (Stern 2010, 12–13). Similar standing figurines were discovered at Tel Dor, in a deposit in Area B dated to the Persian and Early Hellenistic periods (Stern 2010, fig. 12.1,3, pl. 7; for the latest objects from this deposit see Erlich 2010, 142). Other examples were found in the favissa at Machmish (Avigad 1960, pl. 11A). As demonstrated by Stern (2010, 13), this is most likely a Phoenician type.

**TF 11** portrays a standing woman draped in a narrow long chiton girded at her waist. The legs are hinted at behind the drapery. The chiton is framed with brown stripes, similar to decoration of Persian-period figurines from Maresha (Erlich 2006a, pls. 1, 2). **TF 12** is of a similar type, but arms are stretched along the sides of the body. This example was made in an inferior mold and is undecorated. Both **TF 11** and **TF 12** resemble figurines of maidens in Greek style dated to the Persian period from Kharayeb near Tyre (Oggiano 2015, fig. 3), Tel Dor (Stern 2010, 18, figs. 22–23, pl. 13) and Tel Sippur (Negbi 1966, pl. II).

#### CATALOGUE OF PERSIAN-PERIOD FIGURINES (TF 10– 12)

<b>TF 10.</b> Standing draped woman Loc. 1393, basket 1.3.361 LHSB, West Annex, tanurs complex, in hard bricky layer below the floor of the tanurs with mainly pre-Hellenistic finds (TA I, i, 96) Lower portion preserved. P.H. 6.4, P.W. at base 5. Crumbly buff clay (2.5Y 8/3 pale yellow) with many grits, voids, and cracks. Solid and made in a worn mold, back roughly smoothed. Lower part of a standing woman draped in a long garment. Behind the flat dress two legs are distinguishable. The feet are hardly seen, standing on a wide base. Parallels: Tel Dor (Stern 2010, fig. 12.1,3, Area B favissa,	TA72 TC42/IAA 73-1408 HELL 2A/B	Persian period); Machmish (Avigad 1960, pl. 11A, Persian period). Date: Persian period.
<b>TF 11.</b> Standing draped woman Loc. 2456, basket 2.4.596 LHSB, South Annex, pit cut through pre-Hellenistic fills (TA I, i, 88) Lower portion preserved. P.H. 9.4, W. of base 5.8. Light gray-whitish clay with gray core, small voids and a few grits. Solid, mold-made and retouched by hand, back smoothed by hand, painted stripes in reddish brown.	TA73 TC24/IAA 74-942 HELL 2A or earlier	



Lower part of a draped woman standing on a rectangular flat base. The woman is wearing a long garment (chiton), with one fold in the middle of the two legs, which are visible behind the drapery. The garment is girdled at the waist. Two schematic feet are shown under the garment. The drapery is decorated with reddish brown stripes framing it.

Previous publication: Weinberg 1974, 26, no. 11b.

Parallels: Tel Dor (Stern 2010, 18, figs. 22–23, pl. 13, Persian); Tel Sippor (Negbi 1966, pl. II, Persian).

Date: Persian period.

**TF 12.** Standing draped woman  
 Museum of Art and Archaeology, University of Missouri  
 Loc. 3418, basket 3.486

TA70 T8  
 HELL 2A

Houses on the South Slope, courtyard of Unit 2, floor pavement and fill above (TA I, i, 107)

Torso preserved; head and lower portion missing. P.H. 7.1, P.W. 4.5. Buff clay with grayish core, a few grits and voids. Front mold-made, back flat and unmodeled, shaped with knife.

Standing draped female with arms alongside the body. The woman is wearing a long garment girdled at the waist, probably a peplos, with a shallow vertical fold in the middle. The modeling is very flat and schematic. The proportions are wrong: the left shoulder and arm are too large, and the arms are too long.

Parallels: Tel Sippor (Negbi 1966, pl. II, Persian period); Tel Dor (Stern 2010, fig. 19.1, pl. 12, Persian period).

Date: Persian period.



TF 10



TF 12

TF 11



## IV. TERRACOTTA FIGURINES OF THE HELLENISTIC PERIOD

### CONTEXT AND DATING

A total of twenty-five terracotta figurines dating to the Hellenistic period were found at the site. As no structure other than residential was found here—no shrine, no tomb, no public building—the figurines should be attributed to the domestic sphere. They may have been used as apotropaic objects, possibly placed in household shrines, or used as toys or decorative ornaments.

Five figurines, **TF 18**, **TF 19**, **TF 22**, **TF 24**, and **TF 29**, were found on Hellenistic floors; the rest come from secondary or later fill accumulations. While this means that for the most part their contexts are not helpful for detailed spatial analysis, their general contexts are suggestive. Seven figurines were found in the southern part of the LHSB, either the South Wing or the South Annex (**TF 17**, **TF 18**, **TF 19**, **TF 21**, **TF 24**, **TF 25**, **TF 31**), as was one of the stone figurines (**SF 1**); three were found in the tanurs complex of the West Annex (**TF 13**, **TF 14**, **TF 37**). It may be that those living and/or working in the southern and western areas of the compound comprised the main owners of the figurines. Ten further figurines were uncovered in fills within the Roman buildings in the area of the former LHSB, and most of these probably came from that building: **TF 20** and **TF 22** in and around Building 1, **TF 27** in Building 2, **TF 15** and **TF 36** in Building 3, **TF 30** and **TF 32** in Building 5, **TF 16** in Building 7, **TF 26** in Building 9, and **TF 35** in Building 10. The remainder were found in topsoil or modern strata (**TF 16**, **TF 23**, **TF 28**, **TF 31**, **TF 33**, **TF 34**).

Almost all of the figurines found in loci dated to Roman and later periods are Hellenistic in type and style; and as they were uncovered in fills and accumulations that contained mostly Hellenistic pottery, the figurines too are very likely Hellenistic in date.<sup>3</sup> It should be remembered, however, that their find spots provide only the latest possible date for the figurines, meaning when they went out of use or became part of a secondary deposit, rather than either the date of manufacture or usage.<sup>4</sup> Table 1 provides the phase date for those terracotta figurines found in Hellenistic contexts.

Cat. no.	Phase and date	Description
<b>TF 13</b>	HELL 2A/B (ca. 125–100 BCE)	wall in West Annex
<b>TF 17</b>	HELL 2C or 2B/C (ca. 100–75 BCE)	
<b>TF 18</b>	HELL 2C or 2B/C (ca. 100–75 BCE)	earth floor in Southern Annex
<b>TF 19</b>	HELL 2C or 2B/C (ca. 100–75 BCE)	earth floor in Southern Annex
<b>TF 21</b>	HELL 2C or 2B/C (ca. 100–75 BCE)	
<b>TF 24</b>	HELL 2C or 2B/C (ca. 100–75 BCE)	earth floor in Southern Annex
<b>TF 25</b>	HELL 2C or 2B/C (ca. 100–75 BCE)	
<b>TF 29</b>	HELL 2C or 2B/C (ca. 100–75 BCE)	cobble floor, south slope
<b>TF 37</b>	HELL 2A/B (ca. 125–100 BCE)	wall in west annex

Hellenistic terracotta figurines found in secure Hellenistic contexts.

Table 1.

### TECHNIQUE AND FABRIC

The Hellenistic figurines are made in a standard technique for the period (Uhlenbrock 1990; Muller 1996: 25–48; Burn and Higgins 2001, 18–20). Most are mold-made and hollow. Only a few backs survive, most of which are plain

<sup>3</sup> On the amount of residual Hellenistic pottery in Roman fills, see Herbert TA I, i–ii, 27–28 and Berlin 1997, 7–16.

<sup>4</sup> On the multiple dates for a figurine type, see Erlich and Kloner 2008, 101.



and unmodeled (**TF 13**, **TF 25**, **TF 31**, **TF 35**). Only the back of a woman's head **TF 18** is mold-made. None of the backs is complete, so there is no evidence for the existence or lack of vents. The only hand-made figurine is captive **TF 19**, which is crudely modeled. **TF 15** shows signs of adding an appliqué on a mold-made piece. The altars **TF 36** and **TF 37** are probably made in a mixed technique, mold-made, hand-made, and modeled by a sharp tool. The interior surface of the figurines is smoothed by finger.

Retouching with a sharp tool is evident in ten figurines: the facial features of **TF 13**, the head of **TF 15**, the hair of **TF 18**, the folds of **TF 23** and **TF 26**, the toes of **TF 28**, the facial features of **TF 31**, masks **TF 32** and **TF 35**, and altar **TF 36** (decorative grooves). Two female heads (**TF 16** and **TF 17**) have small bulges, perhaps due to production in a plaster mold (Erlich and Kloner 2008, 108). **TF 17** carries remains of white slip and pink color. The back of female head **TF 18** is painted in red directly on the bare surface. **TF 33** is covered with a red slip. The rest of the figurines did not preserve any slip or coloring.

The fabric of all examples is reasonably well levigated, with small inclusions and voids, and generally not fully fired. The clay colors range from light gray/whitish, light brown, buff, to light red. The relatively small assemblage and their fragmentary state do not allow the suggestion of workshops. Most, if not all, seem to be local or regional productions, employing minimal retouching or no finishing and no white slip. These same characteristics appear at Maresha (Erlich and Kloner 2008, 113). The technical details of the figurines from Tel Dor are generally better than the Anafa assemblage (Erlich 2010, 138–140), possibly because most of the Tel Dor assemblage is earlier, or else due to a higher-quality supplier. Both the technique and production method of the Anafa figurines are consistent with a Levantine assemblage of the Late Hellenistic period.

#### HUMAN FIGURES (**TF 13–29**)

**TF 13** depicts a Satyr or actor's head. The head is bearded and has a swollen hairdo, deeply grooved forehead, thick and asymmetric eyebrows, protruding almond-shaped eyes, wide nose, and a large mustache falling down to the beard. Such facial features are typical of Satyr figures, as seen in examples from Susa (Martinez-Sève 2002, 116–117, no. 95), or a Silenus from Kharayeb near Tyre (Chéhab 1951–1954, pl. XXI). The face resembles masks of comic actors in its forehead and hairdo, as in examples from Alexandria (Adriani 1940, pl. XXXIV.4) and Tarsus (Besques 1972, pl. 371d). Nevertheless, the Anafa head does not carry the protruding trumpet-like mouth typical of masks and actors (Martinez-Sève 2002, 222–224). Burn and Higgins raise a similar uncertainty regarding a figurine from Cyprus portraying either a Satyr or comic actor (2001, 282, pl. 152.2945). The style, the parallels, and the context of the figurine all point to a Hellenistic date in the second century BCE or earlier.

Whether Satyr or comic actor, **TF 13** belongs to the spheres of Dionysus and the theater (as does another terracotta, Dionysus mask **TF 32**). Satyr and Silenus figures are common in the Hellenistic Levant. They appear on vases, braziers, masks, and figurines from Tel Dor (Rosenthal-Heginbottom 1995, 258–259; Erlich 2010, 132, 191 no. 75, 148, 203); in figurines from Kharayeb, where Silenus is depicted with young Dionysus (Chéhab 1951–1954, 90–91, 138–139, pl. XXI); in a figurine from 'Akko (unpublished; to be published by the author); and in a Satyr mask from Maresha (Erlich and Kloner 2008, 57, pl. 34.183). Masks and actor figurines are also quite common in the region, at Tel Dor (Erlich 2010, 132–134, 191–194), Maresha (Erlich and Kloner 2008, 56–58, pl. 34), and 'Akko (Erlich 2009a, 44–47). This head of a Satyr or comic actor from Anafa joins a growing corpus of objects with theatrical themes from Hellenistic Palestine and Phoenicia, in spite of the absence of theaters in the region (Erlich 2009a, 60; 2010, 159). If the figure was considered by its owner to be a Satyr, this object could also have held an apotropaic meaning, as Satyrs, Sileni, and Bes heads often serve as protective decorations (Tran Tam Tinh 1986, 107; Erlich 2010, 148).

**TF 14** preserves only a round face of a figure, with a groove in the center of each cheek and the remains of a finger on the mouth. This is the Egyptian child-deity Harpocrates, the son of Isis, whose cult was popular in Ptolemaic Egypt (Bailey 2008, 13–14). Figurines of Harpocrates, shown with his finger to his mouth, are very common in Ptolemaic and Roman Egypt (e.g., Besques 1992, pls. 66–70; Bailey 2008, pls. 9–13). In Palestine and Phoenicia his image first appears in the Persian period. Bronze examples are known from Beer Sheva and Maresha (Erlich 2009a, 30–33). Clay figurines of a crouching Harpocrates or a temple boy, sometimes with a finger to his mouth, also occur in Persian and early Hellenistic periods (Stern 2010, 17, 101). **TF 14**, with its fleshy face and the grooved cheeks, resembles Ptolemaic terracottas and so seems to date to the later third to second century BCE. Harpocrates appears at other

Hellenistic sites in the southern Levant, including Maresha (Erlich and Kloner 2008, 10–11, pl. 4.15) and Kharayeb near Tyre (Chéhab 1951–1954, 139–140, pl. III.3, pl. IV; Oggiano 2015, fig. 8). A glass pendant depicting Harpocrates was unearthed in a Hellenistic level at Yavneh-Yam (Fischer and Jackson-Tal 2003). The Egyptian child-god is also attested among the Hellenistic figurines from Delos, along with other Egyptianizing types (Barrett 2011, 247–261).

**TF 15** is enigmatic. It shows a clearly modeled face turned right on a long neck. The head is wrapped by what seems to be headgear tied with lappets surrounding the face. If not for the lack of a mustache, the lappet might have been interpreted as a beard. It is possible that the headgear and the beard-like lappets were not cast in the mold but added later by hand, as suggested by the tooling marks on them. The elongated neck, its angle, and the delicate face resemble female heads. **TF 15** may have been a head of a female figurine modified to be a male by adding the cap and lappets, as in a king's figurine shaped from a woman's head at Hellenistic Failika (Ikaros) in Kuwait (Mathiesen 1982, 30–35).

The cap on **TF 15** is the Persian pointed cap with an upright or folded point, the so-called *tiara* or *kyrbasia*. It is common among figurines of riders and other types of the Persian period in the Levant (Moorey 2000, 476–478; Erlich 2006a, 47–48; Stern 2010, pl. 9). This cap is not a true miter like the *tiara* because it does not end in a fold. During the Hellenistic period, the Persian cap was maintained especially in Mesopotamia and continued to adorn heads of riders. A similar figurine, depicting a head with Persian cap, was found in Susa and dated to the Seleucid–Parthian period (Martinez-Sève 2002, 518). The combination of Hellenistic and Persian iconography in one figurine is typical of Mesopotamia. For example, some Hellenistic terracottas modeled in the earlier “Persian rider” style but wearing the Macedonian cap *kausia* were found at Hellenistic cities in Mesopotamia (Van Ingen 1939, pl. XXX; Karvonen-Kannas 1995, pl. 66; Moorey 2000, 479; Martinez-Sève 2002, 460–481). **TF 15** shows the opposite approach, a Hellenistic figure (perhaps also a rider) with an old-fashioned cap.

In the Levant, parallels for figurine **TF 15** come from Hellenistic Cyprus, depicting warriors riding a horse and dressed in Persian garb (Karageorghis, Merker, and Mertens 2004, no. 295; Burn and Higgins 2001, 284, pl. 154.2953, from Salamis). Sometimes the lappets cover the mouth of the warrior, but this is missing in the Anafa figurine, perhaps because of the combined technique suggested above.

Warriors and hunters wearing Persian caps appear in the late fourth-century BCE Alexander sarcophagus (Von Graeve 1970; Ridgway 1990, 37–45, pls. 10–16). The Persian dress worn by some of the figures on this sarcophagus, including by Alexander himself in the hunting scene (Von Graeve 1970, 95–96; Ridgway 1990, 44, and n. 30), is thought to be a generic depiction of an Oriental, and here indicates Sidonians (Pollitt 1986, 40). The same thing can be said of **TF 15**, which might represent a youth of Phoenician origin. This figurine is Hellenistic in style, but the cap preserves local old traditions and may have been added as an explicit expression of Phoenician identity.

**TF 16**, **TF 17**, and **TF 18** are fragments of female heads. **TF 16** was unearthed in an Arabic I level, while **TF 17** and **TF 18** were uncovered in HELL 2C levels. Of **TF 16** only the face survives, of **TF 17** the upper part of a wreathed head remains, and of **TF 18** only the back of the head is preserved. The blisters on the faces of **TF 16** and **TF 17** suggest production in a plaster mold, a method that had begun in the third century BCE and become common by the second century (Erlich and Kloner 2008, 108).

All three are typical of Hellenistic figurines in the Tanagrene tradition. The style of the faces is characteristic, with clear, opened eyes, distinct eyelids, slightly wide nose, and fleshy lips. Such female heads occur in almost every site in Palestine where figurines have been found (Erlich 2009a, 59). Even very small assemblages, such as from Tel Keisan, Tel Yokne'am, or Tel Beth She'an, have yielded such female figurines (Paraire 1980, pl. 103.20–21; Rosenthal-Heginbottom 1996, 65 no. 3; Erlich 2006b, 619–621).

The coiffure of both **TF 17**, which shows the front, and **TF 18**, which shows the back, is Knidian (Erlich and Kloner 2008, 116). Both wear a thick wreath. That of **TF 17** is only slightly modeled, as was typical of Late Hellenistic figurines from Asia Minor, Egypt, and the Levant (Thompson 1963, 47; Erlich and Kloner 2008, 115–116). The wreath of **TF 18** was retouched and is more detailed. Heads with Knidian hairdos and a thick wreath have been found at Samaria (Reisner, Clarence, and Lyon 1924, pl. 76b) and Maresha (Erlich and Kloner 2008, 38, pl. 20.104), while female heads with only a Knidian hairdo or a wreath on a different coiffure appear at other sites in Israel. For all three of these items, their context, technique, type, and style suggest a date in the second century BCE.

**TF 19** is the only nearly complete figurine of this entire group. It was found on a HELL 2C earth floor in western Room 4 of the South Annex of the LHSB. It depicts a man, hand-made and crudely modeled. He is either lying on the ground with body lifted up from the chest, or he is bowing. The head is triangular, the face is birdlike, and the nose pinched. His body is flat and schematic, with two short legs stretched ahead and a relatively large penis. His hands are turned behind his back.

This figurine is unusual in type, style, and technique. While other Hellenistic figurines from the site are mold-made, this one is crudely modeled by hand and a sharp tool, probably by an unspecialized person rather than an experienced *coroplast*. Whoever made this piece was interested primarily in conveying that this figure was human and male, lying or bending, and captured. The only extra details are the incised navel and eyeholes. The birdlike face, which is typical of early figurines such as some of the Iron Age Pillar figurines (Kletter 1996, 29), seems here to indicate a human face, and not a pleasant one.

Weinberg suggested that this was a curse figure, similar to Hellenistic lead figurines found at Samaria and Maresha (Weinberg 1971, 105–106; cf. Reisner, Clarence, and Lyon 1924, pl. 76y; Bliss and Macalister 1902, pl. 85; Erlich 2009a, 100). The Hellenistic lead figurines are also flat and schematic, sometimes bent in strange poses, with their gender indicated by coiffure or body part, and above all with arms bound behind or in front of the body. Figurines of bound, contorted, and incarcerated figures from ancient Egypt, Greece, and the Near East are explained as supernatural inimical forces (Faraone 1992, 74–93; 1994). In pharaonic Egypt, large figures made of wax or wood and small imitations made of clay were used in magical ceremonies to be spat upon, trampled, cut up, and then burned, as explained in Egyptian texts (Faraone 1992, 78–81; Pinch 1994, 90–103; Ritner 1995, 111–119, 142–144). At a Roman house in Karanis in Egypt, a deposit was found under the floor, including a crude, hand-made, and pierced clay figurine that was burned. This cache was explained as a love-inducing ritual, with the piercing and burning serving as part of the rite (Wilburn 2012, 131–139, pls. 13–14.). This custom, which started in the Egyptian Old Kingdom, persisted until the Roman period, as seen in figurines and magical papyri (Ritner 1995, 112–113, 116, 142–144). In the Greek world talismanic figurines of captives were often made of lead or bronze (Faraone 1994), just as the lead figurines from Palestine mentioned above. The Egyptian curse figurines have their knees bent, unlike the Anafa figurine, which resembles more the Greek types (Rachel Kousser, personal communication).

We may conclude that in **TF 19** we see two sources of influence merged, the Egyptian clay versions and the Greek lead figures, with **TF 19** a cheaper clay substitute for a lead curse figurine. Another possible explanation for making this figurine in clay rather than metal is that it was used in the same manner as the wax and clay bound dolls in Egypt, where the figure's evil forces were suppressed by burning it at the end of the magical ritual. **TF 19** does carry additional signs of burning, seen in the black spots covering the brown surface. Its discovery on a floor implies that it was used in that room, probably for an apotropaic or magic purpose.

**TF 20** and **TF 23** most likely depict standing young men. **TF 20** portrays a standing youth draped in a long chiton and holding a square object in his left hand. He resembles figurines of standing schoolboys holding a writing tablet under their left arm from Kharayeb near Tyre (Chéhab 1951–1954, 102; pls. LXIII.2, LXIV); a plaster mold for the same type was found at Maresha (Erlich and Kloner 2008, 37–38, pl. 19.101). Pupils were a popular subject among Hellenistic terracottas, especially in Alexandria, but there they are usually depicted seated (Weber 1914, pl. 36.394; Graindor 1939, pl. XX.54; Adriani 1940, pls. S.2, XI.6, L.16). The standing schoolboy seems to have been a type local to Phoenicia and Palestine. It is also possible that **TF 20** depicts another type of standing youth, as the square object held by him could be an object other than a writing tablet.

**TF 21**, **TF 22**, and **TF 23** each portray a standing figure with a short chiton ending above the knees. Such a short chiton is typical for standing boys or youths, as in examples from Myrina (Mollard-Besques 1963, pl. 156d) and Delos (Laumonier 1956, pl. 57.577,582). Such figurines are common in the region, as seen in examples from Kharayeb near Tyre (Chéhab 1951–1954, pls. LXIII–LXIV, LXVI, LXX, standing boys and schoolboys) and Tel Dor (Erlich 2010, 129, 185). Standing boys are often shown making various gestures or engaged in some activity, but these examples are too fragmentary to ascertain such specifics.

**TF 24** is a standing draped female. The central part of her garment has folds drawn up the central axis of her body and then falling down in one curled fold on the abdomen. A similar drapery arrangement is seen on standing female figurines from Alexandria (Kassab Tezgör 2007, pl. 6.52) and Delos (Laumonier 1956, pl. 74.732). This specific composition is, however, also typical for the attire of certain goddesses. The central twisted fold is characteristic of Isis, with the mantle tied between her breasts and one end hanging loosely; such Isis figurines have been identified from Amathus on Cyprus (Queyrel 1988, 59, 67, pls. 14–21). This representation also fits the dress of Ptolemaic queens, priestesses, and votaries of Isis, though the composition is slightly different (Erlich and Kloner 2008, 15).

Another possibility is that **TF 24** depicts not the center of the body but rather the legs. In this case it would be portraying the common type of the half-nude Aphrodite, with her garment tied to her hips and a loose fold falling down in between the legs. Similar figurines have been found at Delos (Laumonier 1956, pl. 52.498,499) as well as the Roman figurines from our region, as in figurines from Gerasa (Iliffe 1944, pl. II.26) and Beth She'an (Dayagi-Mendels and

Rozenberg 2010, 104, no. 9). Thus **TF 24** is either a fragment of the garment of an ordinary woman, part Isis, a figure related to Isis, or Aphrodite. According to its style and context it should be dated to the late second century BCE or slightly later.

**TF 25** and **TF 26** are fragments of female drapery. **TF 25** shows the folds of a himation stretched across the body typical of dancers, as on such figurines from Troy (Thompson 1963, pl. XXIV). Late Hellenistic parallels for this type come from 'Akko (Messika 1996, pl. 8.13–15) and Maresha (Erlich and Kloner 2008, 29, pl. 14.64–65). It may also represent a different type of standing draped woman, perhaps with a hand on her waist. **TF 26** is a tiny fragment, showing the left part of a woman wearing a chiton girded below the breasts and a himation covering her shoulder. The size of the fragment does not allow any further identification.

**TF 27** and **TF 29** depict legs and feet. **TF 27** portrays a nude leg with a bent knee. This could be a nude rider, as from Salamis on Cyprus (Burn and Higgins 2001, pl. 154.2953) and Alexandria (Kassab Tezgör 2007, pl. 17d). **TF 28** and **TF 29** show standing figures, with only one foot preserved on each. **TF 28** is standing on a relatively high cylindrical base; **TF 29** is standing on a low square base. Fragments with similar characteristics have been found at Tel Dor (Erlich 2010, 189 nos. 66–67), but obviously the complete figurine might be different.

#### ANIMALS (**TF 30–31**)

The Hellenistic assemblage includes two animals. **TF 30** preserves the head of the Egyptian Apis bull, with a solar disc between the bull's large horns and a wreath on his forehead. The Apis cult was popular in Graeco-Roman Egypt (Boutantin 2014, 252–255). According to the angle of the neck, the missing body was in profile, while the head was turned toward the front. The size of **TF 30**, its proportions, and above all the angle of the neck suggest that it is a head of a figurine rather than a bust or bull's head (*boukranion*) appliqué.

The Egyptian Apis bull is represented in two formats: as a complete figure, normally showing the bull crouching, and as a bust, i.e., bull's head (*boukranion*) appliqué, with a solar disc and amulet on the neck (Boutantin 2014, 260–291; Besques 1992, pl. 80c; Fjeldhagen 1995, 176–177; Bailey 2008, pl. 130.3718–3720). The busts, which are the more common type, date largely to the Roman period, while the figurines are known from Persian and Hellenistic contexts. Apis bull figurines were, naturally, quite popular in Egypt (Boutantin 2014, 282–286; Bailey 2008, 180, no. 3716), but they also appear outside of Egypt, though in smaller numbers (Kater-Sibbes and Vermaseren 1975a, b). From Palestine and Phoenicia come bronze Apis figurines dating to the Persian and Hellenistic periods: from the shrine at Beer Sheva, Ascalon, and the shrine at Mizpe Yammim in Galilee (Erlich 2009a, 30–32; Berlin and Frankel 2012, fig. 31). A Hellenistic terracotta Apis figurine comes from Kharayeb near Tyre (Chéhab 1951–1954, pl. X.4); another, probably carrying a disc between the ears, was found at Delos (Laumonier 1956, 276, pl. 99.1315).<sup>5</sup>

**TF 30** carries a wreath on his forehead. While the busts are sometimes represented with a wreath and solar disc on the heads,<sup>6</sup> an Apis bull figurine wearing a wreath is unique; it does not appear even once in the catalogue of Apis figures within or outside of Egypt (Kater-Sibbes and Vermaseren 1975a, b). Hellenistic figurines of bulls adorned with wreaths do appear at Priene (Rumscheid 2006, pls. 148–149) and Delos (Laumonier 1956, pl. 99.1318). In Greek cult bovines and other animals who were to be sacrificed were sometimes adorned with wreaths (Van Straten 1995, 161–162, fig. 43). Some terracotta figurines of animals have been interpreted as representatives of sacrifice, or even substitutes for those who could not afford an animal (Merker 2000, 265, 322). The depiction of **TF 30** with a wreath may indicate that it is meant to represent a bull to be sacrificed to Apis or to another deity rather than the deity itself.

**TF 31** portrays the head of a horse, modeled in profile at the front and with the other half left unmodeled. It resembles horse's heads from Tarsus (Besques 1972, pl. 381e, I) and Susa (Martinez-Sève 2002, 506, no. 819). Horse figurines, often with their riders, are very common in Hellenistic Palestine and Phoenicia. They appear at Maresha

<sup>5</sup> Terracotta cows or bulls have been found at 'Akko (Messika 1996, pl. 14.140), Samaria (Reisner, Clarence, and Lyon 1924, pl. 75t), and Beth She'an (Erlich 2006b, 623–624), but these fragments do not preserve any Apis attributes. Apis's human variation, the Ptolemaic god Serapis, is attested at Samaria in a terracotta head (Crowfoot, Crowfoot, and Kenyon 1957, pl. XIII.4) and in a Hellenistic dedicatory inscription to Isis and Serapis (Crowfoot, Crowfoot, and Kenyon 1957, 37, no. 13).

<sup>6</sup> See, e.g., a terracotta bust from Troy (Thompson 1963, 140, pl. LVI.285) and another from Hemesa at Syria (Kater-Sibbes and Vermaseren 1975b, 3, pls. IV–VII).

(Erllich and Kloner 2008, 46–51, pls. 25–30), Kharayeb near Tyre (Chéhab 1951–1954, pls. V.1–3, X.5), Tel Dor (Erllich 2010, 196 no. 88), ‘Akko (Messika 1996, pl. 13.129–130; Ariel and Messika 2007, 18, fig. 1.3), Tel Keisan (Paraire 1980, pl. 104.36), and Samaria (Reisner, Clarence, and Lyon 1924, pl. 75r, v).

#### MASKS (TF 32–35)

Fragments of four terracotta masks were found at the site. **TF 32** is the best preserved. It shows an upper part of a mask with a wreath of ivy leaves and flowers, typical of Dionysus or Satyr masks. A similar Satyr mask was found at Maresha (Erllich and Kloner 2008, 57, pl. 34.183). This example also resembles a Roman Dionysus mask from Kastrā (Haifa Museum, the National Maritime Museum 1999, 26); as its context is also Roman, it may have belonged to one of the site’s Roman-era residents. The remaining masks are small fragments showing the eye (**TF 33** and **TF 34**) and the side of the hair (**TF 35**), similar to masks from Tel Dor (Erllich 2010, 192 nos. 78–79).

Masks were very popular in Hellenistic and Roman Palestine and Phoenicia, as evident at Maresha (Erllich and Kloner 2008, pl. 34), Tel Dor (Erllich 2010, 191–185, ‘Akko (Messika 1996, pls. 7.7, 13.120–121; Messika 1997, 122 no. 11), Sussita (Erllich 2009b, fig. 13), Kastrā (Haifa Museum, the National Maritime Museum 1999, 26–27), and more. Some of them are theatrical, others are Dionysiac, and some may have served a general apotropaic function, similar to masks from earlier times (Erllich 2010, 132–133).

#### ALTARS (TF 36–37)

**TF 36** and **TF 37** depict corners or walls of small altars, *arulae*, generally used as incense burners (Yavis 1949, 171–175; Thompson 1963, 141–142). Hellenistic altars were found at Maresha (Erllich and Kloner 2008, 59–60, pl. 35) and ‘Akko (Messika 1996, pl. 13.127–128). Roman altars occur at Tel Dor (Erllich 2010, 135, 197), Caesarea (Patrich and Abu Shaneb 2008, 315, 329), Sussita (Erllich 2009b, 57), and Tarsus (Goldman 1950, pl. 252). **TF 37** was unearthed in a Late Hellenistic context and so is certainly Hellenistic in date; **TF 36** is also probably of the same period.

#### CATALOGUE OF HELLENISTIC-PERIOD FIGURINES (TF 13–37)

**TF 13.** Satyr head or an actor TA72 TC11/IAA 74-940  
Loc. 1276, basket 1.2.338 HELL 2A/B  
LHSB, West Annex, tanurs complex, small wall (TA I, i, 95)

Only the head is preserved. P.H. 3.1, W. 2.7. Light gray clay, gray core, with small voids. Solid and mold-made, back smoothed by hand. Probably retouched.

Bearded head of a Satyr or an actor. The head carries a swollen hairdo (*speira*), deeply grooved forehead, thick asymmetric eyebrows, protruding almond-shaped eyes, wide nose, and a large mustache and beard. A concave groove crosses the mouth and the mustache, either mistakenly or deliberately incised so as to render a smile.

Previous publication: Weinberg 1973, pl. 30C.

Parallels for Satyr: Kharayeb (Chéhab 1951–1954, pl. XXI, Silenus and Dionysos, Hellenistic); Susa (Martinez-Sève 2002, 116–117, no. 95, Satyr and Dionysos, Seleucid/Parthian).

Parallels for actor: Alexandria, Hadra (Adriani 1940, pl. XXXIV.4, mask, Hellenistic); Corinth (Merker 2000, pl. 53.H355, Early Hellenistic); Tarsus (Besques 1972, pl. 371d, actor, Early Roman).

Date: Late Hellenistic.



**TF 14.** Harpocrates head

Museum of Art and Archaeology, University of Missouri  
Loc. 1233, basket 1.2.91

Roman material over the West Annex of the LHSB, bricky soil/  
rubble (TA I, i, 138)

Front of head is preserved. P.H. 2.3, P.W. 1.8. Buff to light red  
clay with small grits and voids. Hollow and mold-made.

Face of Harpocrates. The deity has childish face with full  
cheeks grooved in the middle, clear modeled eyes, large nose,  
and fleshy lips that are hidden behind remains of a finger.

Parallels: Kharayeb (Chéhab 1951–1954, pl. III.3, pl. IV, Hel-  
lenistic); Tarsus (Goldman 1950, 222, figs. 121–125, Hellenistic  
and Roman).

Date: Late Hellenistic.

TA 69 T1

ROM 1

**TF 15.** Man's head<sup>7</sup>

Museum of Art and Archaeology, University of Missouri

Loc. 21308, basket 2.13.65

Building 3, bricky soil north of wall 21301

Front of head and neck preserved. P.H. 4, W. 2.2. Light brown  
clay. Hollow, mold-made. Probably retouched.

Head of a man with Persian headgear. The facial features  
are similar to those of **TF 9**. The headgear and beard-like lap-  
pets were probably applied to the face after casting in the mold.

Previous publication: Weinberg 1973, pl. 30D.

Parallels: Susa (Martinez-Sève 2002, 518, no. 843, Seleucid/  
Parthian); Cyprus (Karageorghis, Merker, and Mertens 2004,  
no. 295, Hellenistic; Burn and Higgins 2001, 284, pl. 154.2953,  
Hellenistic).

Date: Hellenistic.

TA72 TC19

ROM1A/B

TF 14



TF 15



<sup>7</sup>I was not able to examine this figurine in person. I am grateful to Jeffrey B. Wilcox of the Museum of Art and Archaeology at the University of Missouri, who examined the figurine and provided me with the technical description.

**TF 16.** Woman's head TA73 TC27/IAA 74-943.  
 Loc. 4106, basket 4.1.48 ARAB I  
 Building 7, yellow soil (TA I, i, 147)

Front of face is preserved. P.H. 1.8, P.W. 1.8. Light pink clay, well levigated with a few tiny grits. Hollow and mold-made. A few bulges at the inner corner of the right eye and at the left side of the mouth may indicate production in a plaster mold.

Woman's face with wide-opened eyes, accentuated eyelids, slightly large nose, and delicate lips.

Parallels: Susa (Martinez-Sève 2002, 553–554, nos. 909–911, Seleucid/Parthian).

Date: Hellenistic.

**TF 17.** Woman's head with wreath TA70 TC33a/IAA 70-1804  
 Loc. 2419, basket 2.4.336 HELL 2C contam.  
 LHSB, South Annex, eastern rooms, mudbrick fall from wall 2423

Upper part of the head preserved. P.H. 2.3, P.W. 1.8. Light orange clay, well levigated, a few voids. Remains of white slip and pink paint. Hollow and mold-made. A few bulges may indicate production in a plaster mold.

Woman's head wearing a schematic thick wreath shown at the front and what appears to be a kerchief at the back. Her hair arranged in a Knidian coiffure. The face has a triangular forehead, large eyes under heavy upper eyelids, and a wide nose. There are remains of white slip and pink color on the attachment of the wreath and the hair.

Parallels: Maresha (Erlich and Kloner 2008, pl. 20.104, Hellenistic); Tel Keisan (Paraire 1980, 103, nos. 20–21, Hellenistic); Samaria (Reisner, Clarence, and Lyon 1924, pl. 76b, Hellenistic); Tel Dor (Erlich 2010, 174, nos. 19–20, Hellenistic).

Date: Hellenistic.

**TF 18.** Back of woman's head TA80 TC7 3280/IAA 80-974  
 Loc. 7920, basket 7.9.101 HELL 2B/C  
 LHSB, South Wing, beaten earth floor (TA I, i, 58)

Back of head is preserved. P.H. 2.5, P.W. 2.2. Pinkish brown clay. Hollow and mold-made, retouched, remains of red slip.

Back of a woman's head with a Knidian coiffure and a thick wreath. The wreath is incised with small diagonal grooves. The coiffure is not detailed, except for a small double bun resting on the back of the neck.

TF 16



TF 17



TF 18





**TF 19.** Captive  
 Loc. 2138, basket 2.2.223  
 LHSB, South Annex, Western Room 4, earth floor with Hellenistic material (TA I, i, 94)

TA70 TC1/IAA 71-167  
 HELL2C

Almost complete. L. 8.2, H. 4.8, W. 3.2. Dark brown clay with grits, shiny surface. Solid and hand-made.

Crudely modeled man, lying with head at right angle to the body (bending?) and hands bound behind his back. The body is flat and schematic with two short legs stretched ahead. His privates show asymmetric testicles and a relatively large penis. A small aperture in the middle of the abdomen marks the navel. The arms are drawn behind the back. The face is shaped as an owl: rounded forehead, large and sunken cheeks, sharp and long nose (broken at its edge), and two apertures that mark the eyes.

Previous publication: Weinberg 1971, 14.  
 Date: Hellenistic.

**TF 20.** Standing draped figure holding an object (schoolboy?)  
 TA78 TC2/IAA 78-1219  
 Loc. 7411, basket 7.4.34, ROM 1A/B  
 Building 1, soft soil, architectural debris with Hellenistic and Roman pottery (TA I, i, 114)

Front of the body is preserved from below chest to knees. P.H. 6.7, P.W. 3.5. Pinkish brown clay with a few small grits. Front mold-made.

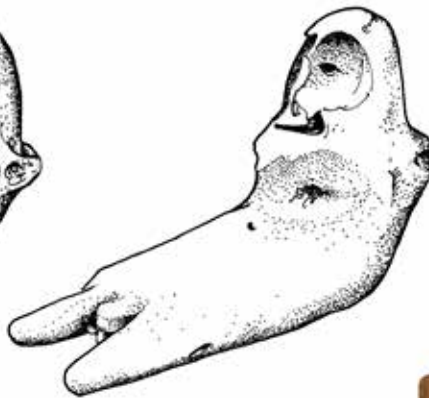
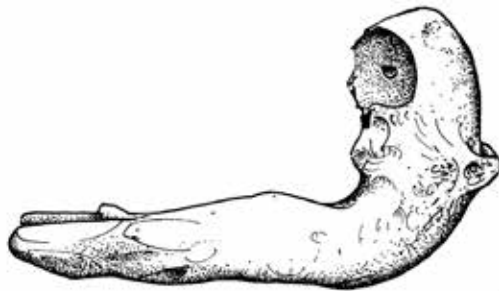
Standing figure draped in a long garment with some vertical folds. The left hand is holding a square object to the left chest.

Parallels for schoolboys: Kharayeb (Chéhab 1951–1954, pls. LXIII–LXIV, Hellenistic); Maresha (Erlich and Kloner 2008, pl. 19.101).

Parallels for standing woman (different drapery), holding a similar unidentified object: Susa (Martinez-Sève 2002, 254, no. 291).



TF 19



TF 20





**TF 21.** Standing boy TA69 TC16/IAA 70-1805  
 Loc. 2312, basket 2.3.83 HELL 2C  
 and Loc. 2409, basket 2.4.264 ROM 1B+  
 LHSB, South Annex, eastern rooms

Front of body partially preserved. P.H. 5, P.W. 3.8. Light red clay with small grits. Mold-made.

Fragment of a standing draped figure, probably a boy. A short chiton with a few diagonal folds exposes one or two fleshy legs.

Parallels: Kharayeb (Chéhab 1951–1954, pls. LXIII–LXIV, LXVI, LXX, standing boys and schoolboys, Hellenistic); Myrina (Mollard-Besques 1963, pl. 156d, young boy, end of first century BCE); Delos (Laumonier 1956, pl. 57.577, Late Hellenistic).



TF 21



**TF 22.** Standing boy TA80 TC17 3280/IAA 80-975.  
 Loc. 7806, basket 7.7.88 ROM 1C  
 Outside Building 1 to the northwest, beaten earth floor (TA I, i, 114)

Front of torso partially preserved. P.H. 6.4, P.W. 2.5. Light red clay with beige core with many small voids. Made in a worn mold.

Front of a draped figure, probably a boy. According to the pose of his legs he is leaning on something or walking. He is wearing a short chiton that is schematically rendered due to a worn mold.

Parallels: Delos (Laumonier 1956, pl. 57.582, Late Hellenistic).



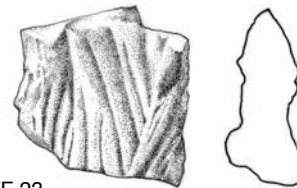
TF 22



**TF 23.** Standing figure TA80 TC1 5280/IAA 80-976  
 Loc. 5524, basket 5.5.2 MODERN  
 Topsoil

Front of torso partially preserved. P.H. 3, P.W. 3. Buff clay with small grits. Mold-made, retouched.

Fragment of a draped figure showing some drapery folds (short chiton?) and part of the leg.



TF 23



**TF 24.** Standing draped woman (goddess?)  
 TA72 TC1/IAA 73-1410  
 Loc. 2444, basket 2.4.410 HELL 2C  
 LHSB, South Annex, Western Room 4, ashy floor running up to wall 2436, Hellenistic finds (TA I, i, 95)

Fragment preserves front of body. P.H. 4, P.W. 3.1. Pinkish clay with some grits and voids. Hollow and mold-made.

Drapery with folds drawn from the sides to the center and up, one fold falling down in the middle.

Parallels for Isis: Amathus (Queyrel 1988, pls. 14–21, second–first centuries BCE); Myrina (Besques 1992, pl. 61b; Mollard-Besques 1963, pl. 108c, end of first century BCE). Parallels for half-nude Aphrodite: Delos (Laumonier 1956, pl. 52.498,499, Late Hellenistic); Gerasa (Iliffe 1944, pl. II.26, first–second centuries CE); Beth She'an (Dayagi-Mendels and Rozenberg 2010, 104, no. 9, Early Roman). Similar drapery fragments: Delos (Laumonier 1956, pl. 74.732, Late Hellenistic). Standing woman (but our folds seem to be in the central axis): Alexandria (Kassab Tezgör 2007, pl. 6.52).

Date: Late Hellenistic.



TF 24





**TF 25.** Drapery fragment of a standing woman, possibly a dancer  
TA70 TC11/IAA 70-1801

Loc. 2425, basket 2.4.288

HELL 2C

LHSB, South Annex, eastern rooms, hard bricky layer with many Hellenistic finds (TA I, i, 91)

Drapery fragment preserved. P.L. 3.2, P.W. 3.5. Pinkish to reddish clay, a few grits and voids. Hollow, front mold-made, back smoothed by hand.

Fragment of an edge of drapery, probably covering an extended arm.

Parallels: 'Akko (Messika 1996, pl. 8.13–15, area L, Late Hellenistic); Maresha (Erlich and Kloner 2008, 29, pl. 14.64–65, Hellenistic). A similar dancer with an arm wrapped in the himation and turned to the side: Troy (Thompson 1963, pl. XXIV).

Date: Late Hellenistic.



**TF 26.** Drapery fragment of a standing woman

TA69 TC15/IAA 70-1808

Not illustrated

Loc. 3319, basket 3.3.54

ROM 1A

Building 9, contaminated, stucco fill debris (TA I, i, 140)

Small fragment of the upper left body is preserved. P.H. 3, P.W. 2.7. Reddish brown clay with a few small voids. Front mold-made and retouched.

Left part of a woman wearing chiton girded below the breasts and himation covering the shoulder. Shallow clear folds are marked on the drapery.

**TF 27.** Leg of a rider?

TA81 TC10 8148/IAA 81-1640

Loc. 5849, basket 5.8.111

ROM 1B

Building 2, yellow fill of Roman deposit (TA I, i, 117)

Small fragment. P.H. 6, P.W. 2.7. Mold-made.

One nude leg in a pose of a riding figure. Behind the leg is a ridge going down, perhaps the animal's leg or another object.

Parallels for rider: Salamis, Cyprus (Burn and Higgins 2001, pl. 154.2953, second–first centuries BCE); Alexandria (Kassab Tezgör 2007, pl. 17d, Hellenistic).



**TF 28.** Base and leg

TA73 TC20/IAA 73-1411

Loc. 5102, basket 5.1.167

MODERN to ARAB 1

Area of the LHSB, subsoil rock

Base and foot are preserved. P.H. 3.5, P.W. 2.5. Light red clay with grits and voids. Mold-made and retouched.

Bare right foot on a high cylindrical base.

Parallels: 'Akko (Messika 1996, pl. 11.93, area L, Late Hellenistic); Tel Dor (Erlich 2010, 189 no. 66, Late Hellenistic).

Date: Late Hellenistic.



**TF 29.** Base and leg

TA69 TC14/IAA 70-1811

Loc. 3321.1, basket 3.3.122

HELL 2B/C

Houses on the South Slope, Unit 2, cobble floor pavement (TA I, i, 108)

Base and foot are preserved. P.H. 2.3, P.W. 2.2. Light brown clay with grits and voids. Mold-made and retouched.

Bare left foot on a rectangular plinth base. Toes are incised.

Parallels: Tel Dor (Erlich 2010, 189 no. 67).

Date: Late Hellenistic.

**TF 30.** Head of an Apis bull      TA80 TC18 3280/IAA 80-973  
 Loc. 8319, basket 8.3.58      ROM 1A  
 Building 5, rubble and many tesserae stones, post-Hellenistic  
 dismantlement and dumping (TA I, i, 126)

Head and part of neck preserved. P.H. 5.2, P.W. 3.3. Buff clay with a few grits and voids. Front mold-made, back smoothed by hand, hollow, with a lump of clay stuck in the cavity.

Head of an Apis bull. The angle of the neck indicates that the missing body was in profile and the head turned to the front. The animal is made in a worn mold with schematic facial features: blurred eyes and nostrils and incised mouth. He wears a thick wreath on the forehead and carries between the two large horns a horned solar disc.

Parallels: Kharayeb (Chéhab 1951–1954, pl. X.4, Hellenistic); Egypt (Besques 1992, pl. 80b, end of first century BCE); Naukratis (Bailey 2008, pl. 129.3716, Ptolemaic, second–first centuries BCE).

Date: Late Hellenistic.

**TF 31.** Horse’s head      TA73 TC13/IAA 74-941  
 Loc. 5203, basket 5.2.29      ARAB–MODERN  
 LHSB, South Wing, mixed eroded soil

Head preserved. P.H. 2.2, P.W. at front 2, P.W. at profile 4. Pinkish brown clay with small voids and a few grits. Front mold-made, back unmodeled, retouched.

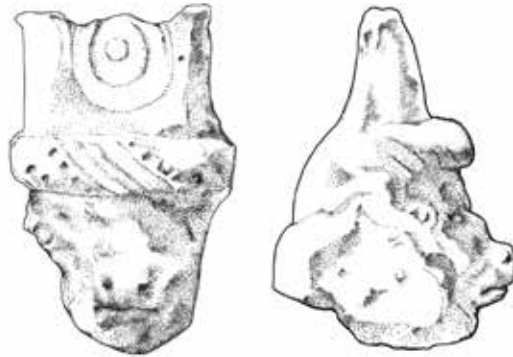
Horse’s head in profile. The ear, eye, and reins are mold-made, while the nostrils, mouth, and teeth are incised with a sharp tool.

Parallels: ‘Akko (Messika 1996, pl. 13.129–130, shrine near the post office, Hellenistic); Susa (Martinez-Sève 2002, 506, no. 819, Seleucid/Parthian); Tharsus (Besques 1972, pl. 381e.I).

Date: Late Hellenistic.



TF 30



TF 31





**TF 32.** Mask fragment of Dionysus or Satyr  
 TA70 T9  
 Museum of Art and Archaeology, University of Missouri  
 Loc. 2606, basket 2.6.70  
 ROM IC  
 Central area, Building 5, bricky debris/rubble (TA I, i, 127)

Upper left part is preserved. P.H. 6.5, P.W. 5.2. Light red clay with grits and voids. Mold-made and retouched.

Upper left side of a mask with ivy leaves, grapes, and a decorative upper band. Fringe for hair and part of the left eyebrow.

Date: Late Hellenistic or Early Roman.

**TF 33.** Mask fragment  
 TA69 TC6/IAA 70-1807  
 Loc. 1300, basket 1.3.2  
 MODERN  
 Topsoil

Small fragment preserved. P.H. 3, P.W. 4.4. Grayish light brown clay, soft fabric, a few small grits. Mold-made and slipped in red.

Fragment of a large mask preserving the right eye (probably about 15 cm in diameter when complete). Thick eyebrow sloping down, small part of the forehead, eyelid, and part of the eye hole.

Parallels: 'Akko (Messika 1996, pl. 7.7 [Tel 'Akko]; pl. 13.121 [shrine near the post office site]); Tarsus (Goldman 1950, pl. 234.277, Roman); Susa (Martinez-Sève 2002, 229, no. 252, Early Hellenistic).

**TF 34.** Mask fragment  
 IAA 78-1223  
 Basket 1.7.32

Small fragment preserved. P.H. 3.3, P.W. 3. Light pink clay with grits and voids. Mold-made.

Probably a mask fragment showing the forehead, left eyebrow, and left eye.

Parallels: Maresha (Erlich and Kloner 2008, pl. 37.183, Satyr mask, Hellenistic); Susa (Martinez-Sève 2002, 228, no. 251, Seleucid/Parthian).

**TF 35.** Mask fragment?  
 TA68 TC 23/IAA 68-1586  
 Loc. 3204, basket 3.2.17  
 ROM 1B/C  
 Building 10 on the South Slope of the tel, bricky soil, floor or construction phase (TA I, i, 143)

Small fragment of front and back preserved. P.H. 7.2, P.W. 3.2. Light brown clay with small grits and voids. Mold-made and retouched.

Possibly a side of a mask with schematic incised short lines that might be hair.

Parallels: Tarsus (Goldman 1950, pl. 235,275,290, Roman).



**TF 36.** Altar fragments

Three fragments, non-joining but probably belonging to the same object:

(a) TA68 TC 7a/IAA 68-1583  
Loc. 2303, basket 2.3.32

ROM1B

From the main stucco deposit  
(b) TA68 TC 7b/IAA 68-1583  
Loc. 2309, basket 2.3.58

ROM1B

Building 3, from the bottom of stucco deposit  
(c) TA68 T34/IAA 70-1815

ROM1B

Loc. 2326, basket 2.3.155  
Building 3, robber's trench of wall 2313 (TA I, i, 121-122)

Largest fragment: P.H. 3.8, P.W. 3.6. Pinkish brown clay, soft fabric, with grits, cracks, and voids. Mold-made (?) and retouched.

Three corners of the same square altar. The base is decorated with incised straight lines.

Parallels: 'Akko (Messika 1996, pl. 13.127-128, shrine at the post office site, Hellenistic); Caesarea (Patrich and Abu Shaneb 2008, 329, Early Roman); Maresha (Erlich and Kloner 2008, 59-60, pl. 35, Hellenistic); Sussita (Erlich 2009b, 57, Roman); Tel Dor (Erlich 2010, 135, 197, Early Roman); Tarsus (Goldman 1950, pl. 252, Roman).

Date: Late Hellenistic.

**TF 37.** Altar fragment?

TA73 TC9/IAA 73-1412

Loc. 1276, basket 1.2.338

HELL 2A/B

LHSB, West Annex, tanurs complex, small wall (TA I, i, 95)

Small fragment preserved. P.H. 2.6, P.W. 2.2. Pinkish clay with grits and many voids. Mold-made?

Corner of a square object, altar, architectural model, or a base. One side is a full wall, while the other is a leg-like base.

Parallels: See **TF 36**.

## V. STONE FIGURINES (SF 1–2)

Two figurines made of soft limestone or chalk, called *kirton*, were also found at Tel Anafa. The site is situated on a basalt base, surrounded by either basaltic or alluvial soils. A few kilometers to the east there are some small *kirton* outcrops from the Eocene (Anat Cohen-Weinberger, personal communication), but these limited spots do not seem to have been the source for a specialized craft such as sculpting figurines. It seems more likely that the objects were brought from elsewhere in the Upper Galilee, where many *kirton* formations exist.

**SF 1** depicts a standing female, robed, her head and part of her left arm missing. She assumes a frontal, hieratic stance on a low base and wears a chiton and a red-painted himation. Her left arm is pressed along her body, her right resting on her chest and holding some object, perhaps a flower or a small bird. The ends of her hair fall on her right shoulder.

Although the head is missing, it is clear that the body is dwarfish, awkward, and disproportioned. The stone surface is rough. The figure was carelessly made, resulting in a somewhat ungainly appearance. The arm is thick and clumsy, as are the fingers. The outer garment is meant to be delicate, with a V-shaped collar. However, it is depicted as heavy drapery with a rounded, flat collar enveloping a regrettably thick neck. The folds are few in number and diagonal. A Hellenistic limestone statue similar in pose, frontal stance, and dwarfishness of the body was found in Cyprus (Hermery 1989, 375 no. 761), but its modeling is more intricate and plastic than the Tel Anafa piece. Women in a similar pose, holding objects, are portrayed in terracotta figurines. A terracotta figurine of a young woman carrying a bird was revealed at Maresha (Erlich and Kloner 2008, 38, pl. 20.103).

Weinberg suggested that the figurine depicts Demeter (1970, 23–24). It is true that figurines depicting a woman offering some kind of object or an animal held close to her body can often be associated with the cult of Demeter. Hellenistic terracotta figurines of a similarly posed woman holding a ball have been revealed at the Temple of Demeter and Kore at Acrocorinth (Merker 2000, 125–126, pl. 26). However, there is no proof that statuettes of this type represent the goddess, a priestess, or a worshipper (Connelly 1988, 5; Merker 2000, 327–328). Stone statues from the Hellenistic period in Cyprus depict a variety of figures—women, men, and children—that assume the stance of a worshipper bringing an offering (Connelly 1988). At Umm el-Amed, next to Sidon, a statue of a standing woman with flat, linear garment folds was found (Dunand and Duru 1962, pl. XXXIII, no. 1). Worshipers offer prayers to various gods, not necessarily Demeter. This statuette depicts a figure in prayer, or perhaps a goddess, in traditional Greek iconography but in a style both provincial and quite inelegant.

**SF 2** is too fragmentary to be identified with certainty. It looks like a straight base with a vertical wall. It could be a base of a figurine or a small incense altar.

**SF 1.** Standing woman  
 Loc. 2413, basket 2.4.159  
 LHSB, South Wing, eastern rooms, pottery dump (TA I, i, 91)  
 Headless, parts of the front left and back right are missing, broken in the middle, and restored. Deep hole in left shoulder, perhaps for insertion of a rod for attachment of something. A depression at the back of the right arm. P.H. 14.1, H. of base 1.2, W. of front 6.8, W. of profile at base 4.7. Front sculpted with a sculpting tool, back unmodeled with vertical grooves. Red paint covering the garment of the figure.

Woman standing on a square base in a hieratic pose. She is dressed with a chiton with a deep V-shaped collar and himation. The left arm is stretched along the body, and the right arm is bent to the breasts, holding a small object. On the left shoulder

TA69 SC2/IAA 71-100

HELL 2C

are remains of a hair lock. The body is disproportioned, especially in the thick neck and the large right hand.

Previous publication: Weinberg 1970, 23.

Date: Late Hellenistic.

**SF 2.** Figurine base or altar

Loc. 2132, basket 2.13.182

Building 3, fill sealed under wall 21306

One small fragment. P.H. 3.8, P.W. 8.5 at base. Formed with a sculpting tool.

A base made of chalk, with an upper wall. Could be a small altar or a base for a figurine.

Date: Late Hellenistic or Early Roman.

IAA 73-1418

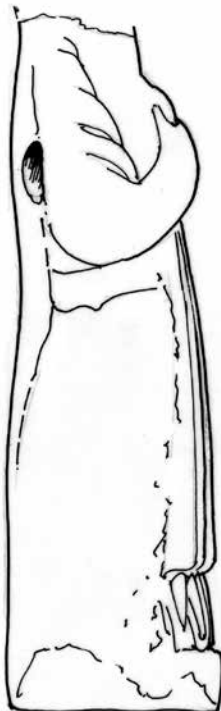
ROM IA



SF 1



SF 1



SF 2

## VI. SUMMARY AND CONCLUSIONS

The assemblage of the Bronze and Iron Ages is varied and includes both standard plaque figurines as well as some pieces that are unique in the region, such as the bear, the zebu, and the specific subtype of Mycenaean figurine. For a rather small site and considering the limited exposure of these early periods, this is a relatively sizable and significant collection. Including also the uncatalogued fragments, these earlier pieces comprise about one-fifth of the whole assemblage of terracottas from the site (without them the early terracottas are one-fourth of the assemblage). Since most of these were found in later fills, we do not know their original usage or even whether they belong to the same stage of the site's life.

Some clues may suggest a more precise context. One object, the Mycenaean bull **TF 6**, certainly dates to the Late Bronze II period, meaning the thirteenth century BCE. The zebu **TF 8** could also fit here (or else in the Early Iron Age). The pottery from the LB phase at the site shows a peak in the LB IIB period (see ch. 6, this volume). These points may be connected to larger regional movements. Sharon Zuckerman (2007, 25) suggested that Tel Anafa and Dan absorbed inhabitants of Hazor who fled the city at the end of the thirteenth century BCE. Hazor is 37 km from Tel Anafa as the crow flies, and Dan a further 16 km. Further study has shown that Dan suffered a decline in the thirteenth century BCE similar to that at Hazor (Rachel Ben-Dov, personal communication; Ben-Dov 2011). It may be that the settlement at Tel Anafa during the late thirteenth century is a result of the events that took place in these nearby cities, especially at neighboring Dan.

From the Persian period only three figurines, standing women of three different types, were found. The few figurines are mirrored by the relatively small amount of pottery (Berlin 1997, 17–18), glass (Grose 2010, 19), and lamps (Dobbins 2010, 112, graph 1). No structures from this phase were found. These remains are too limited to support any conclusions on the nature of the site.

As one would expect, the largest assemblage belongs to the Late Hellenistic period, the time of the flourishing of the LHSB. Most of the Hellenistic figurines were found either in Hellenistic levels of the LHSB or in secondary deposits in the Roman buildings erected above it. No figurines can be firmly attributed to the site's Roman phase.

The Hellenistic figurines were found either in the LHSB's South Wing or South Annex (seven terracotta and one stone figurine) or in the tanurs complex of the West Annex outside the building (three figurines). Two more figurines come from the houses of the Southern Slope, which Herbert attributes to the building's servants (TA I, i, 100–102). None were found in the courtyard or in the LHSB's northern, eastern, or western wings. It is true, of course, that the figurines were small and portable and could be easily moved from place to place. Still, their distribution in the LHSB only in the South Wing, South Annex, and West Annex is very suggestive.

The South Wing, South Annex, and West Annex were all service areas. In the West Annex were tanurs for bread making (Wells et al. 2010, 302–303); in the South Annex were stone vessels and tools for crushing and grinding raw plants, food, and dye material (Wells et al. 2010, 312, fig. 8). High concentrations of weaving and spinning implements were found here (see ch. 4, this volume; weaving tools were also found in other areas of the building). Food preparation and textile production were both largely, if not exclusively, female activities. The similar distribution of objects related to these service activities with figurines may suggest that these objects were not the property of the villa's male residents but instead belonged to working females, whether free or slave, adult or child. Those women would have owned and used the figurines and perhaps employed them in household rituals and/or magic.

Four general conclusions may be drawn from the entirety of the Hellenistic repertoire of figurines. First, while this is largely a typical assemblage for its place and time, meaning the southern Levant in the late second/early first centuries BCE, there are a number of items that specifically evoke Egypt and Phoenicia. Egyptian types consist of Harpocrates **TF 14**, curse figure **TF 19**, Apis bull **TF 3**, and perhaps also Isis **TF 24**. A Phoenician type may be head **TF 15**, and this should be seen in tandem with other Phoenician elements found here, including in the architecture, decoration, and pottery (TA I, i, 17–18; Berlin 1997, 23–29). These two influences should actually be seen as a set



since Egyptian motifs were often used to convey Phoenician identity in Persian and Hellenistic times (e.g., at 'Akko: Erlich 2009, 46–47; at Kharayeb: Chéhab 1951–1954, 79–84).<sup>8</sup>

Second, some of the Hellenistic figurines from Anafa reflect an amalgamation of cultures that is somewhat unusual in the Hellenistic east, where it seems to have been more common for Greek and native cultures to exist side by side rather than merge together (Erlich 2009, 116). Here, certain types show a real integration of sources of inspiration. Hellenistic youth **TF 15**, probably a rider, wears a Persian cap.<sup>9</sup> Curse doll **TF 19** combines Greek and Egyptian characters. Egyptian Apis bull **TF 30** wears a wreath, as in the Greek world. The chalk female figurine **SF 1** depicts the iconography of a standard Greek type but in local material and technique. This hybrid art is typical of Hellenistic Phoenicia (Nitschke 2011).

Third, some of the figurines suggest a protective magic function. Such may be the Dionysiac representations of Satyr **TF 13**, curse figure **TF 19**, and mask **TF 32**. The curse figure has signs of burning on its surface. One may imagine one of the servants performing a magical ritual with this figurine, burning it in order to control evil forces, and leaving it on the room's floor as a protective measure to ensure good luck. The small incense or votive altars may have also been used in small rites as a guarantee of abundance.

Finally, the different techniques and qualities of these figurines suggest that they were not produced in a single nearby workshop but instead found their way to the site from different places. In contrast to the great numbers of more luxurious finds from the site, such as the imported dishes in ceramic and glass, metal objects, and the stucco wall decorations, the few figurines were modest and functional. They were inexpensive adornments for those residents whose day-to-day toil supported the more glamorous lifestyle of the villa's owners.

The assemblage of figurines from Tel Anafa is part of the story of a small site, situated at a busy crossroad, whose location allowed residents to absorb various inspirations from surroundings near and far. And yet, the assemblage also reminds us that life in this corner of the Hula Valley probably did not change much through the ages. One type that recurs in both earlier and later times is the bull. It appears three times in the small Late Bronze Age repertoire and again as one of only two animals depicted in the Hellenistic corpus. These bulls may have symbolized Syrian or Egyptian gods, whether Ba'al, Hadad, or Serapis, or relate to initiation ceremonies of overcoming a wild ox. I prefer instead to see them as representations of the patient and hard-working animals who carried the burden of agriculture in the fertile valley of the Hula, from antiquity until modern times.

<sup>8</sup> For hybrid Phoenician art in the Hellenistic period, see Nitschke 2011.

<sup>9</sup> Compare the opposite phenomenon in Hellenistic Mesopotamia, of so-called "Persian rider" types wearing a Hellenistic cap, the *kausia*; see Erlich and Kloner 2008, 47.

## CONTEXT CONCORDANCE

Loc. no.	Basket no.	Cat. no.	Inv. no	Stratum	IAA #/ Location	Type	Era
1233	1.2.91	<b>TF 14</b>	TA69 TC1	ROM 1	MO	Harpocrates head	Hell–Early Rom
1276	1.2.338	<b>TF 13</b>	TA72 TC11	HELL 2A/B	74-940	Satyr head	Hell–Early Rom
1276	1.2.338	<b>TF 37</b>	TA73 TC09	HELL 2A/B	73-1412	altar fragment	Hell–Early Rom
1300	1.3.2	<b>TF 33</b>	TA69 TC06	MODERN	70-1807	mask fragment	Hell–Early Rom
1393	1.3.361	<b>TF 10</b>	TA72 TC42	HELL 2A/B	73-1408	standing draped female	Persian
2112	2.2.164	<b>TF 8</b>	TA70 TC02	HELL 2C	MO	zebu (humped cattle)	Bronze–Iron Age
2132	2.13.182	<b>SF 2</b>	no inv.	ROM 1A	73-1418	altar or base fragment—chalk	Hell–Early Rom
2138	2.2.223	<b>TF 19</b>	TA70 TC01	HELL 2C	71-167	captive	Hell–Early Rom
2303, 2309, 2313, 2326	2.3.32, 58, 155	<b>TF 36</b>	TA68 TC07a–c	ROM 1B	68-1583	altar fragment	Hell–Early Rom
2312	2.3.83	<b>TF 21</b>	TA69 TC16	HELL 2C	70-1805	standing boy	Hell–Early Rom
2322	2.3.168	<b>TF 7</b>	TA70 TC35	HELL 2C	MO	bovine head	Bronze–Iron Age
2413	2.4.159	<b>SF 1</b>	TA69 SC02	HELL 2C	71-100	standing woman—chalk	Hell–Early Rom
2419	2.4.336	<b>TF 17</b>	TA70 TC33a	HELL 2C contam.	70-1804	woman's head with wreath	Hell–Early Rom
2425	2.4.288	<b>TF 25</b>	TA70 TC11	HELL 2C	70-1801	drapery fragment—standing woman	Hell–Early Rom
2444	2.4.410	<b>TF 24</b>	TA72 TC01	HELL 2C	73-1410	standing draped woman	Hell–Early Rom
2456	2.4.596	<b>TF 11</b>	TA73 TC24	HELL 2A/earlier	74-942	standing draped female	Persian
2606	2.6.70	<b>TF 32</b>	TA70 TC09	ROM 1C	MO	Satyr mask fragment	Hell–Early Rom
3204	3.2.17	<b>TF 35</b>	TA68 TC23	ROM 1B/C	68-1568	mask fragment	Hell–Early Rom
3212B	3.2.131	<b>TF 5</b>	TA68 TC18	HELL 2A	MO	Syrian bear	Bronze–Iron Age
3319	3.3.54	<b>TF 26</b>	TA69 TC15	ROM 1A/B	70-1808	drapery fragment—standing woman	Hell–Early Rom
3321.1	3.3.122	<b>TF 29</b>	TA69 TC14	HELL 2B/C	70-1811	base and leg	Hell–Early Rom
3418	3.4.86	<b>TF 12</b>	TA70 TC08	HELL 2A	MO	standing draped female	Persian
3425.1	3.4.138	<b>TF 9</b>	TA70 TC21	LB II/IRON I	70-1803	animal	Bronze–Iron Age
4106	4.1.48	<b>TF 16</b>	TA73 TC27	ARAB 1	74-943	woman's head	Hell–Early Rom
5102	5.1.167	<b>TF 28</b>	TA73 TC20	ARAB/MODERN	73-1411	base and leg	Hell–Early Rom
5203	5.2.29	<b>TF 31</b>	TA73 TC13	ARAB/MODERN	74-941	horse's head	Hell–Early Rom
5524	5.5.2	<b>TF 23</b>	TA80 TC01	MODERN	80-976	standing figure	Hell–Early Rom
5849	5.8.111	<b>TF 27</b>	TA81 TC10	ROM 1B	81-1640	leg of rider?	Hell–Early Rom
7411	7.4.34	<b>TF 20</b>	TA78 TC02	ROM 1A/B	78-1219	schoolboy?	Hell–Early Rom
7513	7.5.29	<b>TF 3</b>	TA79 TC10	ROM 1B	79-1624	plaque figurine	Bronze–Iron Age
7806	7.7.88	<b>TF 22</b>	TA80 TC17	ROM 1C	80-975	standing boy	Hell–Early Rom

Loc. no.	Basket no.	Cat. no.	Inv. no	Stratum	IAA #/ Location	Type	Era
7920	7.9.101	<b>TF 18</b>	TA80 TC07	HELL 2B/C	80-974	woman's head—back	Hell—Early Rom
8319	8.3.58	<b>TF 30</b>	TA80 TC18	ROM 1A	80-973	Apis bull head	Hell—Early Rom
13103	1.3.439	<b>TF 1</b>	TA78 TC01	HELL 1B	78-1220	nude female	Bronze—Iron Age
21203	2.12.142	<b>TF 2</b>	TA73 TC31	ROM	MO	plaque figurine	Bronze—Iron Age
21301	2.13.46	<b>TF 4</b>	TA72 TC16	ROM 1B—C	73-1409	human legs	Bronze—Iron Age
21308	2.13.65	<b>TF 15</b>	TA72 TC19	ROM1A/B	MO	man's head	Hell—Early Rom
balk trim	2.14.32	<b>TF 6</b>	TA73 TC08		74-939	bull	Bronze—Iron Age
	1.7.32	<b>TF 34</b>	no inv.		78-1223	mask fragment	Hell—Early Rom

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## **6. POTTERY OF THE BRONZE AND IRON AGES**

**by William Dever  
and Ann Harrison**



## CONTENTS

I	Introduction . . . . .	265
II	Early Bronze Age . . . . .	266
	Early Bronze Age II and III . . . . .	267
	Platters and Bowls (PH 1–7) . . . . .	267
	Jars and Kraters (PH 8–17) . . . . .	269
	“Imported” Wares (PH 18–19) . . . . .	271
	Early Bronze Age IV . . . . .	272
	Jars and Amphoriskoi (PH 20–26) . . . . .	272
	Hole-mouth Jars and Cooking Pots (PH 27–34) . . . . .	274
	Beakers and Bowls (PH 35–38) . . . . .	276
	Teapots (PH 39–41) . . . . .	277
	Syrian Caliciform Ware (PH 42–43) . . . . .	278
III	Middle Bronze Age . . . . .	279
	Middle Bronze Age I and II . . . . .	279
	Bowls (PH 44–47) . . . . .	279
	Cooking Pot (PH 48) . . . . .	281
	Jars and Jugs (PH 49–55) . . . . .	281
	Juglets (PH 56–59) . . . . .	283
	Tel el-Yehudiyeh Ware (PH 60–61) . . . . .	284
	Middle Bronze Age III . . . . .	285
	Bowls (PH 62–78) . . . . .	285
	Kraters and Cooking Pots (PH 79–89) . . . . .	288
	Jars (PH 90–101) . . . . .	292
	Jugs and Juglets (PH 102–105) . . . . .	295
	Chocolate-on-White Ware (PH 106–110) . . . . .	297
IV	Late Bronze Age . . . . .	299
	Late Bronze I . . . . .	299
	Bowls (PH 111–114) . . . . .	299
	Cooking Pots (PH 115–121) . . . . .	300
	Jars and Jugs (PH 122–127) . . . . .	302
	Late Bronze II . . . . .	303
	Bowls (PH 128–133) . . . . .	303
	Cooking Pots (PH 134–141) . . . . .	305
	Jars and Juglets (PH 142–146) . . . . .	307
	Imported Wares and Imitations . . . . .	308
	Bichrome Ware (PH 147–150) . . . . .	308
	Base Ring Ware (PH 151–155) . . . . .	309
	White Slip Ware (PH 156–157) . . . . .	311
	Mycenean (PH 158–162) . . . . .	311

V	Iron Age	314
	Iron I	314
	Bowls (PH 163–164)	314
	Kraters and Cooking Pots (PH 165–170)	315
	Jug (PH 171)	316
	Iron II	317
	Samaria Ware Bowls (PH 172–174)	317
	Kraters and Cooking Pots (PH 175–183)	318
	Jars and Jugs (PH 184–187)	319
	Assyrian Palace Ware (PH 188–189)	321
	Cypro-Phoenician Black on Red Ware (PH 190)	321
	Context Concordance	323
	Bibliography	328



## I. INTRODUCTION

This chapter presents a selection of Bronze Age and Iron Age pottery from pre-Hellenistic deposits at Tel Anafa. The excavation exposed very limited areas of these early levels, and what was uncovered was generally very poorly preserved. Consequently, the pottery comes for the most part from secondary fills and is very fragmentary.<sup>1</sup>

The primary purpose of the selection is to show the evidence for the occupation history set forth in Tel Anafa Vol. 1. To that end, the latest datable pottery from stratigraphically significant Bronze Age and Iron Age deposits is emphasized. In addition, we have attempted to represent the range of early material present in these earlier deposits.<sup>2</sup>

The Bronze and Iron Age pottery from Tel Anafa finds its closest parallels in that from Hazor, and most of the comparative material in this catalogue has been drawn from there. At the time of writing, less of the pottery from Dan had been published, but that which is available shows marked similarities with the Anafa assemblage as well.<sup>3</sup> Throughout the Bronze and Iron Age phases, Tel Anafa's strongest cultural connections as indicated by the pottery are with inland and northern coastal areas rather than to southern Israel.

In the earlier periods (Early Bronze–early Middle Bronze), for which there is less comparative material from Hazor, ties to other sites, such as Tyre and Byblos, can be seen clearly. Especially in these early periods, the pottery from Anafa demonstrates strong ties with Syria and the north: Syrian Smeared Wash, Syrian Caliciform wares, Middle Bronze I Syrian juglets. Throughout the Middle Bronze Age the northern Galilee and the areas of Hazor and Dan continue to have links with Syria (Kempinski 1992, 184). In the Late Bronze Age elements such as the quatrefoil carinated bowl and continued comparanda from Kamid el-Loz in the Bek'aa also demonstrate the site's connection with a northern, particularly Syrian, cultural orbit, and the Cypriote and Mycenaean imports show the site's participation in a wider trading sphere. The Iron Age is marked by regionalism. The Anafa pottery shows the transition to Israelite culture in the forms found. Also, as one would expect in the north in this period, certain aspects of the pottery assemblage, such as the Samaria ware and the Cypro-Phoenician ware, may show growing Phoenician influence.

Anafa's location, near the large centers of Hazor and Dan as well as a number of intersecting trade routes, explains the range of wares found here. The main coastal road, the Via Maris, split into two branches at Megiddo. One branch continued to follow a coastal route; the other, the main north–south route to the Bek'aa Valley, passed through Kinnereth and Hazor, ran through the Hula Valley, and just to the west of Dan (Aharoni 1979, 52–53; Dorsey 1991, 95–97). In addition, the northern Galilee was connected directly to the coast by a road running from Achzib to Kedesh, which then connected into the Hula Valley (Dorsey 1991, 158–159). There is also possible evidence for a branch road from the main Bek'aa highway heading into the Golan toward Damascus, which passes Tel Anafa (Dorsey 1991, 157).

The major sites along these roads—Hazor, Dan, and Kedesh—presumably take advantage of their position on the trade route (Gerstenblith 1983, 36–37, 117). This certainly seems to be the case for Dan, which receives large amounts of imported pottery in the Late Bronze Age. Textual sources from both Syria and Egypt help to explain the trade and diplomatic connections of the major cities in the northern Galilee. Gerstenblith points out that the Mari texts indicate a direct connection between Qatna in Syria and the Dan/Hazor area (Gerstenblith 1983, 118; Kempinski 1992, 161). Hazor, especially, is shown in the texts to have strong trade connections with Syria (Malamat 1993). Hazor and Dan are also mentioned in the Egyptian Execration Texts (Gerstenblith 1983, 18; Kempinski 1992, 183).

The catalogue is divided into four main sections corresponding to the major chronological divisions of the Early, Middle, and Late Bronze Ages, and the Iron Age. Within these sections, the catalogue entries are arranged chronologically, and by shape within the major chronological designations. In each section a general overview of the Anafa material precedes the catalogue entries. All catalogue items carry the prefix PH, which stands for “Pre-Hellenistic.” Dimensions are given in centimeters.

<sup>1</sup> The small fragment size of much of the Anafa pre-Hellenistic pottery often makes precise identification difficult. This is especially true for the pottery of the Early Bronze Age through Middle Bronze Age II, which is fill material. Only with MB III do we begin to get ceramic material in primary deposits. We thank Laurie McCoy for all of the drawings in the catalogue.

<sup>2</sup> Unlike other ceramic studies in this volume, this chapter on the pre-Hellenistic pottery is not meant to be a definitive study of the entire body of material. The pottery examined for this report was only drawn from relatively few (ca. 150) loci, which can be connected with Bronze or Iron Age occupation. This represents only ca. 10 percent of the early pottery actually recovered from the site as residual or survivor material in Hellenistic and later deposits. The diagnostics of all these pre-Hellenistic wares (ca. 680 kg) were saved and shipped to the Kelsey Museum of Archaeology at the University of Michigan, where they are available for further study.

<sup>3</sup> This manuscript was submitted in 1996. No changes or additions have been made beyond basic editing—Ed.

## II. EARLY BRONZE AGE

The earliest Bronze Age habitation levels at Tel Anafa were not reached in excavation; consequently, the pottery of this period all comes from later deposits. It does testify, however, to occupation of the site from at least Early Bronze II through Early Bronze IV.<sup>4</sup> There is no clear Early Bronze I material, although one or two pieces may belong to this period.<sup>5</sup> The Tel Anafa pottery sequence really begins with Early Bronze II. Most of the Early Bronze II pottery from the site seems to belong to the mid to late part of the period, ca. 2800–2600, although there are a few sherds of coarse burnished wares that may date to early Early Bronze II. The whole range of Early Bronze III, ca. 2600–2350, may be represented in the Tel Anafa pottery, but the degenerate forms that would verify this have not been identified. As for Early Bronze IV, Tel Anafa has produced a surprisingly large representation of Dever's "Family N," which may span the whole period from ca. 2350 to ca. 2000 BCE. The Tel Anafa material represents the best body of Early Bronze IV yet known from northern Palestine, with connections to both Syria and southern Palestine (Dever's "Family S").

The Early Bronze II pottery assemblage from Tel Anafa contains most of the standard forms for the period: platters; hole-mouth jars; large ovoid store jars, some with ledge-handles; thickened-rim bowls; burnished Abydos-style pitchers;<sup>6</sup> hole-mouth cooking pots. Early Bronze III is represented by the continuation of some degenerate Early Bronze II-style forms, plus clear Early Bronze III diagnostics such as platters, pinch-lapped ledge-handles from store jars, cross-combed store jars, and a few "incipient" flanged-rim hole-mouth cooking pot rims. Degenerate Abydos-style pitchers, jugs, or juglets were not found.

The wares found at Tel Anafa in Early Bronze II and III include the common red burnished and combed wares of the period. One point to note is the small proportion of "metallic" wares in comparison with other sites, for example Beth Yerah. In general, the high firing temperature necessary for metallic wares is found in relatively few pieces (the Abydos-style pitchers and **PH 18**) from Tel Anafa. Indeed, some Early Bronze pieces like **PH 2** are quite underfired. Interestingly, no Khirbet Kerak ware has been identified at the site. The absence of this ware is due presumably to the location of the site beyond the northern limit of its common distribution, which appears to be Hazor and Qadesh-Naphtali (Esse 1991, 139–140).<sup>7</sup> Tel Anafa falls into a zone of the northernmost part of the Galilee, as well as Lebanon and southern Syria, for which little Khirbet Kerak ware has been reported.<sup>8</sup>

The forms represented among the Early Bronze IV pottery from Anafa include large ovoid store jars (some immense), some with vestigial ledge-handles, some with "horn" vestigial lug-handles; two to three handled amphoriskoi (many with incised handles); hole-mouth cooking pots with wheel-finished flanged rim; small hole-mouth jars in thin wares; medium to large beakers; a few cups; and a few teapots. There are even two Syrian "caliciform" rims in blackwhite "reserved-slip" painted ware. There is a good deal of "band-combing," but nearly all examples consist of parallel bands on store jar shoulders (continuing into Middle Bronze IIA here and even later). There is no red wash, nor are there any envelope handles.

The pottery of the Early Bronze IV period is marked by strong regional differentiation, and the Anafa assemblage for the most part fits solidly into the northern stylistic grouping, "Family N." Common features of this group are the "horn" vestigial lug-handles and single-tooth incision around handles, rims, and upper shoulders. These features

<sup>4</sup>We use Dever's Early Bronze IV designation for Albright's Middle Bronze I (Dever 1970, 132–163). For a summary of recent research on Early Bronze IV, see Dever 1989, 226–227. For definition and discussion of Early Bronze IV regional styles, Dever 1980, 35–64.

<sup>5</sup>There is a possible Early Bronze I hole-mouth jar rim in each of loci 3619 and 3620. There is also a possible Late Chalcolithic cornet base from locus 8341.

<sup>6</sup>Abydos ware is the name given to a class of pottery, primarily jugs, that was made in Palestine but first excavated in Egypt. Several fragments of Abydos ware were found at Tel Anafa, but none are catalogued here. Abydos ware began to be produced in Early Bronze II and continued through Early Bronze III. The Anafa examples are well fired and metallic, as is typical for this ware. They are probably Early Bronze II. The stump-base, which becomes popular in Early Bronze III examples of this ware, is not found at Anafa. Parallels for the Anafa forms occur at Byblos (Saghieh 1983, pl. 35), Kinnereth (Amiran 1970, pl. 17, 1), and Farah (N) (Amiran 1970, pl. 17.3).

<sup>7</sup>Khirbet Kerak ware at Hazor: Yadin et al. 1989, 4–5; 1961, pl. CLIV.1,3.

<sup>8</sup>De Contenson 1989, 320–321. For Byblos, see Saghieh 1983, 104; for Tyre, Bikai 1978, 69; for Dan, Biran 1993, 324.

have a geographical distribution limited to the northernmost Galilee and are plentiful in the Tel Anafa assemblage. The “caliciform” wares as well stress the northward connection with Syria. However, there are also southern traits found in the Anafa assemblage. Band-combing, generally considered a southern stylistic trait, appears in a limited proportion. The part of the Anafa assemblage that shows the closest correlation to “Family S” are the hole-mouth jars and cooking pots. These affinities with the southern group indicate the need for some reconsideration of the regional basis for the groups. To this point, “Family N” has been defined exclusively by tomb groups, whereas the southern correlations are with the “Family S” “domestic” site at Jebel Qa’aqir. Therefore, it is not surprising that the settlement pottery from Anafa would find certain parallels in settlement pottery from the south.

In the catalogue entries below, Early Bronze II and III are treated together in one section since in the north they cannot always be clearly differentiated (Esse 1989, 90–91; de Miroschedji 1989, 65). It must also be remembered that this material consists for the most part of very small fragments found in mixed fills. Therefore, although a more precise date may be suggested in the individual catalogue entries, it remains to a certain extent speculative. Early Bronze IV, on the other hand, can be clearly differentiated and is presented in a separate section.

## EARLY BRONZE AGE II AND III

### PLATTERS AND BOWLS (PH 1–7)

Platters and shallow bowls with inverted rims are among the most characteristic forms of pottery in the Early Bronze Age.<sup>9</sup> The pottery examined from stratigraphically significant loci at Tel Anafa yielded twenty-one examples of Early Bronze platter rims. The platter shape with inverted rim has a wide distribution throughout Israel, Lebanon, and Syria, with examples coming from as far north as Ras Sharma (de Contenson 1989, fig. 1). Among the wide production of this form, however, the ware differs. For example, at Beth Yerah, the platters of Early Bronze II are in a metallic ware (Esse 1991, 46–47). As mentioned above, the red ware of the platters found at Tel Anafa is not metallic and not particularly distinctive except in one instance (PH 3), which may have connections with the Lebanese coast.

**PH 1** TA73 P488 Platter with inverted rim  
Loc. 2368 MB contam.

Single fragment of rim and upper body. P.H. 2.3, Th. 0.9. Light red fabric (2.5YR 5/8) with small red, white, and light gray inclusions. Burnished. EB II parallels for the form: Beth Yerah (Amiran 1970, pl. 15.4); Tyre, Stratum XXVII (Bikai 1978, pl. LVIII.A.41). Bikai dates this stratum at Tyre to EB II or III (Bikai 1978, 70). Tell es-Sa’idiyeh in the Jordan Valley, Stratum L2, which dates to EB II (Tubb 1988, pl. 32.9).



**PH 2** TA73 P516 Platter with inverted rim  
Loc. 2386 MB

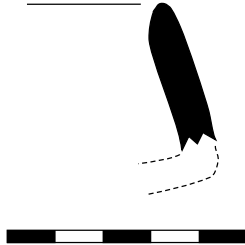
Single fragment of rim and upper body. P.H. 3.5, Th. 0.9. Light red fabric (2.5YR 5/8) with small white and dark gray inclusions, light gray (5YR 6/1) core. Burnished. Parallels for general form as above PH 1. Notable, however, is the slight depression under the rim. This is a common feature on the platters of Strata XXI and XX at Hazor, probably dating to EB III (Yadin et al. 1989, 4; 1961, pls. CLIV.9,11; CLV.4; and CXCVII.1,4). The closest parallel for the shape of this piece is found at Tyre in Stratum XXVII (Bikai 1978, pl. LVIII.A.38). This depression under the rim is also found on platters at Tell es-Sa’idiyeh in EB II (Tubb 1988, pl. 32.8); and at Beth Yerah in EB II levels (Esse 1991, pl. 2.D).



<sup>9</sup>As regards the terminology of “platter” versus “platter bowl,” there seems to be little consensus in the published scholarship on the precise usage of these terms. Also, the Tel Anafa fragments are often so small that precise differentiation between the forms is difficult.

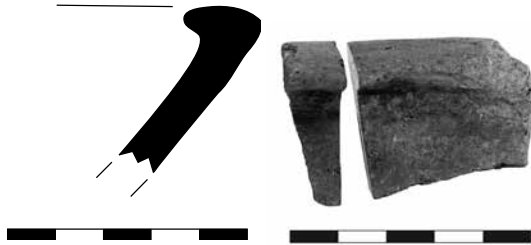
**PH 3** TA73 P435 Platter with inverted rim  
Loc. 3620 MB/LB I

Single fragment of rim. P.H. 2.6, Th. 0.8. Gray fabric (10YR 6/1) with small red, white, and dark gray inclusions. Slipped reddish yellow (5YR 6/6) and burnished. Parallels for general form as above **PH 1**. The fabric of this piece, however, is distinctive among the Early Bronze pieces from Tel Anafa. It would appear that a very similar fabric is found at Tyre in this period. Bikai publishes a bowl with inverted rim with a similar fabric description, from Stratum XXVII (Bikai 1978, pl. LVIII.44).



**PH 4** TA73 P430 Bowl with inverted rim  
Loc. 3619 MB/LB I

Single fragment of rim and upper body. P.H.3.5, Th. 0.11. Pink fabric (5YR 7/4) with small red, white, and dark gray inclusions. Pattern burnish. EB II parallels for shape of rim: bowl from Megiddo, Stratum XVIII (Loud 1948, pl. 4.8) and platter from Beth Yerah (Esse 1991, pl. 1.B). The closest combination of shape and surface treatment is found in an EB II pattern-burnished platter from Megiddo Stratum XVII (Loud 1948, pl. 5.17). However, pattern burnish is often more characteristic of EB III.



**PH 5** TA73 P436 Platter with inverted rim  
Loc. 3620 MB/LB I

Single fragment from base. P.H. 0.018, P.W. 0.027, T. 0.008. Reddish orange fabric (2.5YR 6/8) with small white and medi-

um red inclusions, fired gray. Brown (5YR 5/2) on the interior of the vessel, exterior burnished reddish brown (5YR 5/4).



**PH 6** TA73 P437 Platter with inverted rim  
Loc. 3620 MB/LB I

Single fragment from base. P.H. 0.029, P.W. 0.039, T. 0.007. Gray fabric (7.5YR 6/0) with inclusions, slipped reddish yellow (5YR 6/6), exterior burnished.



**PH 7** TA72 P283 Platter with inverted rim  
Loc. 2355 LB/MB

Single fragment from base. P.H. 0.015, P.W. 0.044, Th. 0.007. Light brownish gray fabric (7.5YR 7/2). Exterior burnished to dark grayish brown (7.5YR 4/2). Parallel for slight rounding of the base: pitcher from Arad (Amiran 1965, pl. 1, upper right).



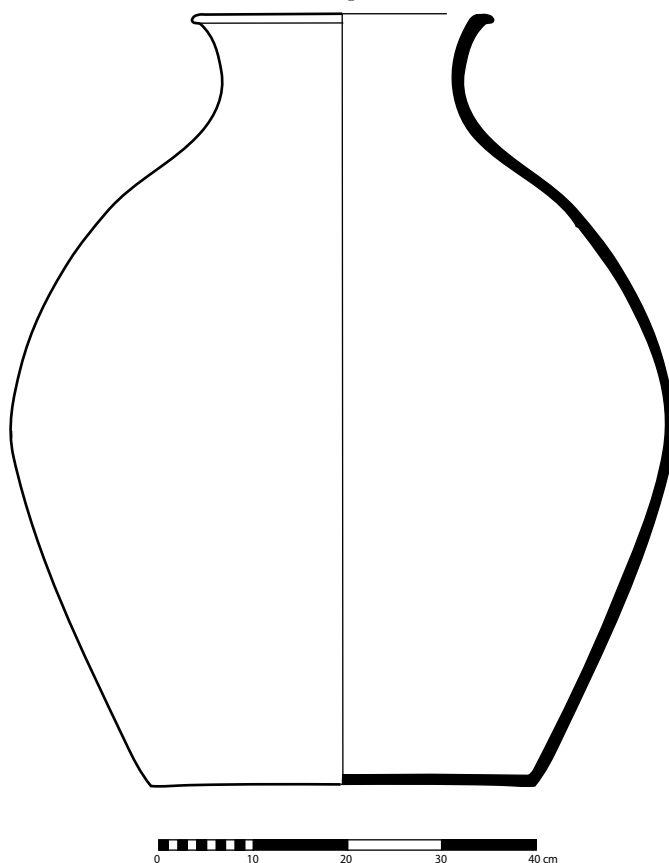
*JARS AND KRATERS (PH 8–17)*

The excavations at Tel Anafa produced fragments of both store jars and hole-mouth jars dating to the Early Bronze II–III periods. There is also one clear example of a spouted krater. The material's fragmentary nature often made precise identification of forms impossible: e.g., a wavy ledge-handle could come from a store jar or a krater. An additional challenge is that most of these forms are not chronologically diagnostic with any degree of precision. The wavy ledge-handles begin in Early Bronze II and continue into the Early Bronze IV period but cannot be dated precisely when the handle is the only preserved element of the pot. This continuity of form recurs with the store jars and hole-mouth jars as well.

**PH 8** TA73 P431  
Store jar with rounded, only slightly everted rim  
Loc. 3620 MB/LB I  
Single fragment of rim and neck. P.H. 6.4, Th. 0.12. Grayish brown fabric (5YR 6/2) with gray core (5YR 5/1), small buff, red, and dark gray inclusions. Parallels for form of rim: jar from Tell es-Sa'idiyeh in Stratum L2, dated EB II (Tubb 1988, fig. 32.4) and a jug from Hazor, Stratum XX (Yadin et al. 1961, pl. CLIV.22).

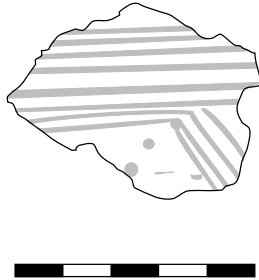


**PH 9** TA78 P87 Store jar, large  
Loc. 8107 MB?  
Six fragments preserve roughly 40 percent of the vessel, full profile, and most of the rim. H. 8.4, max. D. 6.9, D. of mouth 3.3. Gray fabric (10YR 6/2) almost vitrified, with very coarse temper. Flat bottom, convex sides, and flaring rim. Parallel for form of mouth: a store jar from Hazor, Stratum XIX (Yadin et al. 1961, pl. CLV.10). A jar with similar scale and flaring rim, although with different surface treatment, is found at Megiddo in an EB II context (Loud 1948, pl. 4.5).



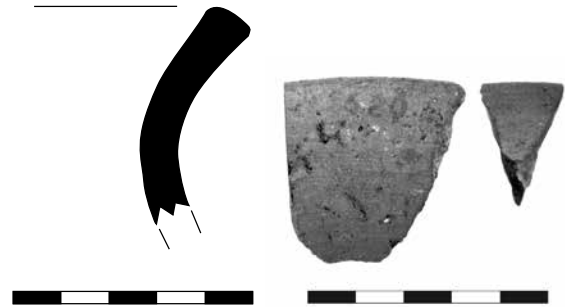
**PH 10** TA73 P10 Store jar, combed decoration  
Loc. 3440 HELL 2A/earlier

Single body fragment. P.H. 3.4, P.W. 4.7. Gray-brown fabric with brown surface. Parallels for EB II–III jars with combed decoration: Beth Yerah (Amiran 1970, pl. 16.1); Hazor (Yadin et al. 1961, pl. CCXXXV.2).



**PH 12** TA73 P432 Store jar, everted rim  
Loc. 3620 MB I/LB I

Single fragment of rim. P.H. 0.4, Th. 0.10. Gray fabric (10YR 6/2) with orange-red surface (5YR 6/8), small red and light gray inclusions. Everted rim finished with a flat edge. Parallel for EB II–III jar: Far'ah (N) (Amiran 1970, pl. 16.7).



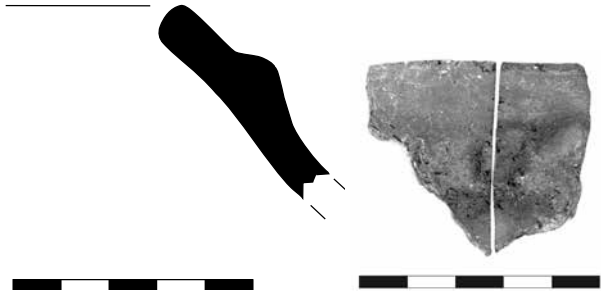
**PH 11** TA73 P542 Store jar, rope decoration  
Loc. 23104 MB II

Single fragment of rim and neck. P.H. 5.4, Th. 0.13. Light pinkish brown fabric (5YR 6/3) with small to medium dark gray inclusions. Parallels: Rope decoration is found most frequently in EB I contexts (Amiran 1970, 55). However, the use of rope decoration continues in limited use through EB. For example, it is found in EB III levels at Ai, as shown by the parallels in **PH 10** below and at Iktanu in Phase I levels (Prag 1974, fig. 3.17, fig. 4.10, fig. 5.20), which can be dated to EB IV (Dever 1980, 37). In this instance the fabric of the vessel suggests a possible EB III date.



**PH 13** TA73 P429 Hole-mouth jar  
Loc. 3619 MB/LB I

Single fragment of rim. P.H. 4.2, P.W. 4.9, Th. 0.9. Red fabric (5YR 6/6) with small white and dark gray inclusions. Thumb-indented rope decoration. Parallels: Hole-mouth jars with rope decoration are found most frequently in EB I—for example, an EB I jar from Beth She'an (Amiran 1970, 55 and pl. 14.9). However, hole-mouth jars with rope decoration continue in use through EB III. Numerous examples are found in EB II and III in the Sanctuary at Ai, for example, from Phase VI (Callaway 1972, fig. 63.19–25).

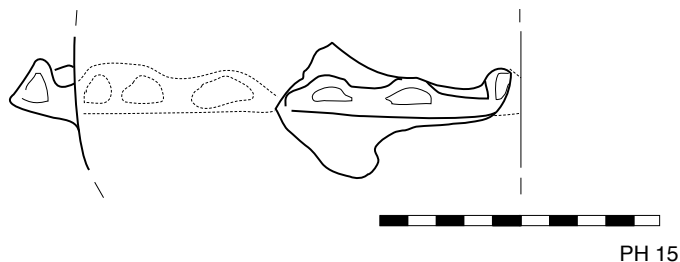


**PH 14** TA72 P294 Spouted krater  
Loc. 21204.1 MB I

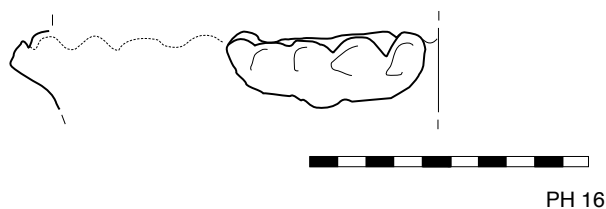
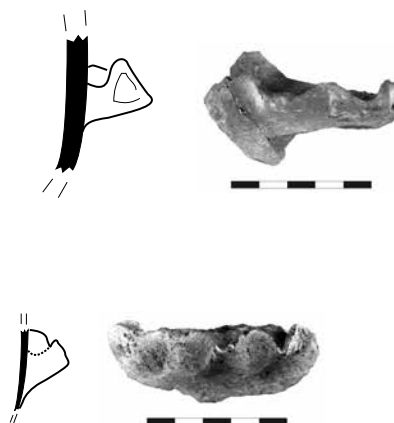
Single fragment preserves most of spout. P.H. 5.0, P.W. 6.4, Th. 0.8. Light red fabric (5YR 6/6) with medium buff and red inclusions. Parallel: Tell es-Sa'ideyeh, Stratum L2, dated to EB II (Tubb 1988, pl. 32.2).



**PH 15** TA73 P356  
 Loc. 3382  
 Single fragment preserves way ledge-handle of the “pushed-up” type. P.H. 4.4, P.W. 7.3, Th. 0.9. Red fabric (2.5YR 5/8). Parallel: Jericho (Amiran 1970, pl. 8.16).



**PH 16** TA73 P412  
 Loc. 3535  
 Single fragment preserves way ledge-handle of the “pushed-up” type. P.H. 2.8, P.W. 8.1, Th. 0.5. Reddish yellow fabric (7.5YR 7/6). Parallel: Megiddo (Amiran 1970, pl. 8.18).



**PH 17** TA72 P273  
 Loc. 3530  
 Not illustrated  
 Single fragment preserves way ledge-handle of the “thumb-indented” type. P.H. 3.8, P.W. 6.7, Th. 0.7. Red fabric (2.5YR 5/8) with small dark gray and white inclusions. Parallel: Beth She’an (Amiran 1970, pl. 8.12).

#### “IMPORTED” WARES (PH 18–19)

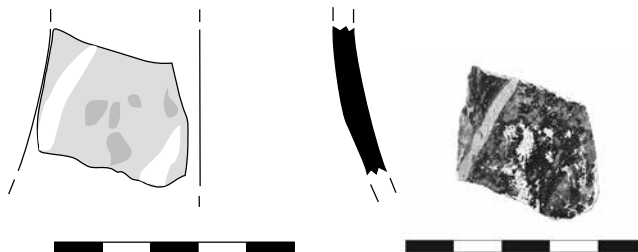
The following two sherds appear to have entered the Anafa assemblage from areas beyond the normal distribution range of pottery in the northern Galilee in this period. **PH 18** has the drop-shaped form of an Egyptian vessel. To date Egyptian vessels have been found at southern sites like Tel Erani (Ben-Tor 1982, 6). The import or the imitation of such a piece this far north in the Galilee may be evidence for Tel Anafa’s contact with the Levantine coast, as trade between Egypt and Byblos can be documented (Ben-Tor 1982, 11). The fragment of Syrian smeared wash shows a connection to sites in inland areas of Syria, which continues in the Anafa assemblage through later periods as well.

**PH 18** TA73 P434  
 Egyptian or Egyptianizing drop-shaped vessel  
 Loc. 3620  
 MB/LB I  
 Single fragment of rim and upper body. P.H. 4.1, P.W. 4.0, Th. 0.5. Pinkish buff fabric (5YR 7/6) with pale gray core (7.5YR 7/2), burnished reddish brown on the exterior, small buff, dark red, and gray inclusions. Parallel for form: Egyptian import from Tel Erani (Brandl 1989, fig. 10.1). The fabric is also rather different from the general Early Bronze Age fabric at Anafa, quite well fired and metallic.



**PH 19** TA73 P466 Syrian smeared wash  
 Loc. 2474 MB

Single fragment from the body of a closed vessel. P.H. 2.9, Th. 0.7. Pinkish white fabric (7.5YR 8/2). Exterior painted streaky dark reddish brown (5YR 3/3) to very pale brown (10YR 7/4). Smeared wash is a Syrian decorative style of the Early Bronze Age. Examples are found in Phases I and J in the Amuq (Braidwood and Braidwood 1960, 414–417, 446–450). At Anafa, this piece should date to the EB III period.



EARLY BRONZE AGE IV

JARS AND AMPHORISKOI (PH 20–26)

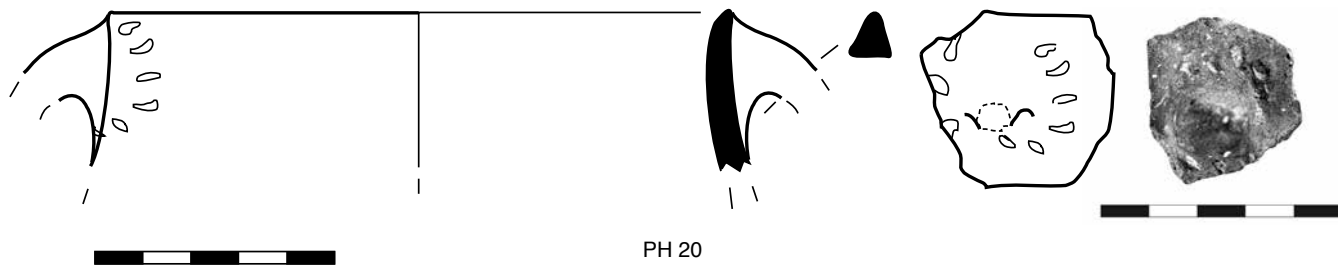
These vessels all belong to “Family N.” In the case of the jars, the most diagnostic features are “horned” vestigial lug-handles on the rims, a trait found only in the northern part of the Upper Galilee. These “horns” appear frequently in the Anafa pottery assemblage, with hundreds attested. The “Family N” amphoriskoi are also typical of the north in EB IV; they have a round swelling body, flat base, and handles joining the rim and shoulder. Particularly characteristic is the use of “stabmark” incision around the handles. Amphoriskoi with both plain and incised handles are found in the Tel Anafa assemblage. Although not geographically diagnostic, vestigial thumb-indented ledge-handles, indicative of Early Bronze IV, are also found frequently in the Anafa material. The jars and amphoriskoi from Tel Anafa find close parallels at Kedesh, Ma’ayan Barukh, Tyre, and Hazor.

**PH 20** TA72 P291 Jar  
 Loc. 2368 MB contam.

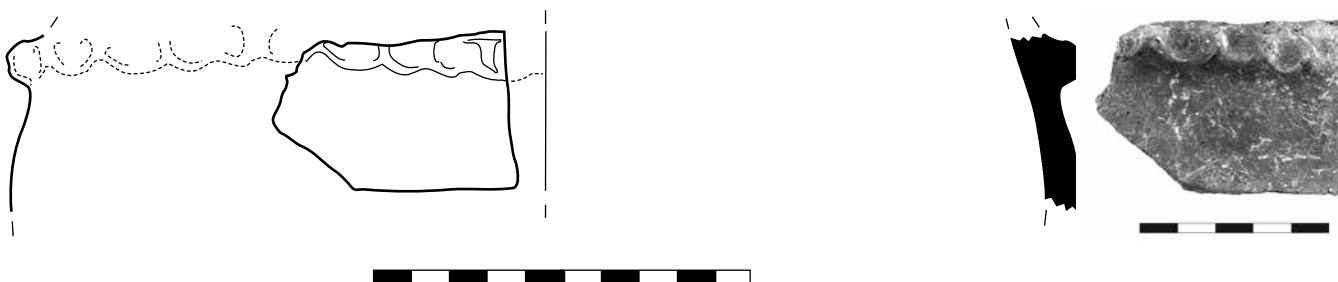
Single fragment of rim preserves “horned” vestigial lug-handle. P.H. 3.1, Th. 0.9. Brown fabric (7.5YR 5/2) with small to medium buff and gray inclusions. “Horned” vestigial lug-handles at the rim, encircled by “stabmarks.” Parallels: Ma’ayan Barukh (Amiran 1961, fig. 6.8); and Kedesh (Tadmor 1978, fig. 3).

**PH 21** TA73 P426 Jar  
 Loc. 3619 MB/LB I

Single body fragment preserves wavy vestigial ledge-handle. P.H. 4.6, Th. 0.9. Light red fabric (2.5YR 6/6). The vestigial or degenerate ledge-handle has lost all functional use and has become primarily decorative. This example continues the tradition of the wavy “pushed-up” ledge-handles of EB II–III. The “handle” protrudes from the surface of the vessel only slightly. Parallel: Ma’ayan Barukh (Amiran 1961, fig. 6.2).



PH 20



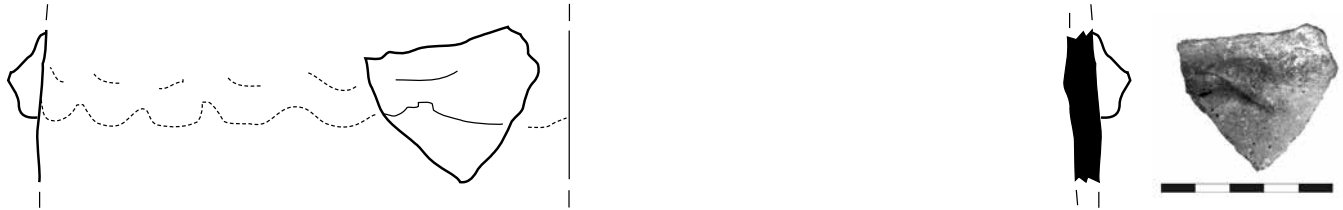
PH 21



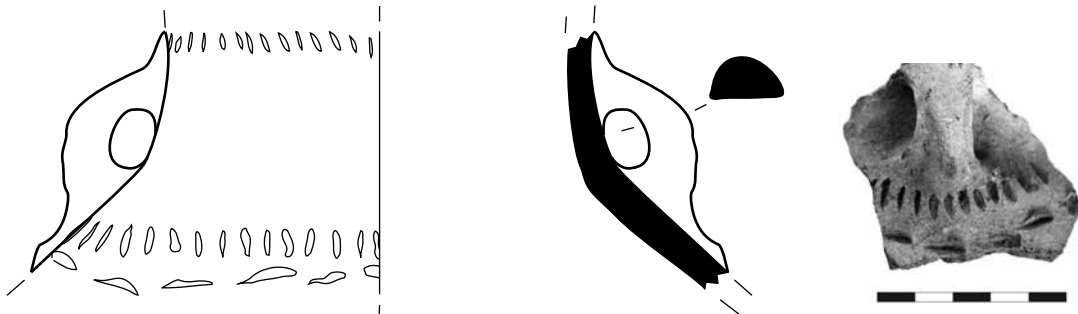
**PH 22** TA73 P379 Jar  
 Loc. 3452 MB/LB I contam.  
 Single body fragment preserves partial way vestigial ledge-handle. P.H. 4.2, Th. 0.8. Light reddish brown fabric (5YR 6/4). Parallel: as above, **PH 21**.

row of vertical "stabmark" incisions above and below the handle; also a single row of horizontal incisions beneath. Parallels for general use of "stabmark" incision: Kedesh (Tadmor 1978, fig. 4); Hazor, Stratum XVIII (Yadin et al. 1961, pl. CLVI.17). Examples from Ma'ayan Barukh, however, show very close parallels for the arrangement of the incisions. One vessel has very similar placement of the vertical incisions (Amiran 1961, fig. 7.15), and another has an encircling band of horizontal incisions (Amiran 1961, fig. 7.18). The use of an encircling band of incisions on the body of the amphoriskos, as well as around the handles, is also found at Tyre in Stratum XIX (Bikai 1978, pl. LIV.2).

**PH 23** TA72 P288 Amphoriskos  
 Loc. 2369 MB  
 Single body fragment preserves handle. P.H. 6.3, Th. 0.8. Light brown fabric (7.5YR 6/4) with medium buff inclusions. Single



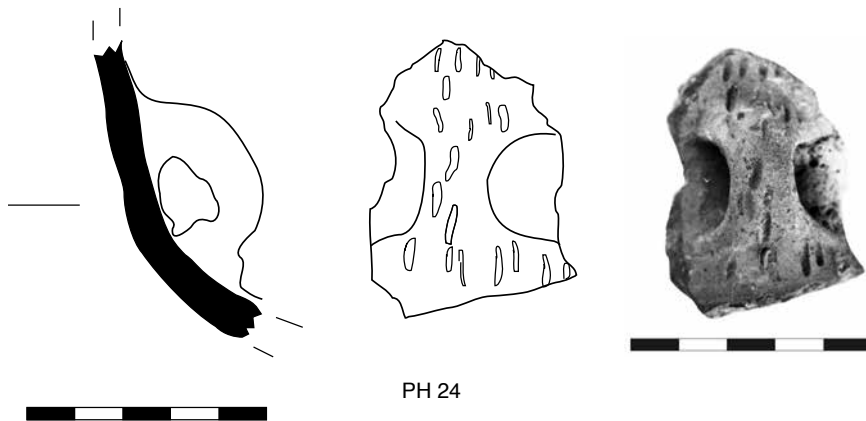
PH 22



PH 23

**PH 24** TA73 P463 Amphoriskos  
 Loc. 2474 MB  
 Single body fragment preserves handle. P.H. 5.5, Th. 0.9. Light red fabric (2.5YR 6/6) with small to medium buff and reddish

brown inclusions. Single row of vertical "stabmark" incisions above and below the handle and numerous vertical incisions on the handle. Parallel for the placement of the incisions: Ma'ayan Barukh (Amiran 1961, fig. 7.18).



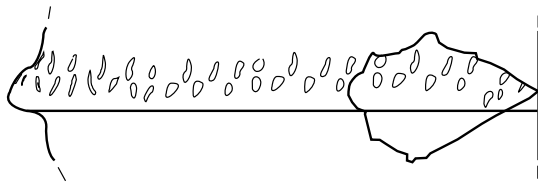
PH 24

**PH 25** TA73 P444  
 Loc. 2464  
 Single body fragment preserves plain ledge-handle with two rows of "stabmark" incision on the upper surface. P.H. 3.8, Th. 0.8. Light reddish brown fabric (2.5YR 6/4) with small gray inclusions.

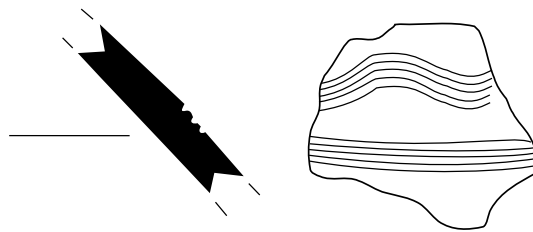
Jar?  
 HELL 1  
 a four-toothed instrument. The pattern consists of waves over horizontal lines. Wavy combed decoration, especially on large vessels like jars, is generally associated with southern areas, particularly "Family S" in EB IV, for example the jar from the Khirbet el-Kirmil tomb (Dever, 1980, fig. 4.1). However, it appears sporadically at northern sites—for example, on a fragment that appears to be from a jar at Kabri (Givon 1988, fig. 22.14) and at Hazor as late as the Middle Bronze Age (Yadin et al. 1958, pl. XCIII.9).

**PH 26** TA73 P480  
 Loc. 2382  
 Single body fragment. P.H. 4.4, Th. 0.9. Dark brown fabric (7.5YR 4/2). Jar body with wavy combed decoration made with

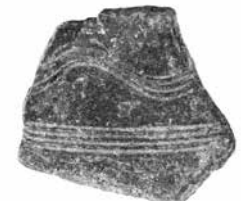
Jar  
 MB



PH 25



PH 26

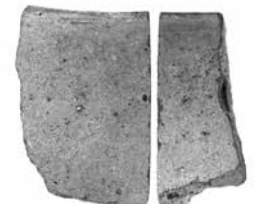
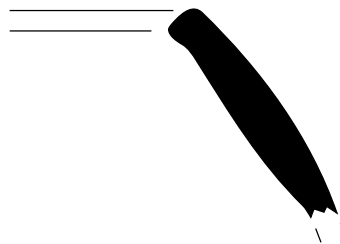


#### HOLE-MOUTH JARS AND COOKING POTS (PH 27–34)

The hole-mouth jars from Tel Anafa are coarsely hand-made with wet-smoothed rims. The rim is formed by folding over the edge of the pot, and the rough edge is left on most examples. These hole-mouth forms are found in both thin-walled jars and cooking wares, with the distinction being the fabric of the vessel. The Early Bronze IV hole-mouth jars from Tel Anafa display a number of varying rim forms. They find close parallels in form among the pottery assemblage of Jebel Qa'aqir, which is representative of "Family S." At Jebel Qa'aqir, however, these forms are all cooking wares. Proportionally, a large number of hole-mouth vessels are set out in this catalogue, yet this seems justifiable since they represent a body of material that is poorly known in the northern Galilee.

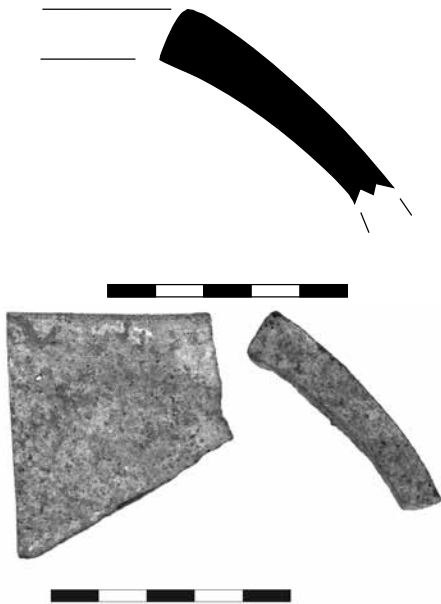
**PH 27** TA73 P390  
 Loc. 3455  
 Single fragment of rim. P.H. 4.3, Th. 0.8. Red fabric (2.5YR 5/6) with light reddish brown core (5YR 6/4) and small to medium gray inclusions. Simple flattened rim with clear traces of folding on the interior. Parallel for general thickening of the upper body of the vessel: cooking pot from Jebel Qa'aqir (Gitin 1975, fig. 2.4).

Hole-mouth jar  
 MB/LB I contam.



**PH 28** TA73 P382 Hole-mouth jar  
Loc. 3452 MB/LB I contam.

Single fragment of rim. P.H. 5.3, Th. 0.11. Light red fabric (2.5YR 6/8) with gray core (2.5YR 5/10). The thickened, flattened rim without a pronounced gutter represents the most frequently occurring hole-mouth form in the EB IV Anafa assemblage. General parallel for form: Jebel Qa'aqir (Gitin 1975, fig. 2.3), but that piece does have a gutter in the flattened edge of the rim.



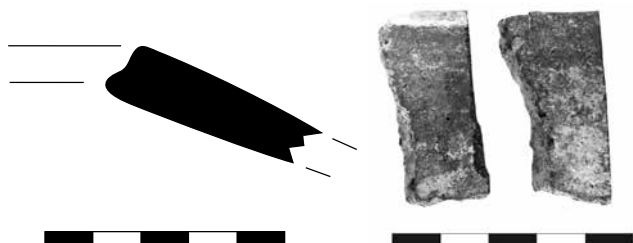
**PH 31** TA73 P405 Cooking pot  
Loc. 3535 LB II contam?

Two joining fragments of flattened, everted rim. P.H. 5.8, Th. 0.6. Pink surface (7.5YR 7/4) with gray core (7.5YR 6/0) and small buff and gray inclusions. Parallel: Jebel Qa'aqir (Gitin 1975, fig. 2.7).



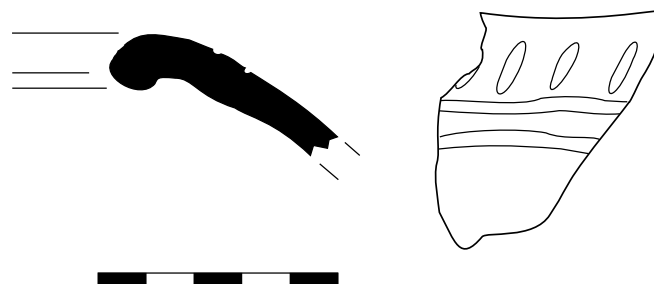
**PH 29** TA73 P468 Cooking pot  
Loc. 2474 MB

Single fragment of thickened, flattened rim with projecting lower edge and gutter. P.H. 4.3, Th. 0.13. Reddish brown surface (2.5YR) with dark gray core (5YR 4/1). Parallel: Jebel Qa'aqir (Gitin 1975, fig. 2.3).



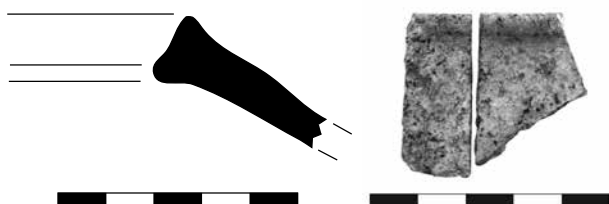
**PH 32** TA73 P388 Hole-mouth jar  
Loc. 3454 MB/LB I contam.

Two joining rim fragments. P.H. 4.1, Th. 0.9. Dark red fabric (5YR 5/4) with small buff and gray inclusions. Incised decoration consisting of a series of diagonal incisions, framed at top and bottom by horizontal grooves and a second groove underneath. Parallel for form: cooking pot from Jebel Qa'aqir (Gitin 1975, fig. 2.6). Parallel for decoration: EB IV teapot? from Tomb 1101 at Megiddo (Guy 1938, pl. 6.28).

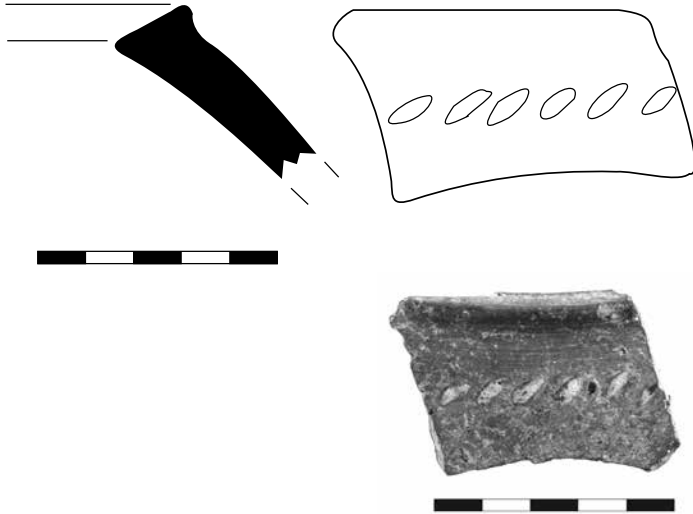


**PH 30** TA73 P451 Cooking pot  
Loc. 2472 LB

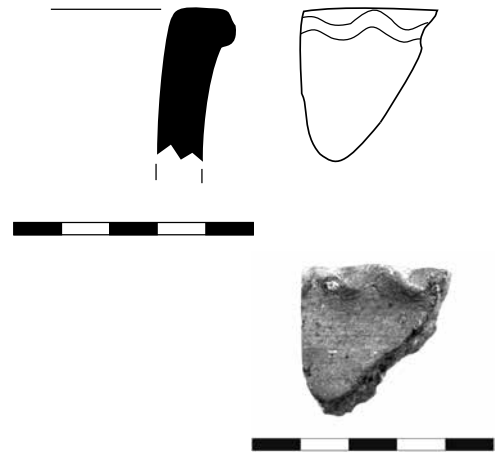
Single fragment of thickened, flattened rim, almost T-shaped in section, with a slight gutter. P.H. 3.5, Th. 0.9. Reddish yellow surface (5YR 6/6) with gray core (7.5YR 6/0) and small gray and red inclusions. Parallel: Jebel Qa'aqir (Gitin 1975, fig. 2.1).



**PH 33** TA73 P536 Cooking pot?  
Loc. 23101 MB  
Single fragment of thickened, flattened hole-mouth rim. P.H. 4.0, Th. 0.10. Reddish gray fabric (10R 5/1). Row of diagonal "stabmark" incisions. Parallel: diagonal "stabmarks" are found on other vessel forms at Ma'ayan Barukh (Arniran 1961, fig. 6.9).



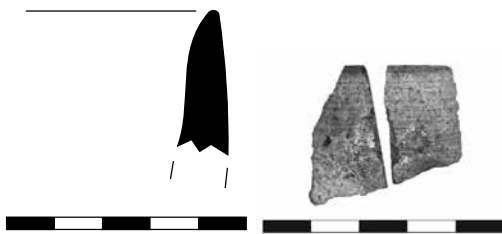
**PH 34** TA73 P325 Cooking pot?  
Loc. 3364 LB II  
Single fragment of flattened hole-mouth rim. P.H. 3.1, Th. 0.11. Light gray-brown fabric (10YR 7/3) with small buff and medium brown inclusions. Thumb-indented scalloped decoration. Parallels for thumb-indented scalloped decoration on the rims of hole-mouth jars can be found at Jebel Qa'aqir (Gitin 1975, 50-51; Dever 1980, fig. 4.21).



#### BEAKERS AND BOWLS (PH 35-38)

The EB IV assemblage includes numerous rim fragments of beakers and small bowls. The beakers appear to be similar to the Megiddo tomb material, but the bowls again seem to have connections with the south.

**PH 35** TA73 P380 Beaker, straight sided  
Loc. 3452 MB/LB I contam.  
Single fragment of relatively thick, tapering rim. P.H. 2.9, Th. 0.8. Grayish brown fabric (10YR 6/2) with very small white and light gray inclusions. Parallel: Tomb 1101 at Megiddo (Guy 1938, pl. 6.22).



**PH 36** TA73 P433 Beaker, straight sided  
Loc. 3620 MB/LB I  
Single fragment of rim. P.H. 4.8, Th. 0.6. Reddish yellow fabric (5YR 6/6) with small to medium gray inclusions. Parallel: Megiddo (Guy 1938, pl. 22.12).



**PH 37** TA73 P389  
 Loc. 3454  
 Beaker  
 MB/LB I contam.  
 Single fragment of slightly incurving rim. P.H. 3.7, Th. 0.6. Gray-brown fabric (5YR 5/2) with small buff and gray inclusions. Parallels in the Megiddo tomb material (Guy 1938, pls. 20.11, 22.11).



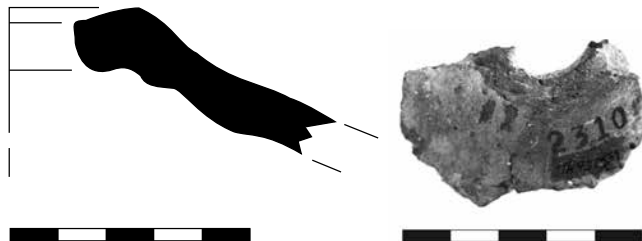
**PH 38** TA73 P490  
 Loc. 2368  
 Bowl, carinated?  
 MB contam.  
 Single fragment of slightly thickened rim. P.H. 4.1, Th. 0.10. Gray fabric (2.5YR 5/10) rimmed with light red (2.5YR 6/6), gray surface (10YR 5/11) and numerous small white inclusions. Decorated on exterior with deep combing. Beginning of slight carination just visible at break. The shape and decoration of this vessel find a general parallel in a bowl from Jebel Qa'aqir (Gitin 1975, fig. 3.17).



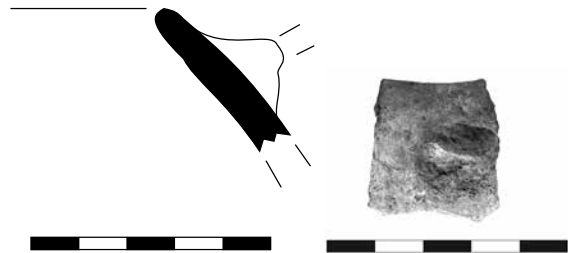
**TEAPOTS (PH 39-41)**

Teapots are a characteristic Early Bronze IV form. The teapot is a small spouted jar, either hole-mouth or with a small, flaring, tapered rim. Often there is a small vestigial handle opposite the spout.

**PH 39** TA73 P534  
 Loc. 23101  
 Teapot  
 MB  
 Single fragment of small, flaring, tapered rim and base of spout. P.H. 5.3, Th. 0.8. Reddish brown fabric (5YR 4/3) with small white inclusions. Parallels for shape of rim: teapots from Jebel Qa'aqir (Gitin 1975, fig. 4.15); Kedesh (Tadmor 1978, fig. 7); and Ma'ayan Barukh (Amiran 1961, fig. 5.2,8).



Parallels: Ma'ayan Barukh (Amiran 1961, fig. 5.7); Jebel Qa'aqir (Gitin 1975, fig. 4.19); and Kedesh (Tadmor 1978, fig. 7).



**PH 40** TA73 P544  
 Loc. 23104  
 Teapot  
 MB II  
 Single fragment of hole-mouth rim and base of small knob handle. P.H. 3.3, Th. 0.7. Light reddish brown fabric (5YR 6/4).

**PH 41** TA70 P314  
 Loc. 3350  
 Teapot?  
 LB II/IRON I

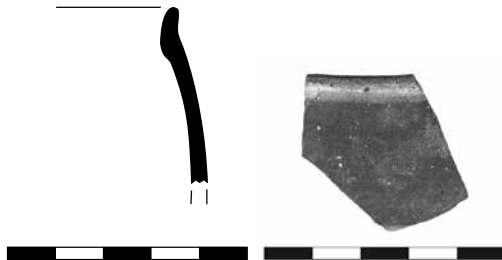
Single fragment of hole-mouth rim. P.H. 2.0, Th. 0.7. Pinkish brown fabric (7.5YR 7/4) with small brown and gray inclusions. Two horizontal grooves around the mouth. Teapots with horizontal groove decoration are found at Ma'ayan Barukh (Amiran 1961, fig. 5.2,7,8). Similar grooved decoration is found in the Golan on a fragment from the rim of a jar (Epstein 1985, fig. 2.18) and on a hole-mouth jar rim at Jebel Qa'aqir (Dever 1970, fig. 4.10).



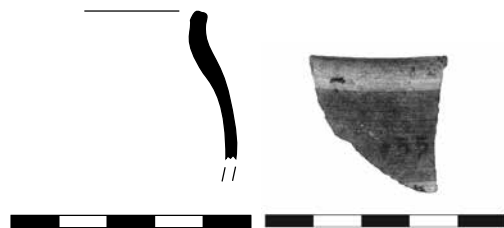
*SYRIAN CALICIFORM WARE (PH 42–43)*

Syrian “caliciform” ware has a fine, dark gray fabric, which is well fired and metallic. The vessels of this ware are decorated with a thin white paint applied in horizontal stripes or wavy lines called “reserved-slip.” The ware is found at Hama in Level J. In Palestine, the ware appears to have a very limited distribution, with examples published from Hazor, Megiddo, and Kedesh; presumably, those examples found are imports from Syria. The most common shape for “caliciform” vessels in Palestine is the teapot, although the two fragments from Anafa appear to come from small bowls or cups, as the rims do not show the more sharply everted form of the teapot rim, and the absence of wavy decoration on the shoulder corresponds to bowl/cup decoration rather than teapot. Small bowls/cups with this gently curved rim and a single band of thin white paint at the rim are found at Kedesh (Tadmor 1978, fig. 8); Hazor (Yadin et al. 1961, pl. CCXXXV.9,10, there called goblets); and Megiddo (Guy 1938, pl. 11.26,27, there called cups).

**PH 42** TA73 P368 Syrian caliciform cup  
 Loc. 3444 LB II  
 Rim and shoulder fragment. P.H. 3.3, Th. 0.3. Dark gray fabric (10YR 4/1), almost vitrified, small white inclusions. White paint on the rim.



**PH 43** TA72 P299 Syrian caliciform cup  
 Loc. 2368 MB contam.  
 Single fragment of rim. P.H. 2.9, Th. 0.3. Dark gray-brown fabric (10YR 4/1) with very small white inclusions. White paint on rim.



### III. MIDDLE BRONZE AGE

All three phases of the Middle Bronze Age are represented in the pottery assemblage from Tel Anafa.<sup>10</sup> Although the Middle Bronze I and II material is sparse, what there is of Middle Bronze I suggests that there is no gap between Early Bronze IV and Middle Bronze I and that the site is inhabited through the whole period (ca. 2000–1800 BCE). As for Middle Bronze II, there may be a gap in occupation somewhere within the period of ca. 1800–1650 BCE. The whole range of Middle Bronze III is present, from ca. 1650, but the end should be placed down around 1500 BCE. Given this range of pottery, it could be argued that there is no Middle Bronze III destruction at Anafa but continuity directly into Late Bronze I.

Most of the standard Middle Bronze I and II forms are found at the site: platter bowls, carinated bowls, a few store jar rims, a few folded-over cooking pot rims. Cooking pots and kraters of Aphek style are rarely attested if at all, and straight-sided, pierced-rim cooking pots are not found. Red burnished wares constitute the majority of the Middle Bronze I pottery, although some “trichrome” painted wares are found. The Middle Bronze II wares are sometimes buff and may be burnished. Band-combing of wheel-made store jar shoulders is found frequently. Tell el-Yehudiyeh ware appears in limited quantities. The most notable items in the Middle Bronze I–II pottery assemblage at Anafa are a group of Syrian-style painted juglets of very fine quality. These juglets, as well as the necked bowl **PH 47**, demonstrate the site’s continued cultural connection with Syria and the north in the early Middle Bronze period.

For Middle Bronze III, a wide range of forms is present in the Anafa assemblage, including platter bowls, carinated bowls, trumpet-footed chalices, everted-rim globular cooking pots, profiled store jar rims, large jars and jugs, piriform juglets and jugs, and dipper juglets. There are a few very large pithoi in red wares. Decorated wares include “Chocolate-on-White” ware and some probable imitations, as well as imports of Cypriot Pendent Line painted ware.<sup>11</sup> The latest material in the assemblage is very late in the Middle Bronze III period, most notably carinated and platter bowl rims, very coarse, gritty store jar wares, advanced cooking pot rims, and, of course, the “Chocolate-on-White” ware.

The Middle Bronze Age pottery from Anafa finds its closest parallels in the pottery from Hazor. This is not surprising, for through most of the Middle Bronze Age the northern Hula Valley most probably was under the control of Hazor (Kempinski 1992, 184). The precise phasing of the Middle Bronze Age in the Hazor publications can seem unclear. The latest Middle Bronze II phase in the Hazor publications is taken as Middle Bronze III in the Tel Anafa terminology. All the Hazor comparanda in the Middle Bronze III section of the catalogue below come from such strata at Hazor unless otherwise indicated.

In the catalogue, the Middle Bronze Age pottery from Anafa will be divided into two groups. The first, smaller group represents the Middle Bronze I and II pottery from the site. This pottery continues to come from mixed fill contexts. The second group of Middle Bronze III pottery is found in much larger quantities on the tel, and a limited portion of the material is from primary deposits.

#### MIDDLE BRONZE AGE I AND II

##### *BOWLS (PH 44–47)*

Few platter bowls have been identified in the Middle Bronze I and II material from Anafa. Those present in the assemblage appear to continue the Early Bronze tradition of red slip and burnish. The other bowl form identifiable in this limited Anafa material is the necked bowl, a type of carinated bowl. Necked bowls enter Palestine from Syria and generally date to Middle Bronze II (Cole 1984, 54). They are “typical” of Middle Bronze II contexts at Hazor (Yadin

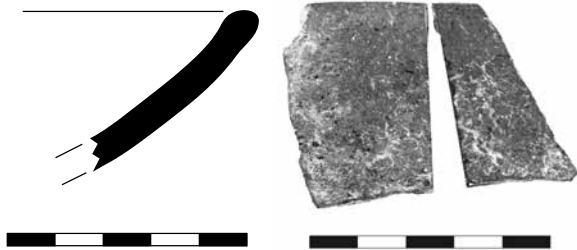
<sup>10</sup> This publication uses the phasing and terminology for the Middle Bronze Age presented in Dever 1987 and Dever 1992, 2–14. For MB III as a separate phase, see Dever 1992, 12.

<sup>11</sup> For Cypriot Pendent Line style of White Painted III–IV in Palestine, see Gerstenblith 1983, 70–72. For general discussion of Cypriot pottery in Palestine in the Middle Bronze Age, see Gittlen 1981, 49–50; Johnson 1982.

et al. 1989, 284). In the north, however, they may have a longer span since the form continues into Middle Bronze III contexts at Hazor and into Late Bronze I at Ras Sharma (Oren 1973, 74).

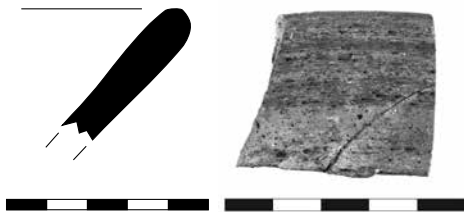
**PH 44** TA73 P456 Platter bowl  
Loc. 2474 MB

Single fragment of simple, slightly flattened rim. P.H. 4.5, P.W. 0.053, Th. 0.007. Light brown fabric (7.5YR 6/2), reddish brown surface (2.5YR 5/6) with very small white and small buff inclusions. Radial burnish on interior. MB I parallels: form and decoration at Tell Jerishe in Stratum III (Geva 1982, fig. 28.26–28); also red-slipped bowl with radial burnish from Aphek (Beck 1985, fig. 5.1).



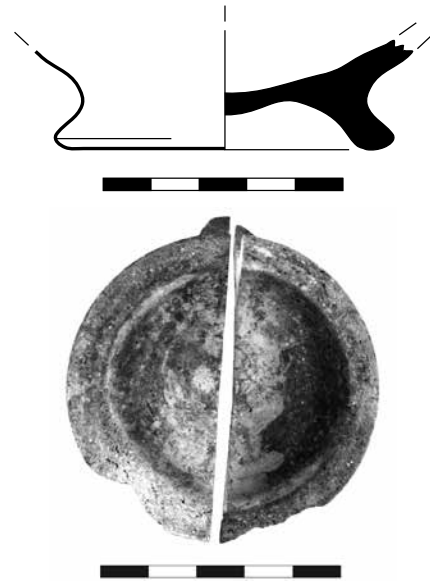
**PH 45** TA73 P414 Platter bowl  
Loc. 3603 LB+

Two joining fragments of simple, rounded rim. P.H. 0.035, Th. 0.8. Light red fabric (2.5YR 6/6) with light gray-brown core (5YR 7/3), light red surface (2.5YR 6/8). Small red, buff, and gray inclusions. Horizontal burnishing on the exterior and rim, vertical burnishing on the interior. MB II parallels: Megiddo, Stratum XI (Loud 1948, pl. 38.5,9).



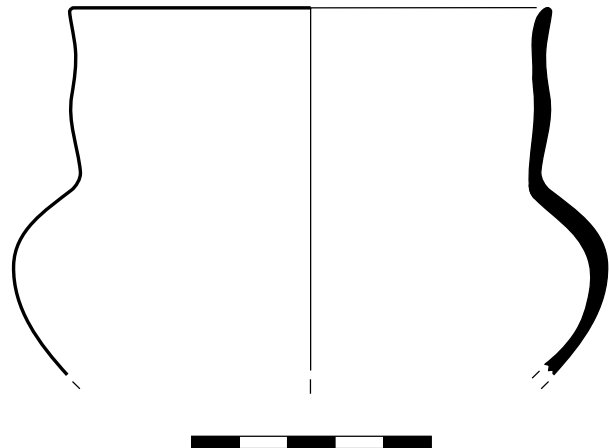
**PH 46** TA73 P505 Platter bowl  
Loc. 2368 MB contam.

Single fragment preserves ring foot base and start of lower wall. P.H. 2.1, D. base 7.0. Reddish yellow fabric (5YR 7/6). MB II parallels: for flaring ring foot, Megiddo, Stratum XII (Loud 1948, pl. 29.26) and for floor (Loud 1948, pl. 29.28).



**PH 47** TA73 P168 Necked bowl  
Loc. 3619, 3614 MB/LB I

Fragments preserve ca. one-half rim and small section of body. P.H. 7.6, est. D. rim 10.5. Gray fabric with light brown surface. Neck burnished vertically, body horizontally. Parallels: form of rim: Hazor in MB II context (Yadin et al. 1960, pl. CLX.38; Yadin et al. 1961, pl. CCLXXXVII.6). The rounded form of the body finds a better parallel in later MB III examples from Hazor (Yadin et al. 1958, pl. XCIV.4,5).





**COOKING POT (PH 48)**

The cooking pots in the Middle Bronze I–II assemblage from Anafa are predominately of the type with folded-over rim. This type is commonly found at northern sites, most frequently on the coastal plain in Middle Bronze II–III (Negbi 1989, 46).

**PH 48** TA73 P423 Cooking pot  
Loc. 3619 MB/LB I  
Single fragment of folded-over rim with gutter. P.H. 3.7, Th. 0.7. Light reddish brown fabric (5YR 6/4) with dark gray core (5YR 4/1) and small buff and gray inclusions. Parallels for the folded-over rim with gutter in MB II context: from Shechem (Cole 1984, pls. 24.d, 25.a).

**JARS AND JUGS (PH 49–55)**

The jars and jugs in the Middle Bronze I–II assemblage at Anafa display two main forms of rim: folded and thickened gutter rim. Jars with folded rims are a common form for Middle Bronze I sites on the northern coastal plain. At Anafa, several variations of the folded rim form are attested, used for both store jars and small jars. The second form is the thickened gutter rim, which is found throughout the Middle Bronze Age on both jars and jugs. Given this range, such rim fragments alone are not closely datable (Ben-Tor 1987, 270; Negbi 1989, 48). Several examples of the form from Anafa, however, appear to be early.

**PH 49** TA73 P393 Store jar  
Loc. 3458 MB/LB I contam.  
Single fragment of elongated, folded rim and start of neck. P.H. 6.0, Th. 0.6. Reddish brown fabric (2.5YR 5/6) with medium gray core (5YR 6/1) and small buff, dark gray, and medium to large light gray inclusions. MB I parallels: in general, Tel Qiri (Ben-Tor 1987, fig. 62.9–10); Tell Jerishe (Geva 1982, fig. 30.1,3,4); Tel Mevorakh (Kempinski 1984, fig. 16.22). The closest parallel is found among numerous such rims at Aphek (Beck 1985, fig. 4.1).

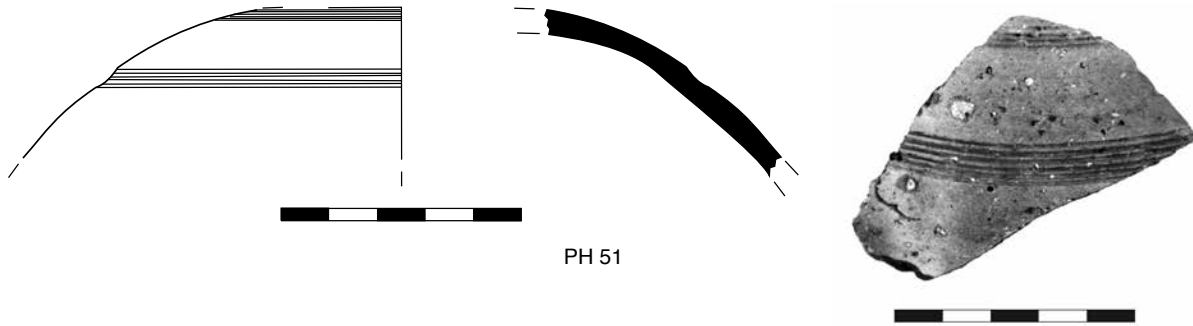


**PH 50** TA73 P502 Store jar  
Loc. 2368 MB contam.  
Single fragment of thick folded rim. P.H. 3.3, Th. 0.13. Reddish brown fabric (2.5YR 4/4) with numerous small white and medium gray inclusions. MB I parallel: Aphek (Beck 1985, fig. 4.10).



**PH 51** TA73 P439 Store jar  
Loc. 3620 MB/LB I  
Single body fragment from shoulder of vessel. P.H. 5.9, est. pres. D. 16, Th. 0.7. Pinkish gray fabric (5YR 6/2) with medium to large buff inclusions. Combed incision drawn with a six-toothed instrument on the shoulder. Parallels: Band-combing on store jar shoulders in the Middle Bronze Age continues the use of

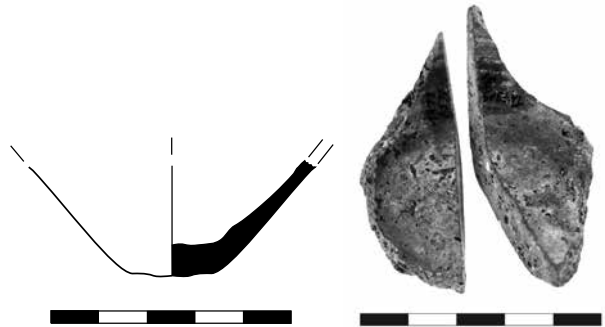
combing as a decorative element from EB IV. In the north it finds its widest popularity in MB I or even MB II. At Tel Qiri, store jars with wheel-combing are found in MB I and II (Ben-Tor 1987, 270). At Hazor the practice is documented on jars from MB II (Yadin et al. 1958, pls. C.28, CXVII.6-8). In the Golan, it is found in MB I and II contexts (Epstein 1985, fig. 4.20-21). Several examples in a transitional MB I-II context are known from Kefar Szold (Epstein 1974, fig. 2.1-7).



PH 51

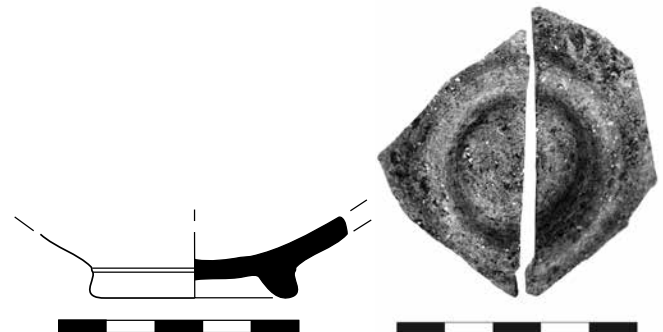
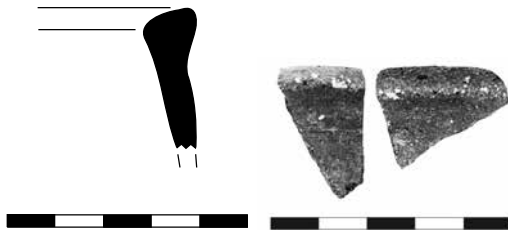
**PH 52** TA73 P424 Small jar  
Loc. 3619 MB/LB I  
Single fragment of folded rim and neck. P.H. 2.1, Th. 0.7. Gray fabric (7.5YR 6/0) with pink surface (5YR 7/4) and numerous small, white, buff, and gray inclusions. MB I parallels at a larger scale: Aphek (Beck 1985, fig. 2.13); Tel Qiri (Ben-Tor 1987, fig. 62.14); the Golan (Epstein 1985, fig. 4.1).

0.023, P.W. 0.058, Th. base 0.010, Th. wall 0.005, D. base 0.029. Light grayish fabric (5YR 7/1) with small buff, white, and gray inclusions. Exterior burnished light brown (10YR 5/3). MB I parallel: Megiddo, Stratum XV (Loud 1948, pl. 7.22).



**PH 53** TA73 P492 Small Jar  
Loc. 2368 MB contam.  
Single fragment of thickened gutter rim. P.H. 2.9, Th. 0.5. Light reddish brown fabric (5YR 6/3) with reddish brown surface (2.5YR 5/4). Numerous medium white and dark gray inclusions. MB I parallels in jugs: Tel Qiri (Ben-Tor 1987, fig. 62.23-24); Megiddo, Stratum XIV (Loud 1948, pl. 11.15).

**PH 55** TA73 P511 Jug, ring foot  
Loc. 2386 MB  
Single fragment of base. P.H. 0.9, D. base 4.4, Th. 0.4. Reddish yellow fabric (5YR 7/6) with numerous small white inclusions. MB II parallel: Megiddo, Stratum XI (Loud 1948, pl. 31.6) for small ring foot and curvature of lower body.



**PH 54** TA73 P531 Jug  
Loc. 2393 MB  
Single fragment of simple flattened base and lower wall. P.H.

*JUGLETS (PH 56–59)*

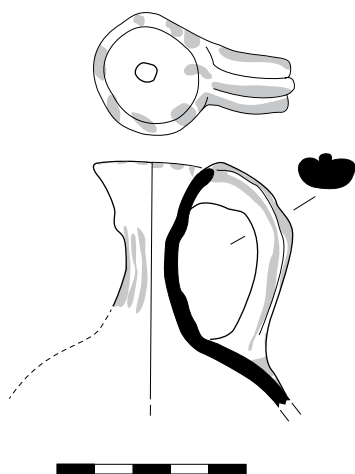
A proportionally large number (nineteen examples from stratigraphically significant loci) of juglets in very fine wares, often bearing painted decoration, were found at Anafa. The most frequent decorative motifs are stripes, concentric circles, or spirals (usually placed between sets of stripes). The Anafa juglets find parallels in Middle Bronze I and II contexts from sites in both Palestine and Syria (Tubb 1983; Gerstenblith 1983, 66–67), but especially in tomb material from Dan and Ginosar.

**PH 56** TA73 P487 “Syrian style” painted juglet  
Loc. 2368 MB contam.

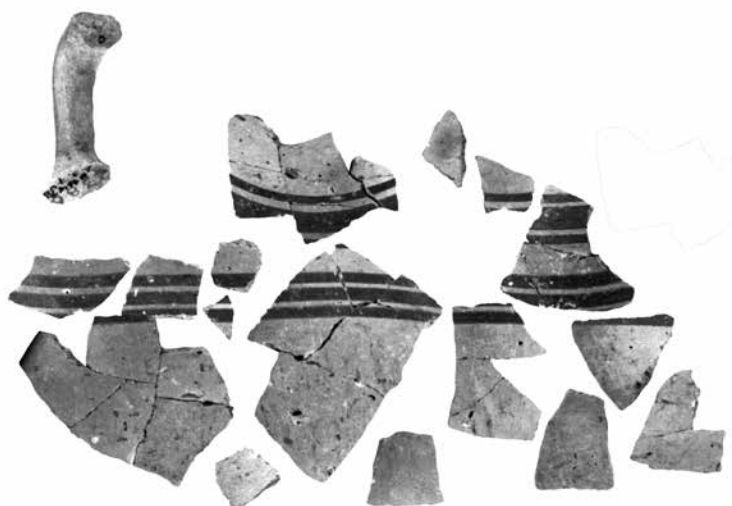
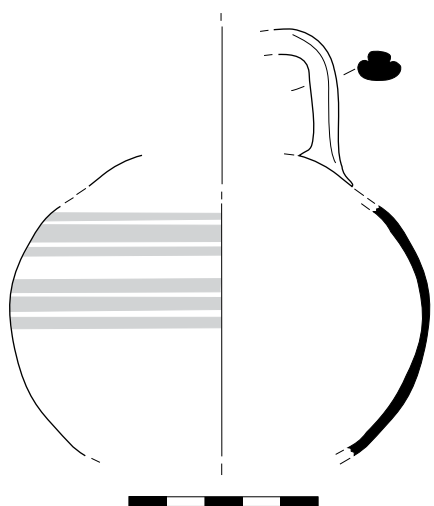
Single fragment preserves rim, neck, handle, and upper body. P.H. 6.3, D. rim 3.0, Th. 0.4. Light reddish brown fabric (5YR 6/3) with reddish yellow (5YR 7/6) exterior surface. Decoration red (10R 4/6). Vertical burnishing on the neck. Stepped-rim and triple handle. Decoration consists of dots on the top of the rim and stripes on the upper body. Parallel in MB I–II context for form of rim and handle: Dan (Ilan 1991, fig. 1.4).

**PH 57** TA73 P521 “Syrian style” painted juglet  
Loc. 2386 MB

Thirty-four joining and non-joining fragments of handle and body. For the largest group of joining fragments P.H. 6.5, max. D. 9.5, Th. 0.5. Reddish yellow fabric (5YR 7/6). Decoration dusky red (10R 3/3). Triple handle. Striped decoration. Parallel: as above, **PH 56**.



PH 56



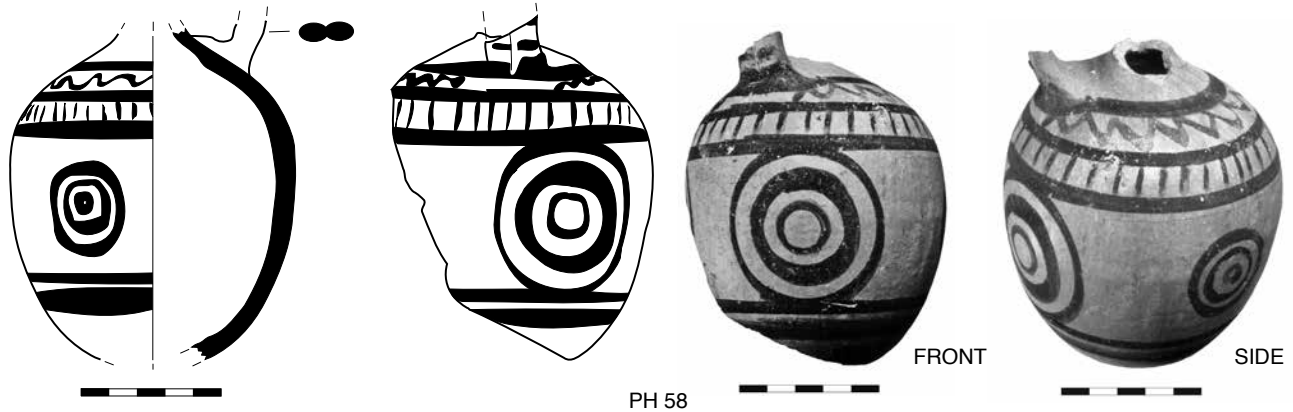
PH 57

**PH 58** TA72 P88  
Loc. 2368, 2388, 23106, 23104

Juglet  
MB contam.,  
HELL 1/2A, MB, MB I

Eight joining fragments preserve most of body, with base, neck, and most of handle missing. P.H. 11.8, max. D. 10.0. Light buff fabric. Decoration light to dark brown. Ovoid body and double

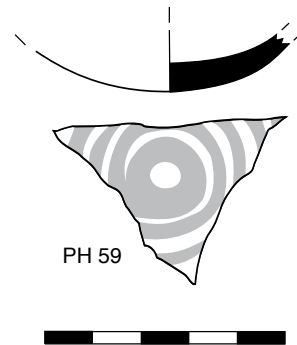
handle. Decorated with horizontal stripe at handle level, wavy band, stripe, zone with short vertical lines, stripe, concentric circles, two stripes. Design of concentric circles. Parallels for concentric circle decoration in MB I-II context: Dan (Ilan 1991, fig. 1.2); Ginosar (Epstein 1974, fig. 14.1 and possibly fig. 14.2,3).



**PH 59** TA73 P495  
Loc. 2368

Juglet with spiral design  
MB contam.

Single fragment of body. P.H. 3.5, P.W. 4.2, Th. 0.5. White fabric (10YR 8/2) with dark reddish brown decoration (5YR 3/3). Parallels for spiral decoration in MB I-II context: Dan (Ilan 1991, fig. 1.4); Ginosar (Epstein 1974, fig. 14.5); and grave 97 at Kamid el-Loz (Miron 1982b, 108, Taf. 23.3).



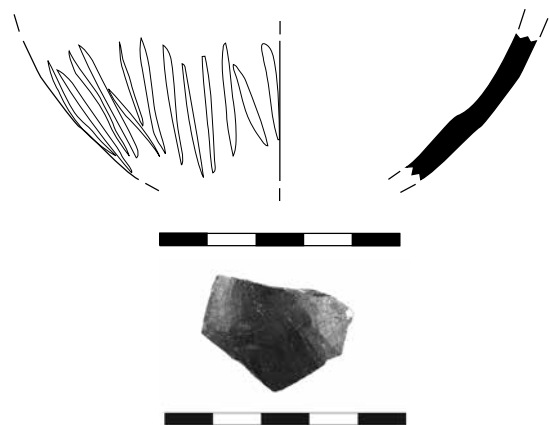
#### TEL EL-YEHUDIYEH WARE (PH 60-61)

Tell el-Yehudiyeh ware is identified by the dark fabric and by the distinctive decorative style of incision filled with lime. This ware was produced in Palestine throughout the Middle Bronze Age, peaking in popularity in Middle Bronze II (Amiran 1970, 119-120). The ware is not common in the assemblage from Anafa. Apart from the two examples catalogued here, only a few other body fragments were found in loci 2386 and 3607.

**PH 60** TA73 P420  
Loc. 3614

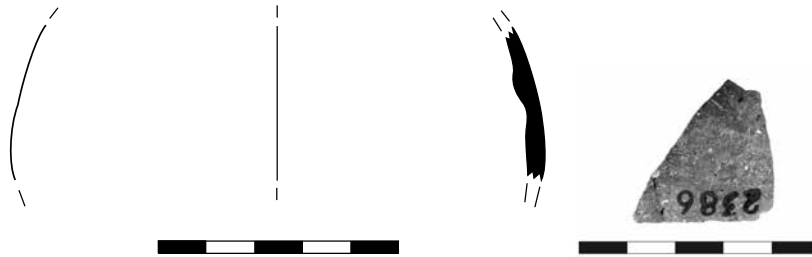
Juglet  
MB/LB I

Single fragment from lower body. P.H. 2.8, max. P.D. 10.5, Th. 0.5. Dark gray fabric (5YR 4/1) vertically burnished to dark reddish brown (5YR 2.5/2). Burnished lower body. Parallels: Afula? (Amiran 1970, pl. 36.10); Ginosar (Amiran 1970, pl. 36.17).



**PH 61** TA73 P588  
 Loc. 2386  
 Single fragment of body. P.H. 3.0, Th. 0.3. Gray fabric (5YR 5/11)

Juglet  
 MB vertically burnished to dark brown (7.5YR 4/2). Burnished lower body. Parallels: as above, **PH 60**.



PH 61

MIDDLE BRONZE AGE III

The Hazor parallels cited below all come from strata dating to Middle Bronze III, unless otherwise indicated.

**BOWLS (PH 62–78)**

Platter bowls and carinated bowls occur frequently in Middle Bronze III levels at Anafa. The platter bowls show a wide range of rim variations and different types of foot. The plain, rounded rim form is found in Middle Bronze II but is more common in Middle Bronze III. There are examples of burnished wares, as well as the plain surface treatment, which, although found in Middle Bronze II, becomes dominant during Middle Bronze III. The carinated bowls show the characteristic late Middle Bronze S-shaped carination.

**PH 62** TA72 P282  
 Loc. 2355  
 Single fragment of plain rounded rim. P.H. 4.7, Th. 0.7. Pink fabric (7.5YR 7/4) with a few small white inclusions. Burnished on the interior. Parallels for rim and burnish: Hazor (MB II?) (Yadin et al. 1958, pl. C.16). Also Hazor (Yadin et al. 1958, pl. CI.5; 1960, pl. CIX.1).

Platter bowl  
 LB/MB pl. CIX.9). However, unlike these Hazor pieces, the Anafa bowl is not burnished.



**PH 63** TA73 P540  
 Loc. 23103  
 Three joining fragments of plain rounded rim. P.H. 5.2, Th. 0.8. Pinkish gray fabric (7.5YR 7/2) with small buff inclusions. Parallels for rim: Hazor (Yadin et al. 1958, pls. CI.5; CIII.1; 1960,

**PH 64** TA73 P453  
 Loc. 2474  
 Platter bowl  
 MB

Two joining fragments of flattened, slightly inverted rim. P.H. 3.6, Th. 0.8. Red fabric (2.5YR 5/8) with small white and gray inclusions. Parallels for rim: Hazor (Yadin et al. 1958, pl. CXIX.3,5).



**PH 65** TA73 P460 Platter bowl  
 Loc. 2474 MB  
 Single fragment of flattened, very slightly inverted rim. P.H. 4.3, Th. 0.8. Light red fabric (2.5YR 6/6) with small white and gray inclusions. Parallel for rim: Hazor (Yadin et al. 1958, pl. CXIX.4).



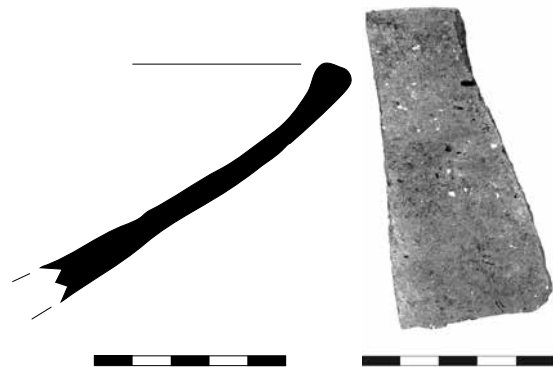
6/4) with small buff and gray inclusions. Parallel: Hazor (Yadin et al. 1958, pl. CXIX.7).



**PH 66** TA73 P481 Platter bowl  
 Loc. 2383, 2384 MB  
 Two joining fragments of flattened, slightly inverted rim. P.H. 3.9, Th. 1.1. Light red fabric (2.5YR 6/6) with small buff and gray inclusions. Parallel for rim: Hazor (Yadin et al. 1958, pl. CXIX.8).

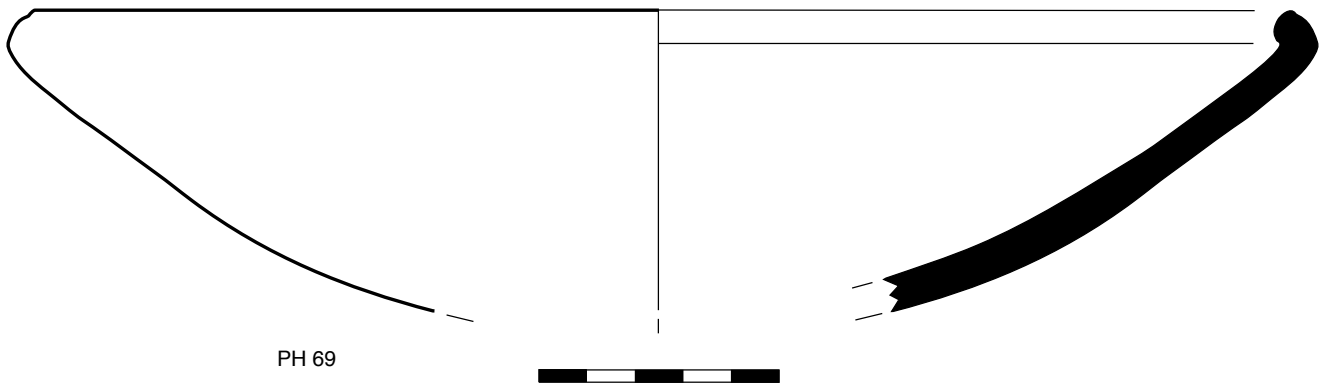


**PH 68** TA73 P538 Platter bowl  
 Loc. 23101 MB  
 Single fragment of flattened, slightly inverted rim. P.H. 8.4, Th. 0.8. Reddish yellow fabric (5YR 6/6) with dark gray core (7.5YR 4/0) and medium buff inclusions. Parallel for rim: Hazor (Yadin et al. 1958, pl. CXIX.2), which has interior and exterior vertical burnishing.



**PH 67** TA72 P296 Platter bowl  
 Loc. 2368 MB contam.  
 Single fragment of flattened, slightly inverted rim. P.H. 3.8, Th. 0.8. Red fabric (2.5YR 4/6) with light reddish brown core (5YR

**PH 69** TA72 P85 Platter bowl  
 Loc. 2368 MB contam.  
 Two joining fragments of rounded, inverted rim and upper wall. P.H. 6.2, D. rim 27.5. Buff fabric with gray core and large inclusions. Radial burnishing on interior. Parallels for rim: Hazor (Yadin et al. 1958, pls. XCIV.2, CXIX.10; 1961, pl. CCLIX.4). These comparanda, however, have a plain surface.



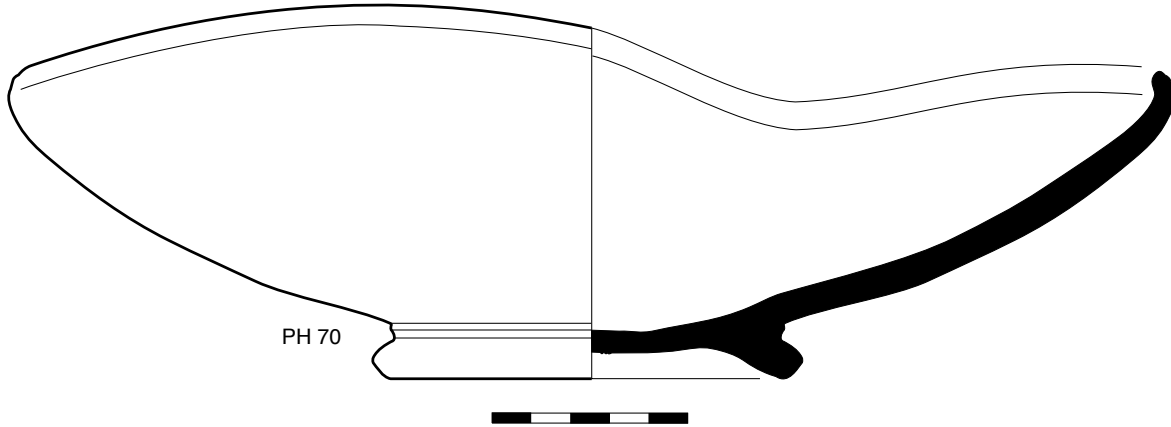
**PH 70**  
Loc. 2368

TA72 P84

Platter bowl  
MB contam.

Single fragment preserves ring foot base with molding at the join to the body and ca. one-half bowl, with rounded inverted

rim. H. 7.5–9.4, D. rim 29.5, D. base 11.0. Buff fabric with large inclusions. Misshapen, warped in firing. Parallels: for rim, Hazor (Yadin et al. 1958, pl. XCIV.2); for foot and molding, Hazor (Yadin et al. 1961, pl. CXC.V.9).

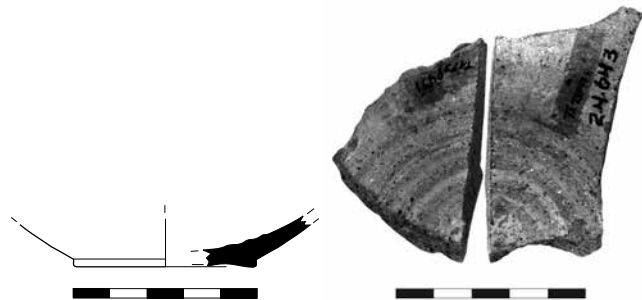


**PH 71**  
Loc. 2474

TA73 P471

Platter bowl  
MB

Single fragment preserves ca. one-half convex disc base and part of lower body. P.H. 1.2, D. base 5.0, Th. 0.9. Pinkish gray fabric (7.5YR 7/2) with small buff inclusions. Three grooved concentric circles on interior of base. Parallels: examples from Hazor (Yadin et al. 1958, pl. CXIX.1,5,9) with convex disc base, which was used extensively on platter bowls in MB III.

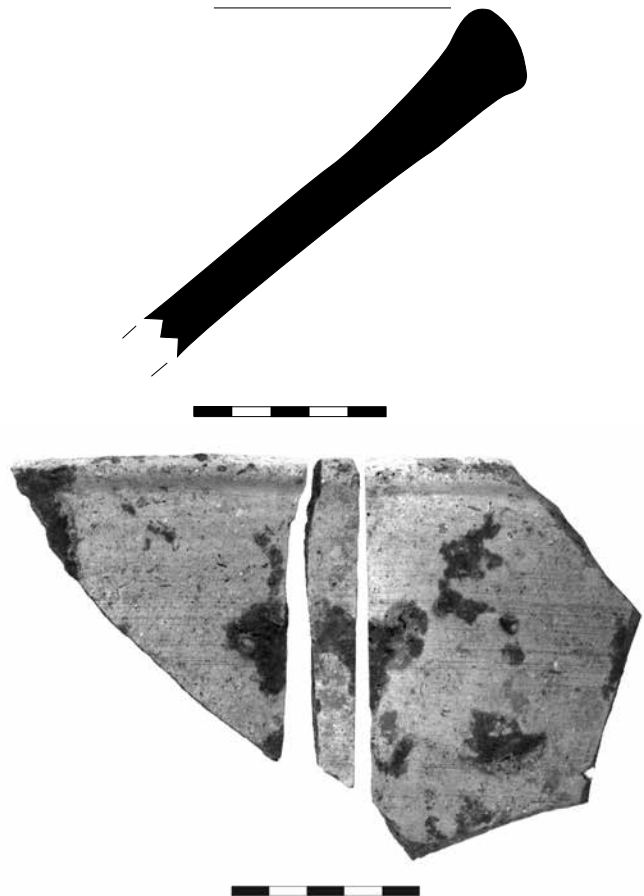


**PH 72**  
Loc. 2368

TA72 P293

Heavy bowl  
MB contam.

Two joining fragments of flattened rim. P.H. 9.2, Th. 1.5. Pink fabric (5YR 7/4) with gray core (7.5YR 6/0), with small buff, gray, and white inclusions. Parallel: Hazor (Yadin et al. 1961, pl. CCXXXVI.8).



**PH 73** TA73 P482 Heavy bowl  
Loc. 2384 MB  
Single fragment of flattened inverted rim. P.H. 6.8, Th. 1.6. Red fabric (2.5YR 5/6) with a reddish gray core (5YR 5/2) with small to medium buff and medium gray inclusions. Parallel for form and heavy fabric: Hazor (Yadin et al. 1958, pl. CI.1).



**PH 74** TA73 P509 Carinated bowl  
Loc. 2386 MB  
Single fragment of straight, flaring rim with pointed edge and sharp carination. P.H. 3.6, T. 0.4. Pink fabric (5YR 7/4). Parallel: Hazor (Yadin et al. 1960, pl. CIX.16).

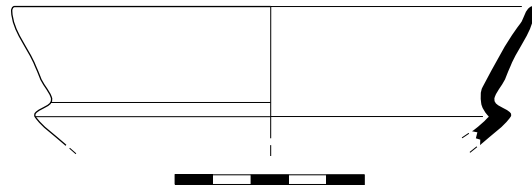


**PH 75** TA72 P81 Carinated bowl  
Loc. 2368 MB contam.  
Single fragment of base and ca. one-half body, preserves complete profile of straight, flaring rim with pointed edge, sharp angular carination, flat lower body profile, and ring foot. H. 10.7, D. rim 20.0, D. base 8.0. Red-brown fabric, light at the core. Parallel: Hazor (Yadin et al. 1960, pl. CIX.16).

**PH 76** TA72 P82 Carinated bowl  
Loc. 2368 MB contam.  
Single fragment of straight, flaring rim and flattened edge and ca. one-quarter body with rounded carination, and flat lower body profile. P.H. 16.8, D. rim 38.0. Greenish buff fabric with many inclusions. Parallel for rim: Hazor (Yadin et al. 1960, pl. CIX.29). Parallel for rounded carination with flat lower body: Hazor (Yadin et al. 1958, pl. CXIX.17).

**PH 77** TA72 P83 Carinated bowl  
Loc. 2368 MB contam.  
Single fragment of elaborated ring foot base, most of flat lower body profile, sharp angular carination, and ca. one-half straight rim and pointed edge, preserving complete profile. H. 7.9, D. rim 15.8, D. base 5.3. Brown fabric with gray core and numerous inclusions. Parallel for flat lower body profile: Hazor (Yadin et al. 1958, pl. CXIX.17).

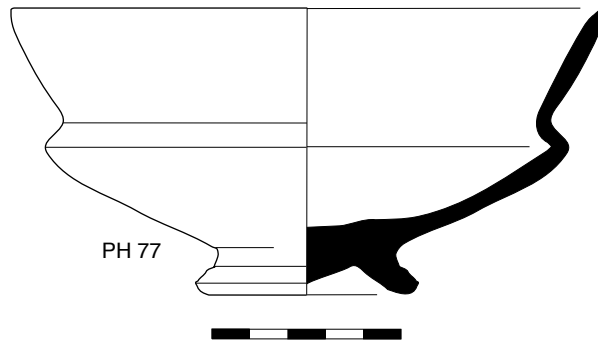
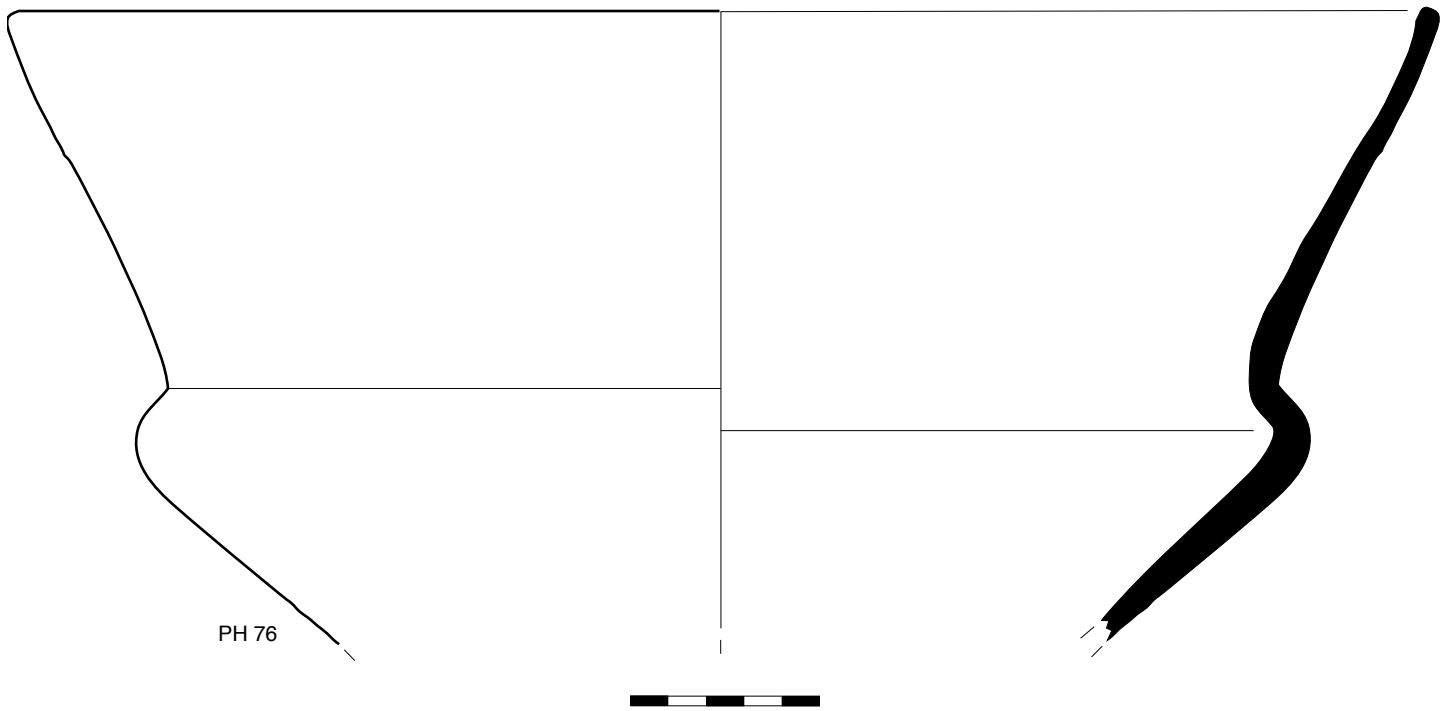
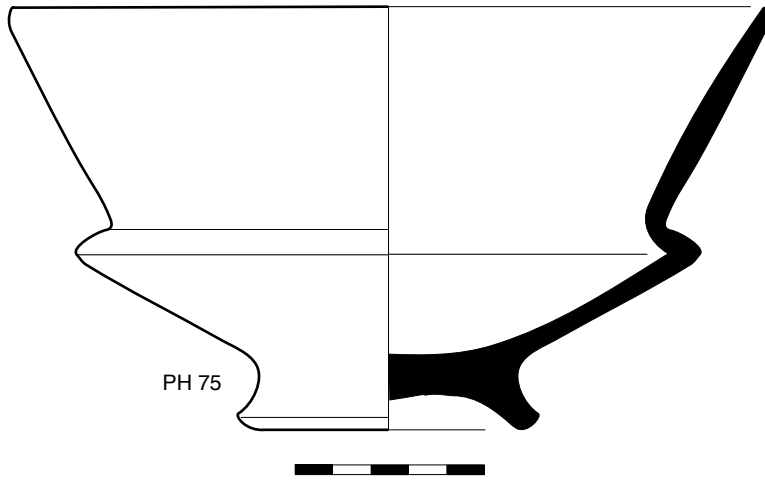
**PH 78** TA72 P89 Carinated bowl  
Loc. 2368 MB contam.  
Two joining fragments of straight rim and pointed edge and small portion of lower body with sharp angular carination. P.H. 3.6, est. D. rim 14.0. Buff fabric with gray core and large inclusions. Parallel for sharp angular carination: Hazor (Yadin et al. 1958, pl. CXIX.13).

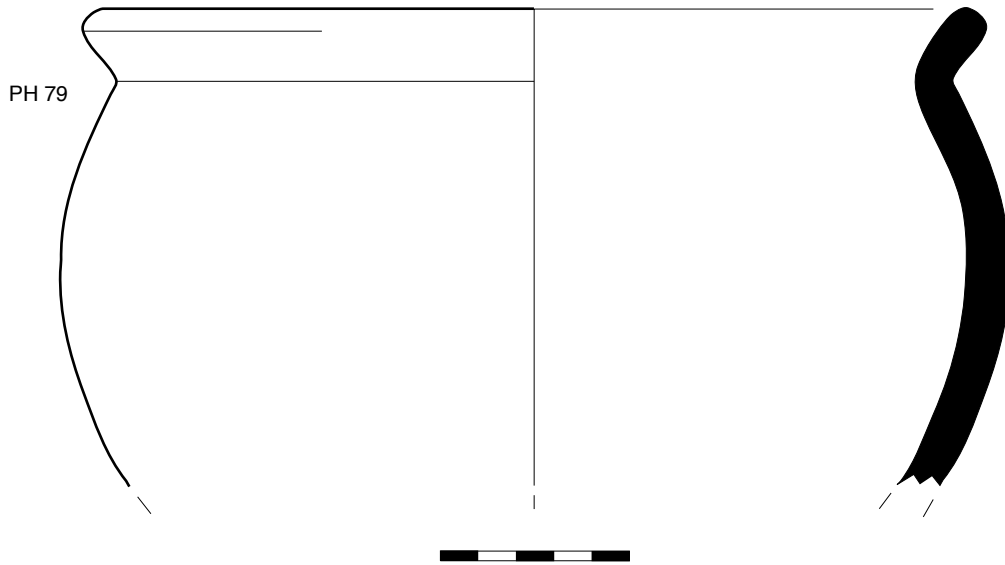


#### KRATERS AND COOKING POTS (PH 79–89)

The majority of Middle Bronze III cooking pots and kraters from Tel Anafa have an everted rim. Within this general form there is a great deal of variation. The cooking pots show strong similarities both with examples from the coastal plain, especially Nahariya, and with examples from Hazor. The parallels from Hazor cited below belong to Middle Bronze III contexts unless otherwise indicated. The Nahariya material cannot be closely dated. The last five entries in this category, **PH 84–89**, date to the transition from Middle Bronze III to Late Bronze I and show characteristic late features such as the T-shaped rim of **PH 88**. These examples find parallels in material from Hazor spanning the transition from Middle Bronze III to Late Bronze I.



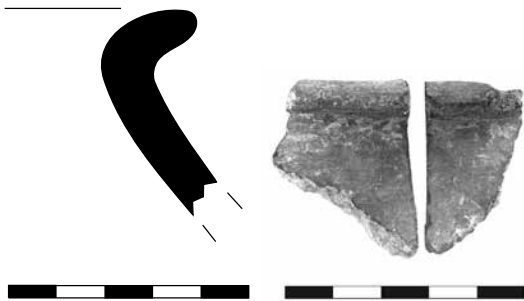




**PH 79** TA72 P86 Krater  
 Loc. 2368 MB contam.  
 Six joining fragments of everted rim and upper bowl. P.H. 13.4, D. rim 24.0, max. D. 25.0. Red-brown fabric with dark gray core. Radial burnishing on the interior of the bowl, except near the lip, where there is horizontal burnishing. Parallel for form: Hazor (Yadin et al. 1958, pl. XCIV.8, cooking pot).

**PH 81** TA73 P353 Cooking pot  
 Loc. 3381 MB/LB I contam.  
 Single fragment of everted rim with rounded edge. P.H. 6.9, Th. 1.3. Reddish brown fabric (5YR 4/4) with small light gray inclusions. Parallels: as above, **PH 80**.

**PH 80** TA73 P508 Cooking pot  
 Loc. 2386 MB  
 Single fragment of everted rim with rounded edge. P.H. 3.7, Th. 0.8. Reddish brown fabric (2.5YR 4/4) with small gray inclusions. General parallel for form: Hazor (Yadin et al. 1958, pl. XCIV.8). Parallel for sharp angle of rim: Nahariya (Cole 1984, fig. 17.b).



**PH 82** TA73 P425 Cooking pot  
Loc. 3619 MB/LB I

Single fragment of everted rim with gutter. P.H. 2.5, Th. 0.8. Reddish brown fabric (2.5YR 3/4) with dark gray core (5YR 5/1) and small white inclusions. Parallels: Hazor (Yadin et al. 1960, pl. CX.12); Nahariya (Cole 1984, fig. 17.d-f).



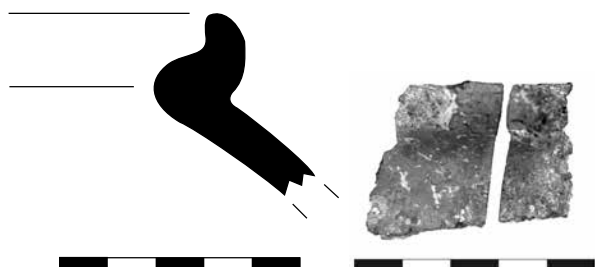
**PH 85** TA73 P335 Cooking pot  
Loc. 3371 MB/LB I contam.

Single fragment of everted rim with slightly thickened, rounded edge. P.H. 3.0, Th. 0.7. Dark reddish brown fabric (2.5YR 3/6) with dark brown surface (7.5YR 3/2) and small white, red, and micaceous inclusions. Parallels: Hazor (Yadin et al. 1958, pls. XCVIII.21 [MB III-LB], CIV.10 [MB III-LB]); 1960, pl. CX.13 [MB III]; 1961, pl. CCLXV.4 [LB I]).



**PH 83** TA72 P292 Cooking pot  
Loc. 2368 MB contam.

Single fragment of everted rim with gutter. P.H. 3.6, Th. 0.7. Dark gray fabric (7.5YR 4/0) with reddish brown surface (5YR 4/3) and medium to large gray and buff inclusions. Cooking pot has everted rim with gutter. Parallel: Nahariya (Cole 1984, fig. 17.f).



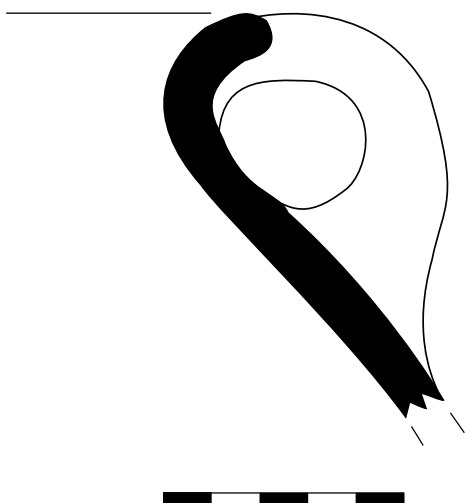
**PH 86** TA73 P336 Cooking pot  
Loc. 3371 MB/LB I contam.

Single fragment of everted rim with flattened edge. P.H. 2.9, Th. 0.6. Reddish yellow fabric (5YR 6/6) with small white and gray inclusions. Parallels: Hazor (Yadin et al. 1958, pl. CXXXVIII.4 [LB I]; 1960, pl. CX.11 [MB III]).



**PH 84** TA73 P510 Cooking pot  
Loc. 2386 MB

Single fragment of everted rounded rim and broad, flattened handle. P.H. 8.0, Th. 0.8. Light reddish brown fabric (5YR 6/3). Parallel: Hazor (Yadin et al. 1960, pl. CX, 19).

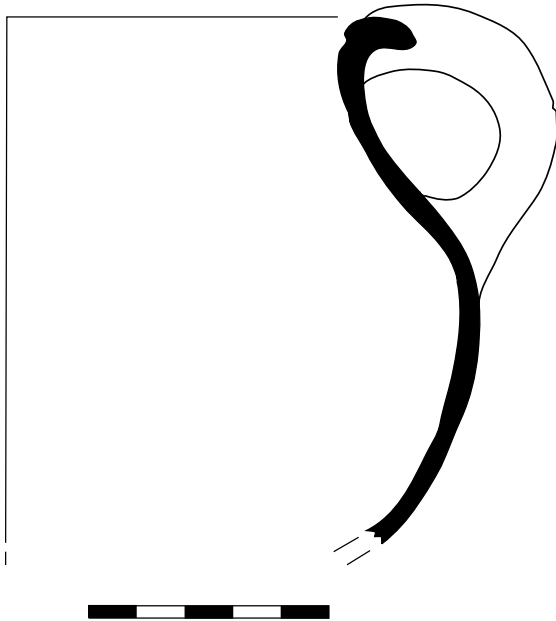


**PH 87** TA73 P386 Cooking pot  
Loc. 3454 MB/LB I contam.

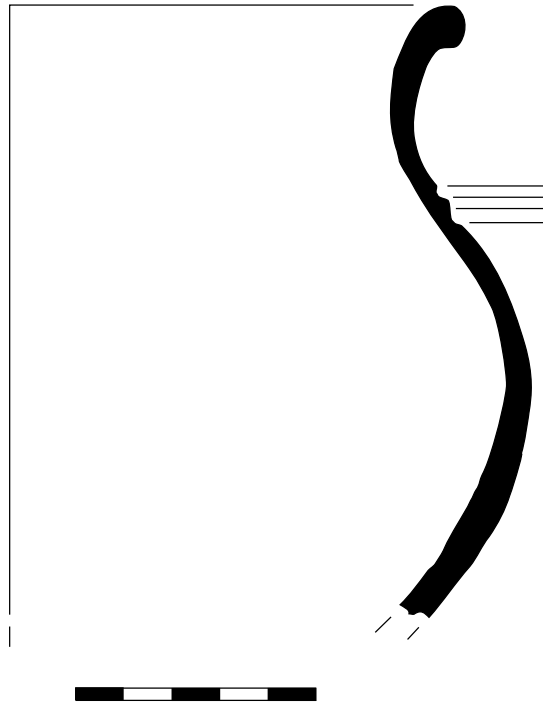
Single fragment of everted rim with slight gutter. P.H. 5.5, Th. 0.9. Reddish brown fabric (5YR 5/4) with numerous small white inclusions. Parallels: Hazor (Yadin et al. 1958, pl. CXXXIX.5 [LB I]; 1960, pl. CX.12 [MB III]).



**PH 88** TA73 PI40  
 Loc. 3619  
 Cooking pot  
 MB/LB I  
 Most of everted T-shaped rim (ca. two-thirds) preserved, as is large section of body and one handle. P.H. 11.1, D. rim 17.0. Dark gray-brown fabric. Parallels for T-shaped rim: Hazor (Yadin et al. 1960, pl. CX.1,2?; 1961, pl. CCLXXXVII.11).



**PH 89** TA73 PI41  
 Loc. 3619  
 Cooking pot  
 MB/LB I  
 Single fragment of ca. one-quarter everted rim with rounded lip and body. P.H. 12.7, est. D. rim. 19.0. Red-brown fabric. Grooved decoration on the shoulder. Parallel for form and decoration: Hazor (Yadin et al. 1958, pl. CXII.15).



### JARS (PH 90–101)

The jars in the Middle Bronze III assemblage at Anafa can be divided into three categories: small jars, store jars, and pithoi. Given the fragmentary nature of the material, the precise separation tends to be one of scale. For the small jars, the very small rim fragments preserved make it difficult to determine whether the rim actually belonged to a jar or a jug. Also, as stated above, several rim forms are produced throughout the Middle Bronze Age. As for vessels on a somewhat larger scale, store jars with ribbed rims are well represented in the Anafa assemblage. Pithoi, in general, tend to be a northern phenomenon and are more common in the Late Bronze Age than in this period (Amiran 1970, 143), but at Anafa as at Hazor, pithoi are found in Middle Bronze III contexts. Pithoi are often one of a kind without precise parallels. Again, the last three entries in this section, **PH 99–101**, are transitional pieces, marking the shift to Late Bronze 1.

**PH 90** TA72 P279  
 Loc. 2355  
 Small jar  
 MB/LB  
 Single fragment of thickened, rounded rim. P.H. 3.6, Th. 0.6. Red fabric (2.5YR 5/6) with small white, gray, and red inclusions. Parallels for general form: Hazor (Yadin et al. 1958, pl. CIII.15 [jug]; 1961, pl. CCLXXXVI.15 [store jar]).



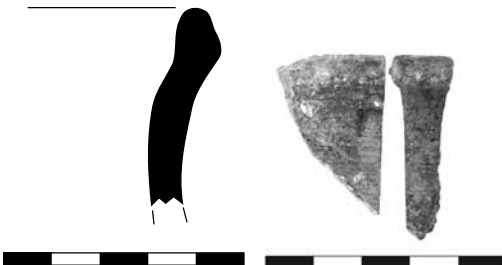
**PH 91** TA73 P485 Small jar  
 Loc. 2384 MB  
 Single fragment of rim. P.H. 20.0, Th. 0.6. Buff fabric (10YR 8/3) with small buff inclusions. Small jar with thickened rounded rim. Parallels: as above, **PH 90**.



**PH 94** TA73 P537 Store jar  
 Loc. 23101 MB  
 Single fragment of rounded, strongly projecting rim with groove on exterior edge. P.H. 4.1, Th. 20.0. Reddish brown fabric (5YR 5/4) with small white inclusions. Parallels: Hazor (Yadin et al. 1958, pls. CI.27, CXI.5).



**PH 92** TA72 P280 Small jar  
 Loc. 2355 MB/LB  
 Single fragment of thickened gutter rim. P.H. 4.1, Th. 0.4. Light red fabric (2.5YR 6/6) with reddish gray core (5YR 5/2), and small buff and medium gray inclusions. Parallel: Hazor (Yadin et al. 1958, pl. CXVII.3 [MB II]).

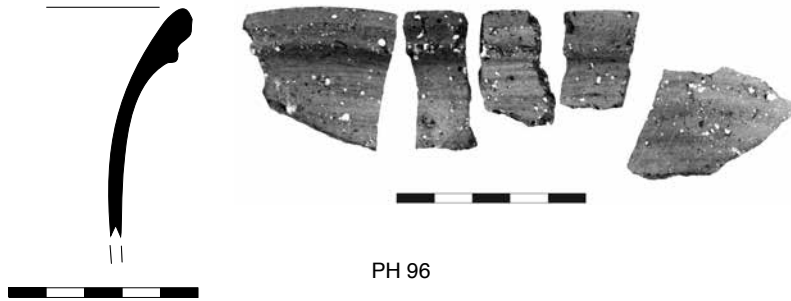


**PH 93** TA73 P461 Small jar  
 Loc. 2474 MB  
 Single fragment of everted triangular rim. P.H. 3.7, Th. 0.6. Pinkish white fabric (7.5YR 8/2) with small to medium white inclusions. Parallel: jug rim, Tel Mevorakh (Kempinski 1984, fig. 14.14 [MB II]).



**PH 95** TA72 P281 Store jar  
 Loc. 2355 MB/LB  
 Single fragment of elongated ribbed rim. P.H. 4.5, Th. 0.8. Pink fabric (7.5YR 7/4) with light gray core (10YR 6/1) and small gray inclusions. Parallel: Hazor (Yadin et al. 1958, pl. XCVIII.10).





PH 96

**PH 96**  
Loc. 2386

TA73 P513

Store jar  
MB

Two joining and one non-joining fragments of short ribbed rim and neck. P.H. 6.1, Th. 0.5. Pink fabric (5YR 7/3) with many small to medium white inclusions and a few small red and dark gray inclusions. Parallel: Hazor (Yadin et al. 1961, pl. CCXLVI.14).

4/1), and very small white inclusions. Parallels: Hazor (Yadin et al. 1958, pl. XCIV.12) and Kamid el-Loz (Mansfeld 1985, Taf. 23.1 [LB I]).

**PH 97**  
Loc. 2368

TA73 P500

Store jar?/pithos  
MB contam.

Single fragment of thickened profiled rim. P.H. 6.2, Th. 1.5. Red fabric (2.5YR 4/6) with gray core (2.5YR 5/10) and small to medium white and gray inclusions. Parallel: Hazor (Yadin et al. 1958, pl. CXI.4).



**PH 98**  
Loc. 2355

TA72 P277

Pithos  
MB/LB

Single fragment of thickened profiled rim. P.H. 4.9, Th. 2.0. Reddish brown fabric (2.5YR 3/6) with a dark gray core (5YR

**PH 99**  
Loc. 2393

TA73 P529

Pithos  
MB

Single fragment of thickened profiled rim. P.H. 4.9, Th. 1.4. Pink fabric (7.5YR 7/4) with pinkish gray core (7.5YR 7/2) and small white, buff, and red inclusions. Late on ware and form. Parallel: Hazor (Yadin et al. 1958, pl. CXLI.8 [LB I]).



**PH 100**  
Loc. 2368

TA73 P497

Pithos  
MB contam.

Single fragment of elongated profiled rim with ridge on neck. P.H. 11.5, Th. 1.4. Reddish brown fabric (5YR 5/4) with gray core (5YR 511) and small to medium white inclusions.

**PH 101**  
Loc. 2368

TA73 P498

Pithos  
MB contam.

Single fragment of everted profiled rim. P.H. 9.4, Th. 1.3. Reddish brown fabric (5YR 5/4) with gray core (5YR 511) and small to medium white inclusions. Parallels: Hazor (Yadin et al. 1960, pl. CXIV.12; 1961, pl. CXC.V.10).



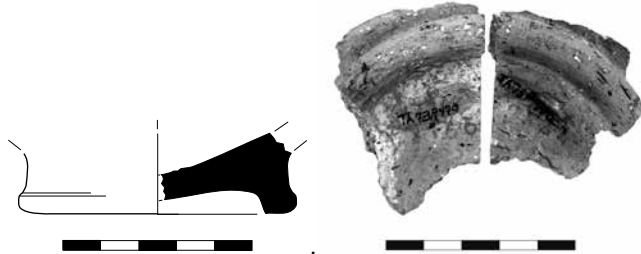
#### *JUGS AND JUGLETS (PH 102–105)*

The Anafa assemblage shows the range of Middle Bronze III jug and juglet types. As mentioned above, some of the small rim fragments included as jar rims, such as **PH 90**, could actually be from jugs. The jugs show the Middle Bronze III feature of a plain surface without a slip or burnish (Negbi 1989, 48). As to form, the use of the ring foot is typical of this period, and **PH 103** shows a rounder body form that enters use at this period and continues into Late Bronze I. Dipper juglets also are of the plain surfaced, pointed bottom form favored by potters in Middle Bronze III (Negbi 1989, 48).

**PH 102** TA73 P470  
Loc. 2474

Jug with ring foot  
MB

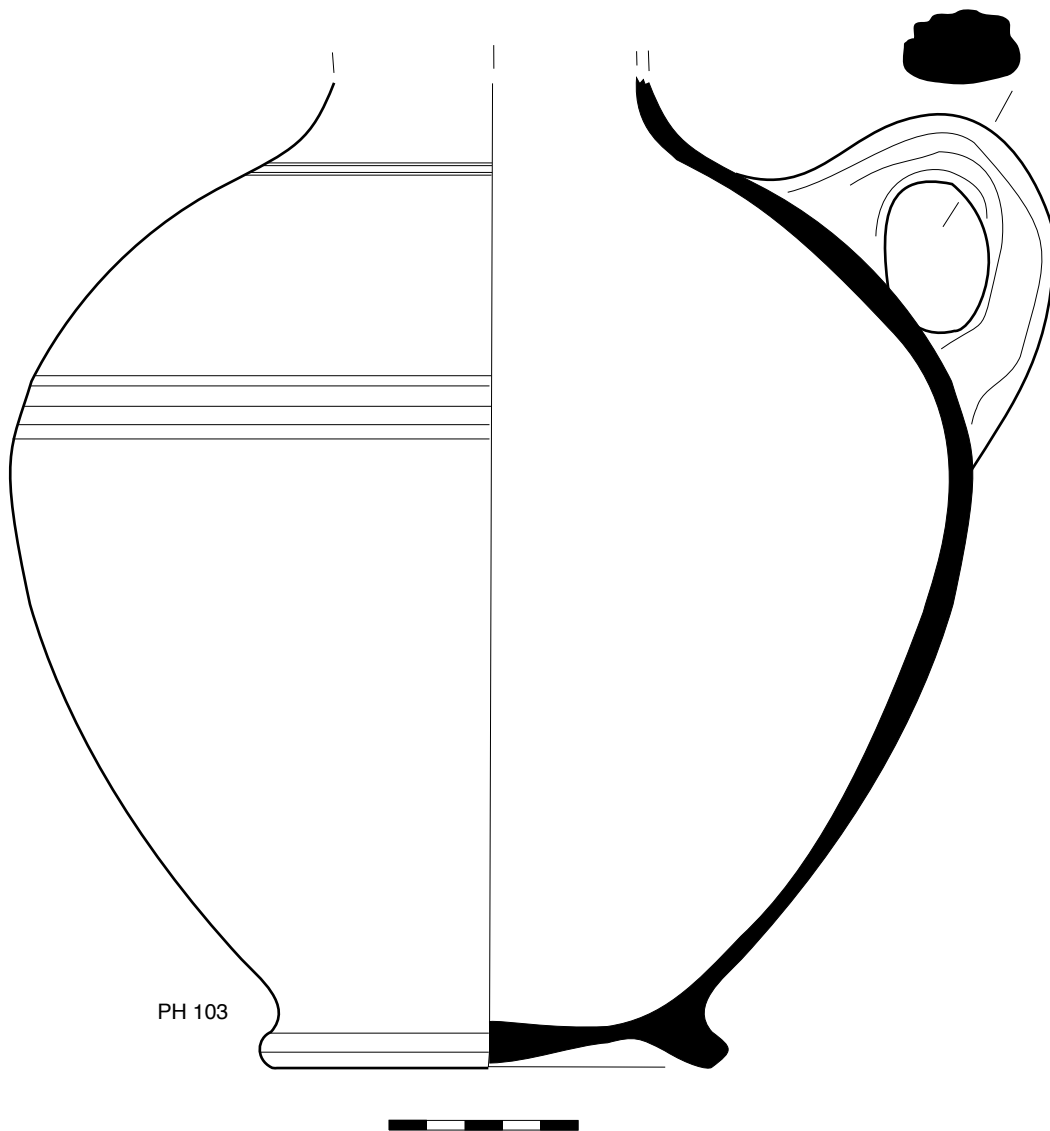
Single fragment of foot. P.H. 2.7, D. base 7.4, Th. 1.0. Pink fabric (5YR 7/3) with small white and red inclusions and medium white inclusions. Parallel: Hazor (Yadin et al. 1960, pl. CXII.1)



**PH 103** TA72 P110  
Loc. 2368

Jug with rounded body  
MB contam.

Flaring ring base, about one-half of body and one vertical handle preserved on shoulder. P.H. 26.5, max. D. 25.8. Buff fabric with gray core and many white inclusions. Two horizontal lines incised on shoulder, five on body at base of handle. Parallels: for general shape: Hazor (Yadin et al. 1958, pl. CI.24); for LB I rounder body form: Hazor (Yadin et al. 1961, pl. CCXLI.19).

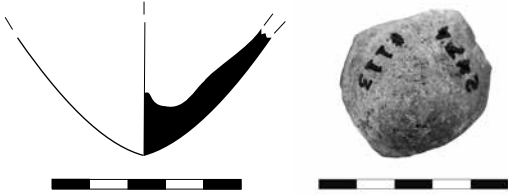


PH 103



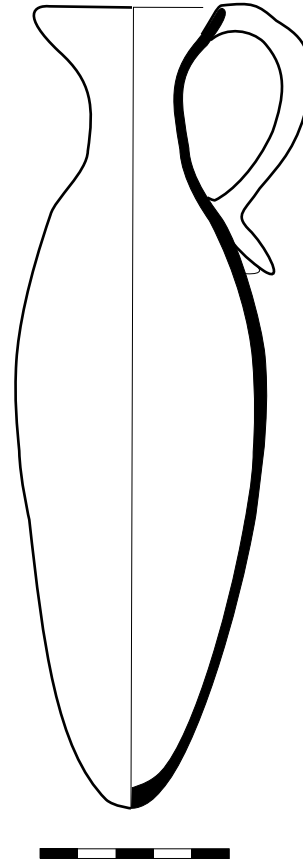
**PH 104** TA73 P464  
Dipper juglet with pointed bottom  
Loc. 2474

Single fragment of base with pointed bottom. P.H. 3.1, max. P.D. 6.0, Th. 0.5. Reddish yellow fabric (5YR 6/6). Parallel: Hazor (Yadin et al. 1960, pl. CXI.1).



**PH 105** TA72 P205  
Dipper juglet with pointed bottom  
Loc. 2368

Fragments preserving complete profile. H. 2.1, D. rim 5. Red-brown fabric with buff surface. Parallel: Hazor (Yadin et al. 1961, pl. CCXXXIX.8).



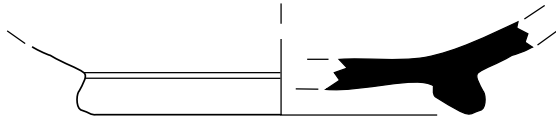
MB contam.

#### *CHOCOLATE-ON-WHITE WARE (PH 106–110)*

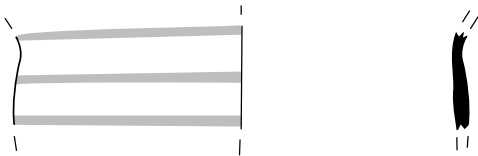
Tel Anafa yielded seventeen fragments of Chocolate-on-White ware and imitations from the loci examined.<sup>12</sup> This ware is defined by its distinctive white slip with brown decoration. Chocolate-on-White ware begins in Middle Bronze III and continues into Late Bronze I (Amiran 1970, 159; Hennessy 1985, 110). At Hazor, Chocolate-on-White ware is “rather common” in Middle Bronze III contexts and becomes “very common” in early Late Bronze I (Yadin et al. 1989, 156, 222).

<sup>12</sup>In addition to the examples listed in the catalogue, Chocolate-on-White ware and imitations were found in loci 2368, 2369, 2374, 2386, and 3607.

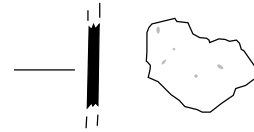
**PH 106** TA73 P512 Chocolate-on-White ware bowl MB  
 Loc. 2386  
 Single fragment of base with small ring foot and slight depression in center of floor. P.H. 1.4, D. 8.0, Th. 0.4. White fabric (10YR 8/2) with a pink surface (7.5YR 8/4). Parallel: near Pella (Hennessy 1985, fig. 2.6). Bowl with almost flat floor: Hazor (Yadin et al. 1961, pl. CCXL.1).



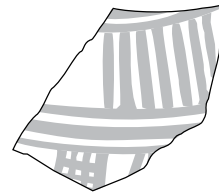
**PH 107** TA73 P396 Chocolate-on-White ware open vessel MB/LB I contam.  
 Loc. 3458  
 Single fragment of body. P.H. 1.9, Th. 0.003. Pink fabric (5YR 7/4) with light gray core (7.5YR 7/0) and small dark gray inclusions. Thick white slip on the interior and exterior. Three brown stripes (2.5YR 3/4) on the exterior. Parallel for decorative motif: Pella (Hennessy 1985, fig. 3.1,9).



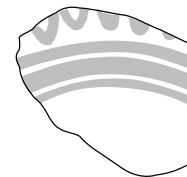
**PH 108** TA73 P472 Chocolate-on-White ware closed vessel MB/LB I  
 Loc. 3603/3614  
 Single fragment of body. P.H. 2.0, Th. 0.3. Pink fabric (5YR 8/3) with highly burnished, slipped exterior.



**PH 109** TA73 P39 Chocolate-on-White ware closed vessel MB  
 Loc. 2386  
 Two joining body fragments. P.H. 3.8. Light buff fabric. Painted decoration of a zone of vertical lines framed by horizontal stripes, above an area with a vertical latticed band. Parallel for zone of vertical lines: Pella (Hennessy 1985, figs. 1.8, 2.2). Parallel for lattice work: Pella (Hennessy 1985, fig. 3.6).



**PH 110** TA 73 P40 Chocolate-on-White ware closed vessel HELL?  
 Loc. 21402  
 Single fragment of body. P.H. 3.5. Fabric almost white on interior and light buff on the exterior. Decoration deep purple-brown. Horizontal squiggle above three horizontal lines. The squiggle is probably the most common decorative motif in Chocolate-on-White ware. Parallel: Pella (Hennessy 1985, fig. 3.5).



## IV. LATE BRONZE AGE

The Tel Anafa assemblage contains an unbroken series of Late Bronze Age pottery from the transitional Middle Bronze III/Late Bronze I forms catalogued in the previous section down to cooking pots that are very close to IRON I in form (**PH 138–140**). This material comes from both fill and primary contexts. The chronological range of the Late Bronze I pottery is ca. 1500 to 1400 BCE. The Late Bronze II material spans the entire period 1400 to 1200 BCE, with a probable peak in Late Bronze IIB, the thirteenth century.<sup>13</sup>

The Late Bronze I material comprises primarily local plain wares, with few imports or painted wares. Imports increase in Late Bronze II. Overall, the Late Bronze Age assemblage at Anafa bears close similarities to the pottery from Hazor and Dan and seems to correspond to a cultural grouping of the northern Galilee. Parallels in forms and import patterns with Kamid el-Loz also appear to connect the Anafa pottery with the Bek'aa Valley, and the source of the quatrefoil bowl form, **PH 114**, is found in inland Syria near Damascus.

The Late Bronze I assemblage at Anafa includes a range of the standard forms. A number of clear Late Bronze I markers are found, including degenerate platter bowls and carinated bowls, cooking pots with everted triangular rims, and large pithoi in buff cream coarse wares, often with chevron-incised bands. Although most of the pottery has no special surface treatment, a few local painted wares are found. There are also a few pieces of probable imported bichrome ware and its local imitations; other imported wares include a few Base Ring I sherds. Neither Black Lustrous wares nor Syrian bottles appear in the assemblage.

Late Bronze II is well represented by both local wares and imports. Standard forms for local wares include degenerate platter bowls and carinated bowls; simple hemispherical bowls with flat or disc base; a few kraters, some with monochrome paint; many cooking pots; and simple store jar rims. The latest Late Bronze IIB materials include heavy platter bowls, very simple store jars with slightly bulbous rims, and numerous cooking pots with slightly elongated triangular rims. These types must fall very close to IRON I, ca. 1200 BCE.

The Late Bronze II assemblage sees a marked increase in imported wares, as is also the case at Dan (Biran 1994, 108–111). There are clear examples of Cypriot Base Ring I–II wares and White Slip II wares (plus imitations of both), several Mycenaean IIIB sherds and imitations, and one or two Cypriot White Painted V–VI sherds. For a small inland settlement, Anafa shows a significant representation of Late Bronze Age imported wares.

The catalogue entries for the Late Bronze Age are presented in three sections. The local wares, primarily plain, of Late Bronze I and Late Bronze II comprise the first two sections. The third section presents a sample of the imported wares and their local imitations. In all the catalogue entries, parallels are from contemporary contexts unless otherwise indicated.

### LATE BRONZE I

#### *BOWLS* (**PH 111–114**)

The Late Bronze I bowls in the Anafa assemblage are of two types: open bowls with simple rims and carinated bowls. Open bowls with simple rims in Late Bronze I can have either straight or rounded sides. The Anafa examples seem to be from bowls with straight sides, but the examples are very fragmentary, making precise identification difficult. Elsewhere, carinated bowls are the most common bowl type in Late Bronze I (Amiran 1970, 124), and several forms are found at Anafa. There are simple carinated bowls like **PH 112** that essentially continue the Middle Bronze Age form (Yadin et al. 1989, 233). As for other forms of carinated bowls, a quatrefoil carinated bowl with handles, **PH 114**, is of particular interest. This is a development from the quatrefoil carinated bowl without handles that is

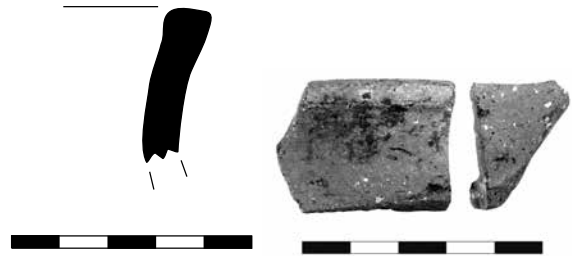
<sup>13</sup>For recent discussion of the chronology and phasing of the Late Bronze Age in Palestine, see Dever 1992, 14–17.

characteristic of Hazor in Middle Bronze III but continues into Late Bronze I (Yadin et al. 1989, 234). The form with handles appears only in Late Bronze I contexts at Hazor. The quatrefoil bowl form appears to be a Syrian element, finding a parallel in Middle Bronze levels at Tell es-Salihieh near Damascus (Yadin et al. 1958, 149).

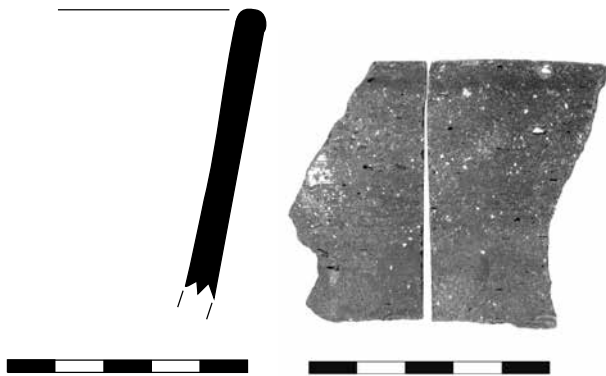
**PH 111** TA73 P403 Platter bowl  
Loc. 3534.1 LB II  
Single fragment of plain rounded rim. P.H. 2.5, Th. 0.8. Very pale brown fabric (10YR 8/3) with small white and gray inclusions. Parallels: Hazor (Yadin et al. 1961, pls. CCLXI.1,2,7).



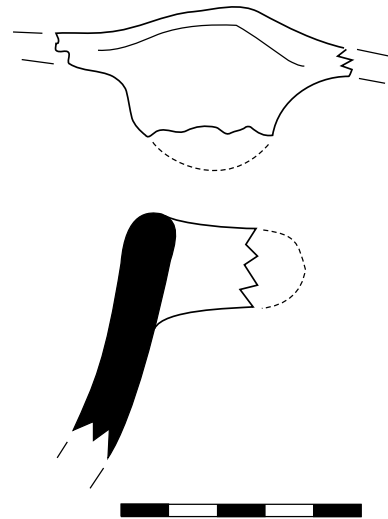
**PH 113** TA73 P404 Heavy carinated bowl  
Loc. 3534.1 LB II  
Single fragment of everted flattened rim. P.H. 2.9, Th. 0.7. Pink fabric (5YR 7/4) with medium to large white inclusions. Parallels: Megiddo (Loud 1948, pl. 53.9); Hazor (Yadin et al. 1961, pl. CCLXXXVIII.27).



**PH 112** TA 73 P401 Carinated bowl  
Loc. 3534.1 LB II  
Single fragment of very tall, thick, straight rim. P.H. 5.8, Th. 0.6. Dark gray metallic fabric (7.5YR 4/0) with reddish brown surface (2.5YR 5/4) and small to medium white inclusions. Parallels: Hazor (Yadin et al. 1958, pl. XCV.2; Yadin et al. 1961, pl. CCLXXXVIII.20).



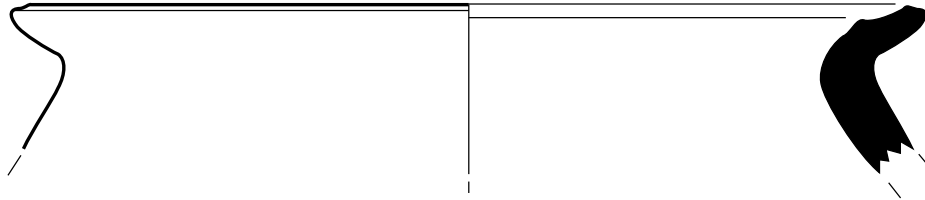
**PH 114** TA73 P338 Quatrefoil carinated bowl with handles  
Loc. 3371 MB/LB I contam.  
Single fragment of rim and base of handle. P.H. 4.9, P.W. 6.1, Th. 0.1. Reddish yellow fabric (5YR 6/6) with medium to large white inclusions. Parallels: Hazor (Yadin et al. 1958, pl. CXXXVI.14-16).



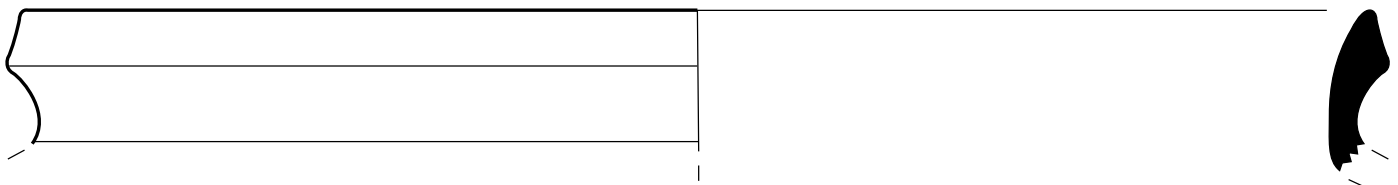
### COOKING POTS (PH 115-121)

Late Bronze I cooking pots can be divided into two groups on the basis of the form of the rim: everted rounded rim and everted triangular rim (Amiran 1970, 135). The everted rim form follows from the Middle Bronze cooking pot but receives differing treatment at the edge. Among the Anafa material the everted rounded form appears to be more prevalent than the triangular form. At this stage in its development, the "triangular" rim is actually just flattened and does not yet show the distinctive form and overhang of the Late Bronze II cooking pot. Two of the catalogued

examples with everted triangular rims, **PH 120** and **PH 121**, also have a clear gutter on the interior of the rim. This appears to be an early feature. Overall, the Anafa Late Bronze I cooking pots are very similar to those from Hazor, where cooking pots with triangular rims and no handles are typical (Yadin et al. 1989, 286).



PH 117



PH 118

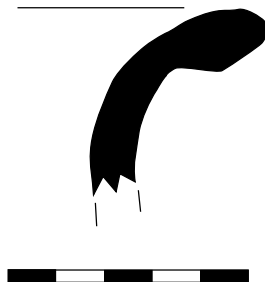
**PH 115** TA73 P352  
 Loc. 3380  
 Cooking pot  
 MB/LBI contam.  
 Single fragment of everted rounded rim. P.H. 3.1, Th. 0.1. Reddish brown fabric (2.5YR 4/4) with many small buff inclusions. Parallel: Hazor (Yadin et al. 1958, pl. CXXXIX.9).



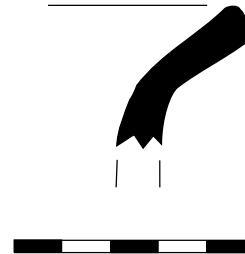
**PH 117** TA73 P523  
 Loc. 2389  
 Cooking pot  
 LB?  
 Single fragment of everted rounded rim. P.H. 3.0, est. D. rim 15, Th. 1.0. Dark reddish brown surface (2.5YR 3/4) with gray core (5YR 5/1) and numerous small to medium white inclusions. Parallel: Lachish (Amiran 1970, fig. 42.7).

**PH 118** TA73 P400  
 Loc. 3534.1  
 Cooking pot  
 LB II  
 Single fragment of everted rounded rim. P.H. 2.9, est. D. rim 27, Th. 0.8. Dark reddish brown surface (2.5YR 3/4) with dark gray core (5YR 4/1) and numerous small white inclusions. Parallels: Hazor (Yadin et al. 1958, pls. CXXXIX.11, CXXXVIII.14).

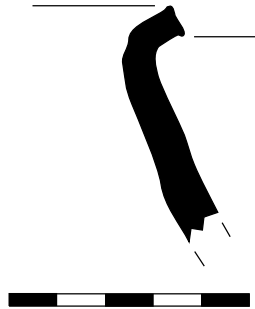
**PH 116** TA73 P399  
 Loc. 3534.1  
 Cooking pot  
 LB II  
 Single fragment of everted rounded rim. P.H. 4.4, Th. 0.8. Pink fabric (7.5YR 7/4) with gray core (7.5YR 6/0) and small to medium white inclusions. Parallels: Hazor (Yadin et al. 1958, pls. CXXXIX.11, CXXXVIII.14).



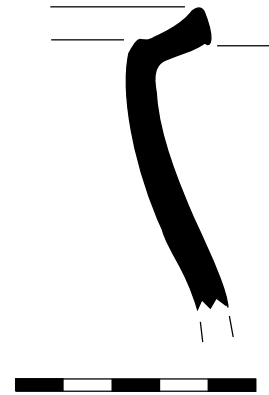
**PH 119** TA73 P351  
 Loc. 3379B?  
 Cooking pot  
 Single fragment of everted triangular rim. P.H. 2.7, Th. 0.8. Reddish brown fabric (2.5YR 4/4) with dark reddish brown core (5YR 3/3) and small white and medium buff inclusions. Parallels: Hazor (Yadin et al. 1958, pl. CXXXVIII.1) and Kamid el-Loz (Mansfeld 1985, Taf. 23.3).



**PH 120** TA73 P375 Cooking pot  
Loc. 3446 LB II  
Single fragment of everted triangular rim with gutter. P.H. 4.4, T. 0.7. Light red fabric (2.5YR 6/6) with gray core (7.5YR 5/10) and small to medium white and red inclusions. Parallel: Hazor (Yadin et al. 1958, pl. CXXXVIII.11).



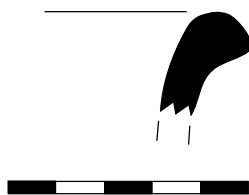
**PH 121** TA73 P374 Cooking pot  
Loc. 3446 LB II  
Three joining fragments of everted triangular rim with gutter. P.H. 5.3, Th. 0.6. Red fabric (2.5YR 4/6) with dark gray core (5YR 4/1) with small white and micaceous inclusions. Parallel: Hazor (Yadin et al. 1958, pl. CXXXVIII.3).



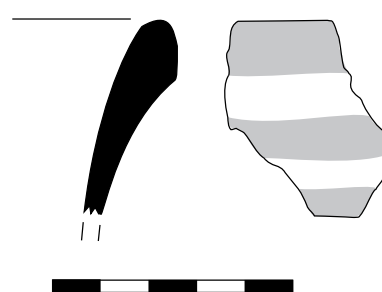
### JARS AND JUGS (PH 122–127)

The jars and jugs of Late Bronze I appear to follow from the Middle Bronze tradition. Small jars or jugs in either plain or decorated fabrics are present in the Anafa material. Jugs with a ring foot are a continuation of Middle Bronze Age forms. The tall, almost echinus profile of the ring foot **PH 127** is most common in Late Bronze I contexts (Oren 1973, 82). Jars with red bands at the rim are characteristic of the Late Bronze Age at Tel Mevorakh (Guz-Zilberstein 1984, 12). Large jars with thickened rims begin in Late Bronze I and continue into Late Bronze II (Oren 1973, 86). Pithoi also continue the Middle Bronze III tradition.

**PH 122** TA73 P350 Small jar or jug  
Loc. 3379 MB/LB I  
Single fragment of everted triangular rim. P.H. 0.020, P.W. 0.038, T. 0.007. White fabric (10YR 8/2) with small buff and medium gray inclusions. Parallel: Hazor (Yadin et al. 1961, pl. CCLXVI.7).



**PH 123** TA73 P402 Jar  
Loc. 3534.1 LB II  
Single fragment of rounded rim. P.H. 3.8. Reddish yellow fabric (5YR 7/6) with painted decoration in red (2.5YR 4/6). Red stripe on the top of the rim and two on the neck. Parallel: Tel Mevorakh, Stratum X (Guz-Zilberstein 1984, fig. 2.10).

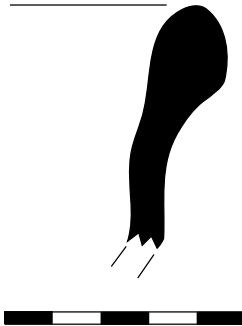


**PH 124**  
Loc. 3367.1

TA73 P327

Jar  
LB II

Single fragment of rounded rim. P.H. 4.5, Th. 1.4. Very pale brown fabric (10YR 8/3) with a few small white inclusions. Traces of a red stripe on the top of the rim and on the neck. Parallel: as above **PH 123**.

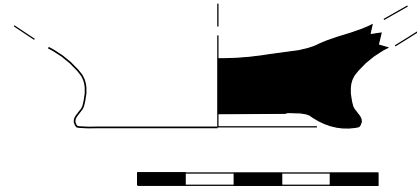


**PH 126**  
Loc. 3445.1

TA73 P372

Jug?  
LB III

Single fragment preserves ca. one-half of base with low ring foot. P.H. 2.3, D. base 5.9. Reddish yellow fabric (5YR 6/6) with small white and gray inclusions. Parallel: Hazor (Yadin et al. 1958, pl. CXL.13).

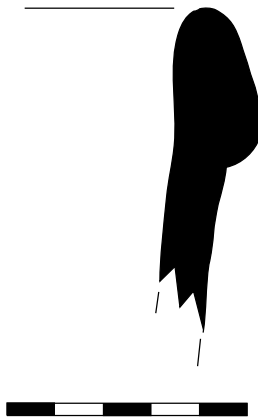


**PH 125**  
Loc. 2389

TA73 P524

Pithos  
LB?

Single fragment of rounded folded rim. P.H. 6.5, Th. 0.11. Pink fabric (5YR 7/4) with large white and gray inclusions. Parallels for form of rim on store jars: Beth She'an (Oren 1973, fig. 38.7) and Megiddo (Guy 1938, pl. 41.26). Parallel on a larger scale: Megiddo (Guy 1938, pl. 52.1).

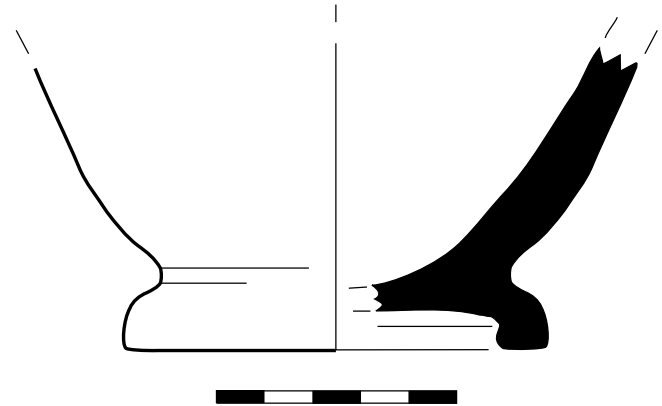


**PH 127**  
Loc. 2389

TA73 P525

Jug  
LB?

Single fragment preserves almost one-half of base with tall ring foot and a portion of the lower body with echinus profile. P.H. 6.1, est. D. base 9.0, Th. 0.9. Red surface (2.5YR 5/6) with gray core (10YR 5/11) with medium buff and white inclusions. Parallels: Beth She'an (Oren 1973, fig. 25.17); near Hazor (Yadin et al. 1961, pl. CCXLI.18).



## LATE BRONZE II

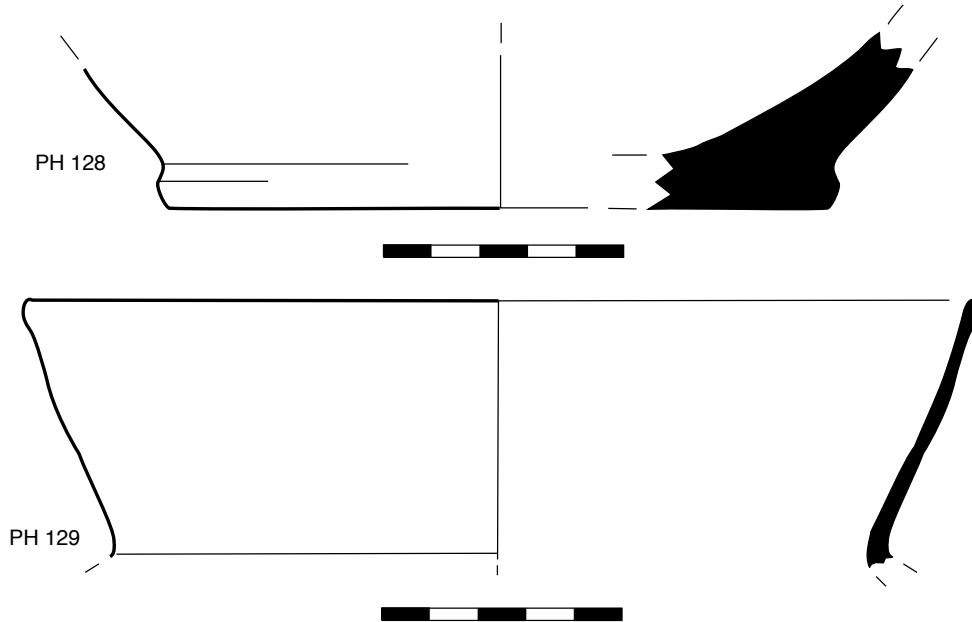
### BOWLS (PH 128–133)

The Late Bronze II assemblage from Anafa contains three main types of bowl forms: platter bowls, carinated bowls, and hemispherical bowls. Degenerate platter bowls with either straight or rounded sides continue from Late Bronze I. However, the flat disc base, such as **PH 128**, becomes common in Late Bronze II (Amiran 1970, 125). Degenerate carinated bowls, marked by the very slight degree of carination, are another form that shows continuous development from Late Bronze I. Hemispherical bowls appear late in Late Bronze II and are a transitional form continuing into IRON I. All three bowl types from Anafa find parallels in the Hazor material.

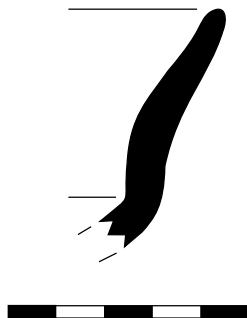
**PH 128** TA73 P359 Degenerate platter bowl  
 Loc. 3424 HELL 1/earlier  
 Single fragment of flat disc base. P.H. 3.1, est. D. base 7.0, Th. 0.13. Pink fabric (7.5YR 7/4) with medium white inclusions. Parallels: Hazor (Yadin et al. 1961, p1s. CLVIII.3, CCLXXI.9,10, CCXCVIII.2).



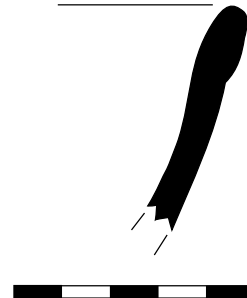
**PH 129** TA73 P42 Carinated bowl  
 Loc. 3615 00  
 Single fragment of tall straight rim. P.H. 5.2, est. D. rim 20, Th. 0.4. Metallic light red fabric (2.5YR 6/6) with reddish gray surface (10R 5/1) and small to medium white inclusions. Parallel: Hazor (Yadin et al. 1960, pl. CXXIX.7).



**PH 130** TA72 P239 Carinated bowl  
 Loc. 3350 LB II/IRON I  
 Single fragment of thickened rim and slight rounded carination. P.H. 4.9, Th. 0.9. Reddish yellow fabric (5YR 7/6) with large brown and medium white inclusions. Parallels: Hazor (Yadin et al. 1958, pl. CVI.17; 1961, pl. CLXI.15) and Dan (Biran 1994, fig. 80.2).

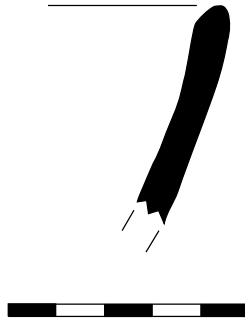


**PH 131** TA72 P267 Hemispherical bowl  
 Loc. 3528 LB II/IRON I  
 Single fragment of rim. P.H. 4.6, Th. 0.8. Pinkish white fabric (7.5YR 8/2) with small dark gray and buff inclusions. Parallels: Hazor (Yadin et al. 1958, pl. CVI.24-29, CXXXIII.9).

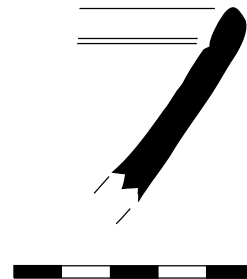




**PH 132** TA72 P268 Hemispherical bowl  
 Loc. 3528 LB II/IRON I  
 Single fragment of rim. P.H. 4.3, Th. 0.6. Pink fabric (7.5YR 7/4) with medium buff and gray inclusions. Parallels: as above, **PH 131**.



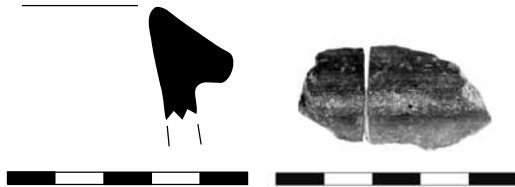
**PH 133** TA72 P269 Hemispherical bowl  
 Loc. 3528 LB II/IRON I  
 Single fragment of rim. P.H. 4.0, Th. 0.7. Reddish gray fabric (5YR 5/2) with light red surface (2.5YR 6/6) and very small white inclusions. Parallels: as above, **PH 131**.



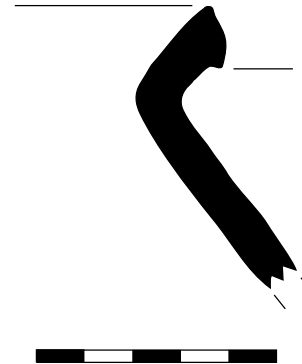
**COOKING POTS (PH 134–141)**

Late Bronze II cooking pots still have the everted rim found in the preceding period, but the finishing of the edge of the rim is now more truly “triangular.” The rim usually has a distinct overfold. At the end of Late Bronze II the face of the triangular overfold is often concave or grooved, as on **PH 138–140**.

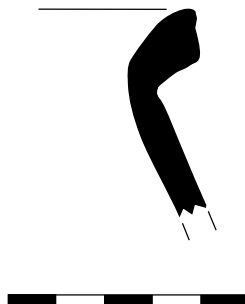
**PH 134** TA73 P395 Cooking pot  
 Loc. 3458 MB/LB I contam.  
 Single fragment of everted triangular rim. P.H. 2.3, Th. 0.6. Reddish brown fabric (2.5YR 4/4) with small buff inclusions. Parallels: Hazor (Yadin et al. 1958, pl. CVII.2; 1961, pl. CCLXXXI.1 and near pl. CCXCII.6,7) and Dan (Biran 1994, fig. 80.5).

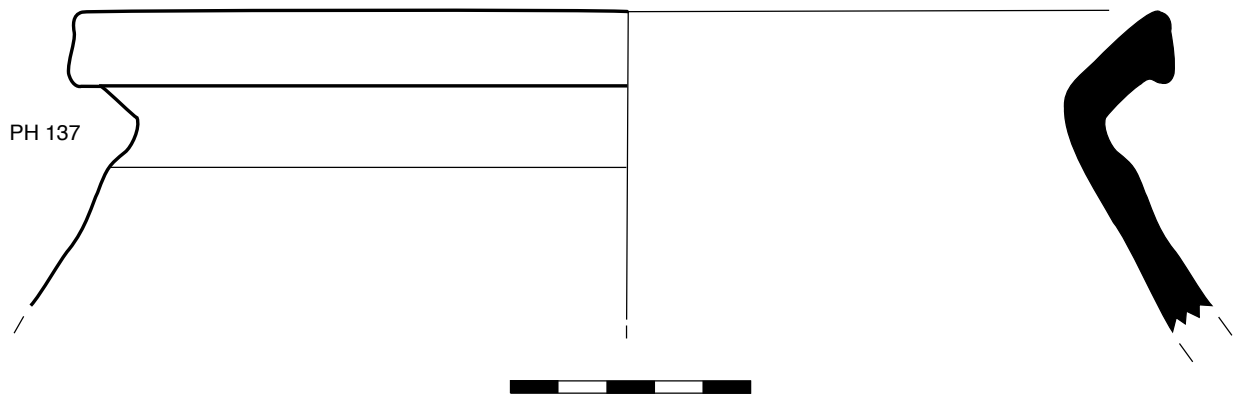


**PH 136** TA73 P450 Cooking pot  
 Loc. 2472 LB  
 Single fragment of everted triangular rim. P.H. 5.5, Th. 0.7. Reddish brown fabric (2.5YR 4/4) with a dark gray core (5YR 4/1) and numerous small white and gray inclusions. Parallel: Hazor (Yadin et al. 1961, pl. CCLXXIV.5).



**PH 135** TA73 P326 Cooking pot  
 Loc. 3364 LB II  
 Single fragment of everted triangular rim. P.H. 4.1, Th. 0.6. Light reddish brown fabric (5YR 6/3) with medium buff, gray, and dark brown inclusions. Parallels: Hazor (Yadin et al. 1958, pl. CVII.11; 1961, pls. CLXI.22, CCLXXIV.9).





**PH 137**  
Loc. 3437

TA72 P251

Cooking pot  
LB/IRON I

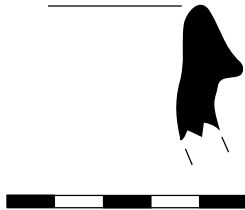
Single fragment of everted triangular rim. P.H. 5.9, est. D. rim 21.5, Th. 0.9. Red fabric (2.5YR 4/6) with small gray and white inclusions. Parallel: Hazor (Yadin et al. 1961, pls. CLXI.22, CCLXXIV.6).

**PH 138**  
Loc. 3350

TA72 P237

Cooking pot  
LB II/IRON I

Single fragment of everted triangular rim. P.H. 2.5, Th. 0.8. Light reddish brown fabric (5YR 6/4) with dark reddish gray surface (5YR 4/2) and small red and white inclusions. Parallels: Hazor (Yadin et al. 1961, pls. CLXIII.3, CCXCII.5).

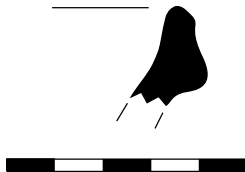


**PH 139**  
Loc. 3350

TA72 P238

Cooking pot  
LB II/IRON I

Single fragment of everted triangular rim. P.H. 2.0, Th. 0.9. Light reddish brown fabric (5YR 6/4) with small to medium red inclusions. Parallel: Hazor (Yadin et al. 1958, pl. CXXXIII.18).

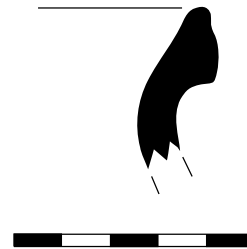


**PH 140**  
Loc. 3528

TA72 P266

Cooking pot  
LB II/IRON I

Single fragment of everted triangular rim with groove on exterior face. P.H. 3.1, Th. 0.8. Light red fabric (2.5YR 6/8) with small red and gray inclusions. Parallels: Hazor (Yadin et al. 1961, pl. CCXCV.5) and Dan (Biran 1986, fig. 3).

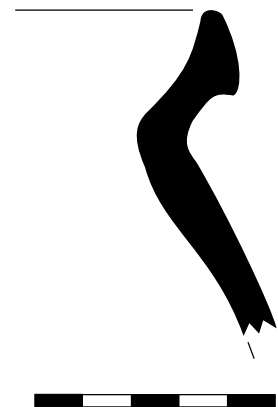


**PH 141**  
Loc. 3436

TA72 P249

Cooking pot  
LB/IRON I

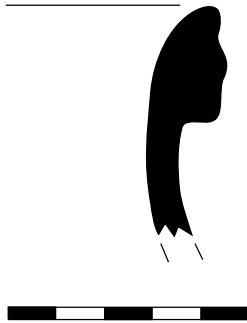
Two joining fragments of everted triangular rim and shoulder. P.H. 6.5, Th. 0.9. Light reddish brown fabric (5YR 6/4) with small brown, white, and gray inclusions. Parallels: Hazor (Yadin et al. 1961, pl. CCLXXIV.6) and Dan Stratum VII (Biran 1989, fig. 4.17.3).



*JARS AND JUGLETS (PH 142–146)*

The store jars from Anafa in Late Bronze II have folded rims. This rim form is found both in the larger plain wares and the smaller-scale decorated wares, such as **PH 144**. The Late Bronze II juglets from Anafa seem to be limited to the plain-surfaced dipper juglets. The form with the rather rounded base is most popular in Late Bronze II (Guz-Zilberstein 1984, 16).

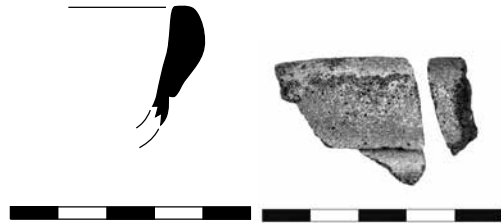
**PH 142** TA73 P355 Store jar  
Loc. 3382 LB II  
Single fragment of folded, grooved rim. P.H. 4.7, Th. 0.7. Pinkish gray fabric (5YR 6/2) with small white, gray, and red inclusions. Parallel for form of rim: on a small scale the form of the rim is that also found on jugs from Hazor (Yadin et al. 1961, pl. CCXCV.9,10). Similar folded and grooved rims are found on LB II pithoi from Stratum VII at Dan (Biran 1989, fig. 4.17.7,8).



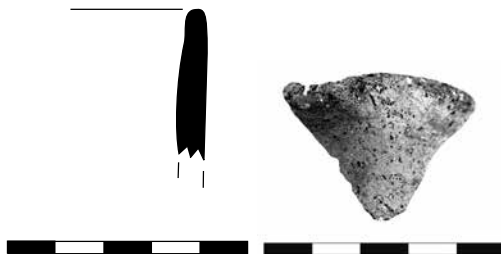
**PH 143** TA72 P253 Store jar  
Loc. 3437 LB/IRON I  
Single fragment of folded, rounded rim. P.H. 3.4, Th. 1.4. Reddish brown fabric (2.5YR 5/4) with small to medium white and medium red inclusions. Parallels: Hazor (Yadin et al. 1960, pl. CXVI.27 [LB I]) and Megiddo (Guy 1938, pl. 33.7 [LB II]).



**PH 144** TA72 P248 Store jar  
Loc. 3425.1 LB II/IRON I  
Single fragment of folded rim. P.H. 2.3, Th. 0.8. Very pale brown fabric (10YR 8/3) with traces of red decoration. Red stripe on the top of the rim and on the neck. Parallel: for decorated store jar, Hazor (Yadin et al. 1958, pl. LXXXVI.5).



**PH 145** TA73 P331 Dipper juglet  
Loc. 3367.1 LB II  
Single fragment of simple rim with trefoil mouth. P.H. 3.1, Th. 0.5. Pink fabric (5YR 7/3) with small to medium white and red inclusions. Parallels: Hazor (Yadin et al. 1961, pls. CCLXXV.3,4, CCLXXXI.4–6).



**PH 146** TA73 P383 Dipper juglet  
Loc. 3452 MB/LB I contam.  
Single rim fragment. P.H. 3.8, Th. 0.5. Light reddish brown fabric (5YR 6/4). Parallels: Hazor (Yadin et al. 1958, pl. CXXVIII.6–8; 1961, pl. CCLXXV.3) and Megiddo (Loud 1948, pl. 58.12).



## IMPORTED WARES AND IMITATIONS

In the Late Bronze Age, Palestine imports Cypriot and Mycenaean pottery in quantity.<sup>14</sup> Both the Cypriot and the Mycenaean wares show specialized import patterning, with only a limited range of vessel forms and decorative motifs found in Palestine (Gittlen 1977; Leonard 1981, 100). With the Mycenaean wares, for example, certain forms were definitely favored, and only 15 to 20 percent of the total form range of Mycenaean pottery is found in the Levant (Leonard 1981, 100).

The Anafa assemblage has probable examples of Cypriot bichrome ware, definite examples of Cypriot Base Ring ware and White Slip II, as well as sherds that appear to be local imitations of all these imported wares. There are also examples of Mycenaean imports and derivative wares. This combination of Cypriot and Mycenaean wares is characteristic of sites in Palestine (Hankey 1967, 146). At Sarepta, for example, Base Ring II wares were found in contexts along with White Slip II and Mycenaean IIIA/B pottery (Koehl 1985, 36). Base Ring II and White Slip II first appear in Palestine in Late Bronze IB, and both wares reach their peak of popularity in Late Bronze IIA (Gittlen 1981, 50–51). Indeed not just these wares but Cypriot imports as a whole peak in Late Bronze IIA (Gittlen 1977, 517). Mycenaean imports do not reach their peak until Late Bronze IIB. With respect to imported pottery in Palestine, it has been argued that coastal sites will have a larger volume of Cypriot and Mycenaean wares and nicer examples of these imports, with inland sites getting only leftovers (Hankey 1967, 146). The inland site of Dan, however, has impressive Mycenaean pottery, including the only chariot krater found in Israel. This underlines the importance of the trade route through the Hula Valley, which brought imported wares into the Anafa area.

*BICHROME WARE (PH 147–150)*

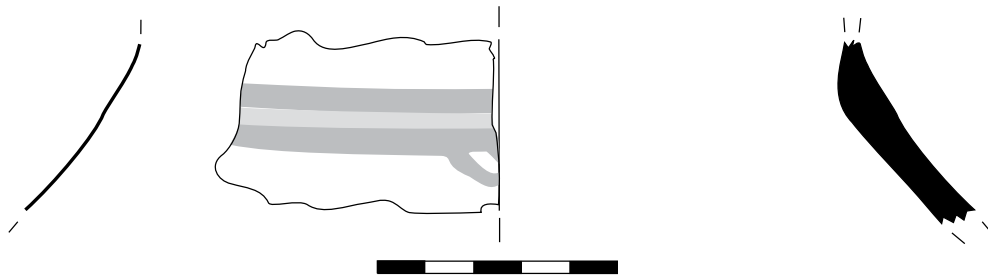
The bichrome ware found in Palestine breaks into two groups, Cypriot imports and locally produced imitations, as has been clearly shown through neutron activation analysis (Artzy, Asaro, and Perlman 1973; Artzy, Perlman, and Asaro 1978). The analysis of bichrome ware excavated at Megiddo shows that the imports may begin in Middle Bronze III, but the local versions do not appear until the Late Bronze I (Artzy, Perlman, and Asaro 1978, 107). Without scientific analysis, the most effective feature for differentiating between domestic and imported wares is the texture of the clay. Local wares are marked by a gritty fabric (Artzy, Perlman, and Asaro 1978, 103). None of the bichrome ware from Anafa has been scientifically tested. Based on the recorded descriptions, there appear to be examples of both “true” imported Cypriot bichrome ware and local imitations, with most apparently local due to their gritty fabric and the tonal range of the colors, which is closer to that on the local bichrome from Megiddo (Artzy, Perlman, and Asaro 1978, 103).<sup>15</sup> The Anafa examples show standard geometric motifs for the ware, and there is one example of figural decoration of a quadruped, probably a bull (**PH 150**). In the Megiddo analysis all of the vessels with animal motifs tested as Cypriot imports (Artzy, Perlman, and Asaro 1978, 104).

**PH 147** TA73 P367 Local bichrome krater  
Loc. 3442 LB II  
Single fragment of body. P.H. 3.8, est. max. D. 19.5, Th. 0.8. Pink fabric (5YR 7/3) with small buff inclusions. The fragment is decorated with two tones of dark reddish brown stripe (5YR 3/2 and 2.5YR 3/4). Three horizontal stripes, brown, red, brown.

Two brown lines slope down to the right off the horizontal line. Parallels: The use of tripartite stripes and the combination of horizontal and diagonal lines are an extremely common motif on bichrome pottery. The “empty” diagonal line of this piece finds a parallel from Megiddo (Loud 1948, pl. 49.15) and from Hazor (Yadin et al. 1958, pl. CXL.18).

<sup>14</sup>For a synthetic discussion of Cypriot and Mycenaean trade and imports on the Levantine coast, see Koehl 1985, 141–147 and now also Zuckerman et al. 2010.

<sup>15</sup>Other examples of bichrome decoration in standard geometric motifs occur in loci 2352, 2444, 2465. Of particular interest is a sherd in a gritty fabric, TA73 P96 in locus 21412, which has the motif of a lozenge pattern filled with dots executed in the standard dark decoration of Late Bronze painted wares. This motif appears more regularly on bichrome wares, for example at Tel Mevorakh (Guz-Zilberstein 1984, fig. 6.2). For the use of the lozenge motif in bichrome ware and especially its popularity on Cyprus, see Epstein 1966, 73–75. There is another possible Cypriot import in locus 3340, TA72 P214, a fragment with relatively non-gritty clay.



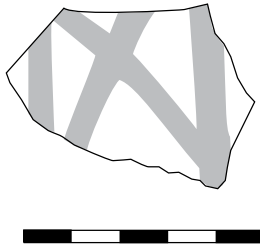
PH 147

**PH 148**  
Loc. 2350

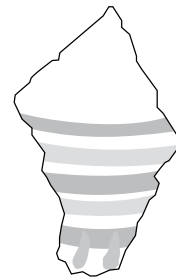
TA72 P34

Bichrome closed vessel  
LB?

Single fragment of body, probably from the shoulder of a large jar. P.H. 3.8. Decoration with X in panel in black, bordered either side with red. Parallel: Megiddo (Guy 1938, pl. 47.14).



with diagonals coming off the outer black stripe. Parallel: Megiddo (Guy 1938, pl. 47.12).



**PH 149**  
Loc. 2348

TA72 P36

Local bichrome closed vessel  
HELL 2A/B

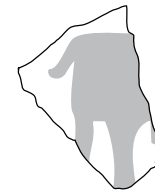
Single fragment of body, probably shoulder of a large jar. P.H. 5.8. Gray fabric very gritty with white slip. Decoration black and red-brown. Horizontal stripes alternating black and red-brown,

**PH 150**  
Loc. 2351

TA72 P35

Bichrome jug  
HELL 2B

Single shoulder fragment. P.H. 3.0. Light buff fabric, somewhat coarse, with decoration in dark brown paint of a quadruped, probably a bull, facing right. Possibly imported. Parallel for decoration: krater from Nagila (Amiran 1970, pl. 48.10), which has been shown to be Cypriot import; see Artzy, Asaro, and Perlman 1975. For bulls in bichrome ware: Epstein 1966, 45–51.



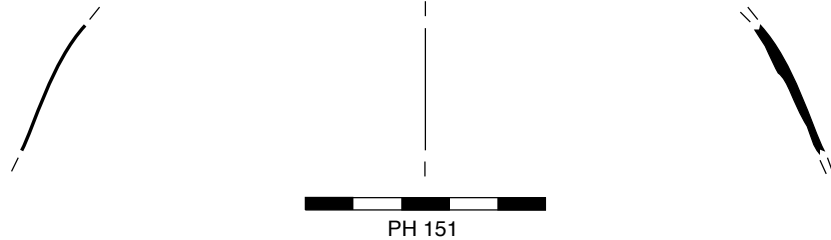
#### BASE RING WARE (PH 151–155)

The Anafa assemblage contains examples of both Base Ring I and Base Ring II, as well as local imitations.<sup>16</sup> Base Ring wares are the most common Cypriot import to Palestine (Gittlen 1977, 44). Yet again the fragmentary nature of the Anafa pottery leads to identification problems, with the small fragment size often making the differentiation of Base Ring I and II difficult.<sup>17</sup> This having been said, the majority of the Base Ring imports found at Anafa appear to be Base Ring II jugs and juglets. This is to be expected given two factors: the wider general distribution of Base Ring II ware than Base Ring I in Palestine (Gittlen 1977, 77 and 80) and the vast proportion of jugs and juglets in the Base

<sup>16</sup> Clear Base Ring II, in loci 3352.1, 3367.1, 3378, and 3535. Base Ring II zoomorphic vessel in locus 2464. Base Ring I in locus 2562. Indeterminate Base Ring ware, some possibly Base Ring I in loci 2463, 3424, 3445.1, 3530, and 3534.1. Imitation of Base Ring ware in loci 3518 and 3535.

<sup>17</sup> For recent discussions of problems with the current typology, especially with fragmentary material, see Vaughan 1991.

Ring II corpus of Palestine. The only unusual element in the Anafa assemblage is the possible fragment of a bull's horn from a Base Ring II zoomorphic vessel.<sup>18</sup> Base Ring I appears in Palestine in Late Bronze I contexts (Gittlen 1977, 126–128). As for Base Ring II, it also first appears in Late Bronze I, but in later contexts than Base Ring I, and is fairly rare in this period, with large quantities only in early Late Bronze IIA (Gittlen 1977, 139). The import of both Base Ring I and II to Palestine peaked in Late Bronze IIA and seems to have ceased by the end of the period, although occasional pieces will continue to be deposited in Late Bronze IIB contexts (Gittlen 1977, 129 and 140). The Base Ring ware from Anafa finds general parallels in the north, both from inland sites such as Hazor and Dan and coastal sites such as Sarepta and Tyre. The presence of local imitation Base Ring ware may be due to a severing of trade connections in Late Bronze IIB (Gittlen 1981, 52).<sup>19</sup>

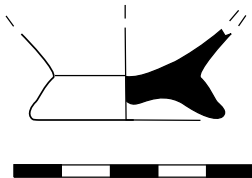


**PH 151** TA73 P360 Juglet?, probably Base Ring I  
Loc. 3424 HELL 1/earlier

Single fragment of body. P.H. 2.6, est. max. D. 17.0, Th. 0.2. Reddish gray fabric (10R 5/1) with very dark gray surface (10YR 3/1) and very small white inclusions. Slipped/burnished? Parallels: Hazor (Yadin et al. 1960, pl. CXXXVI.10,11).

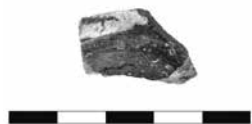
**PH 152** TA72 P272 Base Ring II? juglet  
Loc. 3530 LB II+

Single fragment of ring base. P.H. 1.8, D. 4.0. Fabric gray (10YR 6/1) at interior with exterior light reddish brown (5YR 6/4), slipped very dark gray (10YR 3/1). Parallels for juglet everted ring base: Hazor (Yadin et al. 1960, pl. CXXXVI.12) and Sarepta (Koehl 1985, fig. 2.30).



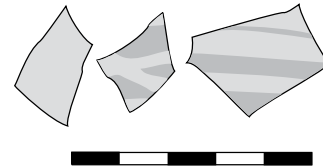
**PH 153** TA73 P349 Juglet, Base Ring II  
Loc. 3378 MB/LB I contam.

Single fragment of base. P.H. 1.6, Th. 0.3. Gray fabric (10YR 5/1) with dark gray surface (7.5YR 4/0) and white decoration (2.5Y 8/2). Parallels: as above, **PH 152**.



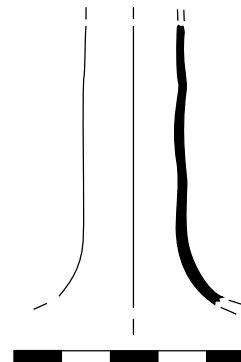
**PH 154** TA73 P334 Bilbil, Base Ring II  
Loc. 3367.1 LB II

Eight non-joining body fragments. Gray fabric (10YR 5/1) with dark brown surface (7.5YR 3/2) and white decoration. Parallels for Base Ring II jugs with linear decoration: Hazor (Yadin et al. 1960, pls. CXXXVI.2–9, CXL.1–3); Sarepta (Koehl 1985, fig. 2.4); Dan (Biran 1994, figs. 82.3, and 83.8).



**PH 155** TA73 P410 Bilbil, imitation Base Ring ware  
Loc. 3535 LBII contam?

Two joining fragments of neck. P.H. 5.3, D. 2.2, Th. 0.5. Pinkish gray fabric (5YR 6/2) with small to medium white and small gray inclusions. Parallels for local imitation of Base Ring: Dan (Biran 1994, fig. 82.4) and Tel Mevorakh (Guz-Zilberstein 1984, 12 and fig. 2.12).



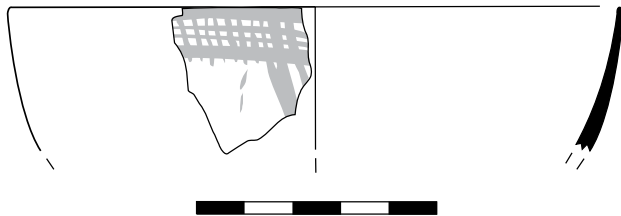
<sup>18</sup>These zoomorphic vessels first appear in Base Ring II (Gittlen 1977, 51). Base Ring bull figurines are fairly rare in Palestine, but there are four examples from Tell Abu Hawam and three from Megiddo (Gittlen 1977, 100 and 235–237). Also, when found in Palestine, these figurines come from habitation rather than tomb contexts (Gittlen 1977, 102).

<sup>19</sup>For discussion of local imitation of Base Ring, see Oren 1973, 90.

*WHITE SLIP WARE (PH 156–157)*

The Anafa assemblage contained numerous fragments of Cypriot White Slip II hemispherical bowls, known as milk bowls. The typology of White Slip II bowls in terms of both form and decoration is well defined and will not be discussed in any detail here (Popham 1972). The majority of these fragments have a simple lattice decoration, as typified by **PH 156**.<sup>20</sup> Other motifs occur in single examples.<sup>21</sup> As for chronology, White Slip II bowls first appear in Palestine in the second half of Late Bronze I (Gittlen 1977, 432). The import peaks in Late Bronze IIA but probably continues into Late Bronze IIB (Gittlen 1977, 435; 1981, 51). Cypriot White Slip II had a wide distribution in Israel and reached most sites (Gittlen 1977, 399). In the northern Galilee and the Bek'aa Valley examples similar to those from Anafa can be found at Hazor, at Dan in Stratum VII (Biran 1994, fig. 83.7), and at Kamid el-Loz (Mansfeld 1985, 119).

**PH 156** TA70 P319 Milk bowl  
Loc. 3350.0 LB II/IRON I contam.  
Single fragment of plain tapering rim. P.H. 3.0, est. D. rim 14.5, Th. 0.3. Reddish yellow fabric (5YR 5/6), slipped white (10YR 8/1) with brown decoration (7.5YR 4/2). Horizontal lattice decoration at rim, with lattice band sloping down to right. Parallels: Simple lattice pattern in frieze and pendant lattices, probably type IIC, for which Gittlen lists sixty-four examples (Gittlen 1977, 466–469). Numerous examples of this type are found at Hazor (Yadin et al. 1958, pl. LXXXIX.10; 1960, pls. CXXIII.6–7, CXCIV.18–19; 1961, pl. CLX.27).



**PH 157** TA72 P1 18 Milk bowl  
Loc. 2354 LB  
Single fragment of body. P.H. 1.6. Horizontal stripe with two diagonal lines descending from it. Parallel: Bamboula on Cyprus (Benson 1972, pl. 16.B109).

*MYCENEAN (PH 158–162)*

A good number of Mycenaean imports are present in the Tel Anafa assemblage as well as examples of Levantine imitations or derivatives of the Greek originals.<sup>22</sup> The shapes present at Anafa are predominately closed, conforming to the general import pattern elsewhere in the Levant, where the primary shapes are the stirrup jar, small piriform jar, vertical flask, and the straightsided alabastron. The apparent large proportion of stirrup jar fragments in the Anafa assemblage fits the heavy export pattern for this form. Stirrup jars are the most frequent Mycenaean export to the Levant (Leonard 1981, 91). At Sarepta, for example, stirrup jars comprise 50 percent of the Mycenaean imports (Koehl 1985, 39). Overall, the Mycenaean imports from Anafa find close parallels with other northern inland sites.

Hazor has a similar range of Mycenaean wares.<sup>23</sup> The Mycenaean pottery from Dan, especially from Tomb 387, which dates LH IIIA2–LH IIIB1, has particularly close parallels for specific pieces from Anafa but a much broader range of types and elaborate decoration (Biran 1994, 116). Kamid el-Loz also has a wide range of forms and elaborate decoration.<sup>24</sup>

<sup>20</sup>In addition to the catalogue entries, milk bowl fragments with lattice decoration were found in loci 1407, 2310, 2317, 2348, 2427, 2463, 3519, 3601; local imitation of a milk bowl in locus 8223.

<sup>21</sup>These other motifs include a variant incomplete lattice pattern in locus 2317, a horizontal dot and lattice frieze in locus 3601, and a lattice and lozenge frieze in locus 2104. Of these, the lozenge pattern frieze is relatively rare in Palestine (Gittlen 1977, 400). Other examples from Palestine include pieces from Megiddo (Loud 1948, pl. 141.21) and Sarepta (Koehl 1985, fig. 2.39).

<sup>22</sup>As well as the examples set out in the catalogue, decorated Mycenaean body sherds were found in loci 2356, 2445, 2464, 2469, 2478, 2562, 3410, 3431, 3440, and 8310. Clear fragments of stirrup jars were found in loci 3511, 5411, and 7201. "Derivative" or local imitations were found in loci 2454, 2463, and 8206. These counts are not comprehensive. Examples of Mycenaean imported pottery were found outside the small range of loci included for study in this chapter.

<sup>23</sup>For a complete list of Mycenaean pottery at Hazor, see Hankey 1967, 123.

<sup>24</sup>For discussions of Mycenaean pottery from Kamid el-Loz, see Hachmann 1966; Slotta 1980; Hachmann and Miron 1980; Miron 1982a; Mansfeld 1985, 119. For local imitation: Hachmann and Miron 1980, 85 and Taf 24.1.

The Mycenaean material at Anafa dates primarily to Late Bronze IIB. Again, this fits the general import pattern. Mycenaean imports in Palestine are rare in Late Bronze I; they increase in Late Bronze IIA, but the majority is found in Late Bronze IIB contexts and belongs to the mainland Greek LH IIIB grouping (Gittlen 1977, 26, n. 7). Mycenaean imports to Palestine decrease sharply at the end of Late Bronze IIB (Koehl 1985, 42). In terms of Greek stylistic and chronological groupings, the bulk of the imported pottery belongs to the LH IIIA2–IIIB1 “koine” style.<sup>25</sup> The place of manufacture of most of these imports has been shown by NAA testing to have been the Argolid (Zuckerman et al. 2010). The pottery from Tomb 387 at Dan has been scientifically tested and comes from the Mycenae area (Gunneweg et al. 1992, 58). In the final stages of the Late Bronze Age the situation becomes more complex with Greek LH IIIB2 “Standard” style being joined by a number of variants of disputed place of manufacture. These wares include “LevantoMycenaean,” “Simple Style,” and “Derivative Mycenaean.”<sup>26</sup> The Tel Anafa assemblage includes a number of such variants in the latest Bronze Age strata.

**PH 158** TA72 P246 Alabastron, straight sided  
Loc. 3352.1 HELL 1/earlier  
Not illustrated

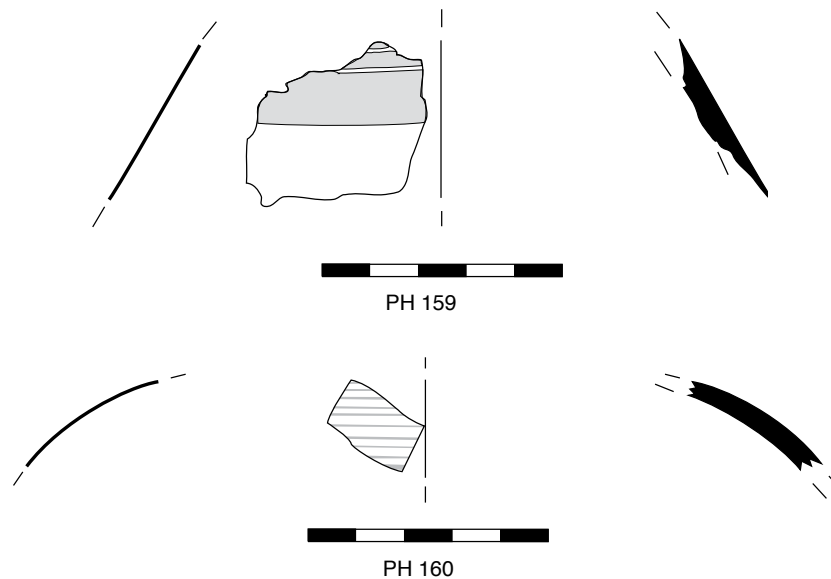
Single fragment preserves shoulder and part of handle. P.H. 2.7, Th. 0.3. Very pale brown fabric (10YR 8/3) with very dark brown (10YR 2/2) shiny decoration. Handle brown, thick band at line of shoulder, thin lighter band below. Parallels: Dan Tomb 387 (Biran 1994, fig. 78.3); Sarepta (Koehl 1985, fig. 4.98); Hazor (Yadin et al. 1958, pl. CXXXI.10).

**PH 159** TA73 P354 Piriform jar?  
Loc. 3382 LB II

Single body fragment. P.H. 3.5, est. max. D. 15.0, Th. 0.6. Very pale brown fabric (10YR 8/3) with very dark brown decoration (10YR 2/2). Parallel: Dan Tomb 387 (Biran 1994, fig. 78.1).

**PH 160** TA70 P316 Flask?  
Loc. 3350.0 LB II/IRON I contam.

Single body fragment. P.H. 3.2, Th. 0.4. Pink fabric (5YR 7/4) with very pale brown exterior slip. Decoration in dark reddish brown (5YR 3/3). Parallels: Dan Tomb 387 (Biran 1994, fig. 78.4); Beth She'an (Oren 1973, fig. 43.20).



<sup>25</sup> On the difficulty of separating LH IIIA2 pottery from IIIB1, especially with sherds, see Hankey 1974, 136. For more general discussion of identifying Mycenaean phases from sherd material, see Mountjoy 1986, 7.

<sup>26</sup> For discussion of these wares, see Leonard et al. 1993, 106–107. The differentiating factors are the fabric of the vessels and the quality of the paint. “Levanto-Mycenaean” may have been made specifically for the eastern export market (Koehl 1985, 145). The “Simple Style” is a ware of questionable origin found in Palestine and Egypt, which is probably contemporary with LH IIIB2 (Furumark 1972, 116). Favored shapes are the pithoid jar, the stirrup jar, and the lentoid flask. For recent discussion of Simple Style pottery, see Hankey 1986 and Koehl and Yellin 1982. “Derivative Mycenaean” is a term referring to vessels made from local clay but reproducing Mycenaean forms and decorated with Mycenaean motifs. For discussion of local imitations of Mycenaean wares, see Oren 1973, 111–113. The most frequently imitated shapes in Palestine are stirrup jars, piriform jars, and pyxides (Hankey 1967, 145).

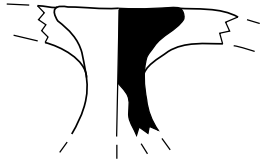
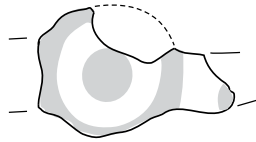


**PH 161**  
Loc. 7201

TA78 P11

Stirrup jar  
ARAB

Single fragment preserves false spout and part of one handle. P.H. 2.5, D. spout 2.5. Well levigated gray-brown fabric with white slip and red-brown paint. Central dot on false spout and circle around the edge with trace of red on handle. Parallels: The use of a central dot and a circle as well as the irregular coating of the handles is found on pieces from Hazor (Yadin et al. 1960, 157 and pl. CXLVIII.1,2), which Furumark placed in LH IIIB Levanto-Mycenean. This motif is found on other LH IIIB stirrup jars: Sarepta (Koehl 1985, fig. 4.104); Amman (Hankey 1974, fig. 6.46). The striping on the handle is found at Dan, Stratum VII (Biran 1994, fig. 83.5). However, the encircled dot is also commonly used in the "Simple Style" (Furumark 1972, 117).

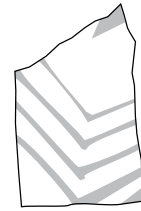


**PH 162**  
Loc. 2356

TA72 P62

Closed vessel  
HELL 2A

Single body fragment. P.H. 4.2. Reddish buff fabric with light buff surface and decoration in glossy red-brown paint. Four parallel chevrons. Parallel: Chevrons on the shoulders of closed vessels are a popular motif: piriform jar at Dan, Tomb 387 (Biran 1994, fig. 78.1); stirrup jar at Dan, Tomb 387 (Biran 1994, fig. 78.2); stirrup jar at Hazor (Yadin et al. 1960, pl. CXXXVII.13).



## V. IRON AGE

The Anafa assemblage contains both IRON I and IRON II pottery, but the earliest and latest IRON II forms are missing. The IRON I pottery falls into the period ca. twelfth/eleventh century through late eleventh/early tenth century BCE. It is interesting and perhaps significant that this pattern of occupation and even the pottery types are characteristic of the so-called Israelite occupation in the Galilee. The IRON II material is mostly eighth century, perhaps beginning in the mid to late ninth to judge from the ridged-rim cooking pots, and continuing to the late eighth century BCE. There appears to be no late tenth- to early ninth-century pottery. There are a few possible seventh-century sherds but apparently no sixth-century material.

The forms of the IRON I pottery from Anafa include the transitional Late Bronze IIB/IRON I forms, catalogued above (**PH 131–133**), which may continue without interruption. Other IRON I forms at the site include numerous cooking pots, mostly eleventh century, with elongated, often concave triangular rims; a few simple store jar rims; heavy red bowl rims; perhaps a few simple hemispherical bowl rims. The fabrics are mostly plain, more pink to red, with little use of burnish. There are no Philistine wares, although Philistine pottery was reaching Israelite settlements and is found at Dan (Dothan 1982, 82–84, 296).

For IRON II, the main diagnostic forms and wares found in the Anafa material are cooking pots with high, slightly grooved rims. There are also several “Samaria ware” bowls of coarse orange fabric. Elsewhere these bowls are frequently found in ninth-century contexts (Barkay 1992, 326). There are two or three clear examples of local-style “Assyrian Palace ware” carinated bowls and bottles, which must date to the late eighth century or seventh century BCE. The other main diagnostic ware is the “Cypro-Phoenician,” represented at Anafa by burnished and black striped sherds (Black on Red). The origin and date of this last ware in Palestine has been controversial and will be discussed further below.

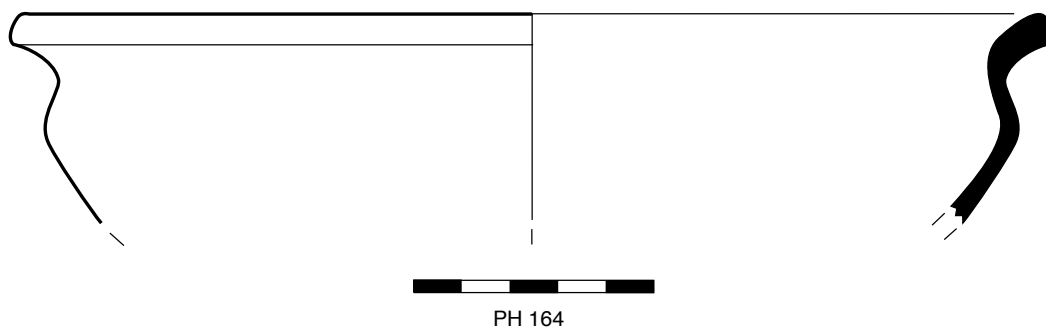
The comparanda for the forms and wares found at Anafa in the Iron Age again come from the northern Galilee, primarily Hazor and Dan. This follows the pattern of regional variation detected at other sites, particularly Dan. In IRON I especially, there is a marked degree of regionalism in the pottery (Mazar 1985, 124). The IRON I parallels come primarily from Strata XII and XI at Hazor and Stratum V at Dan, dating to the twelfth and eleventh centuries. The IRON II parallels are again with Hazor and begin with Stratum VIII, dated by Yadin to a later part of the ninth century (Yadin 1972, 200), and continue through Stratum V.

The catalogue for the Iron Age pottery is presented in two sections. The first section is IRON I and the second IRON II. In the IRON II section, the “Assyrian Palace ware” and the “Cypro-Phoenician” Black on Red are placed at the end of the catalogue.

### IRON I

#### *BOWLS* (**PH 163–164**)

The carinated bowl form is common in IRON I and dominates the Anafa assemblage. In IRON I, carinated bowls have a characteristic “canal” below the rim (Amiran 1970, 192). This form starts in the south at the end of the Late Bronze Age and reaches northern areas in IRON I, going out of use in the tenth century (Mazar 1985, 40–41). The carinated bowl is the most common type at Hazor in Stratum XII (Yadin et al. 1989, 29).



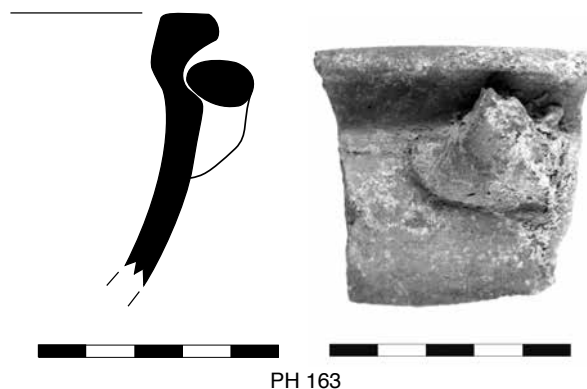
PH 164

**PH 163** TA72 P24I Carinated bowl  
Loc. 3350.0 LB II/IRON I contam.

Single fragment of flattened everted rim and upper body with horizontal? handle. P.H. 5.4, Th. 0.7. Light red fabric (2.5YR 6/6) with gray core (5YR 5/1). Parallel: for shape of carination, Hazor (Yadin et al. 1961, pl. CLXX.5), but this example has a rounder rim and no handle. Parallel for general form with horizontal handle: Tell Qasile (Mazar 1985, fig. 11.6).

**PH 164** TA81 P37 Carinated bowl  
Loc. 8341 IRON

Two joining fragments of rounded rim. P.H. 4.1, est. D. rim 24.0, Th. 0.8. Gray fabric (2.5YR 5/0) with light brown slip (7.5YR 6/4). Parallel: Hazor (Yadin et al. 1961, pl. CLXIV.16).



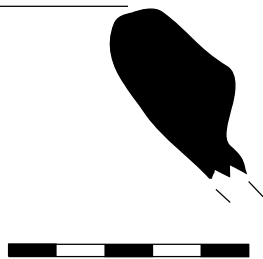
PH 163

#### KRATERS AND COOKING POTS (PH 165–170)

In IRON I, the krater form is more common in the north than in southern areas (Amiran 1970, 216). The catalogued example **PH 165** shows the characteristic form with hole-mouth and thickened rim. The form of the cooking pot changes in the Iron Age. Rims are no longer everted, as in the Late Bronze Age, but are vertical or inverted. These rims are of elongated, triangular form, many having a concave profile. Cooking pot with elongated concave rim appears in twelfth-century Stratum XII at Hazor. This type becomes common in the eleventh and tenth centuries and overlaps with shorter rims in early ninth (Mazar 1985, 53). Within this range it is hard to judge inner development precisely. The IRON I assemblage at Anafa includes large quantities of such cooking pot rims.

**PH 165** TA72 P260 Hole-mouth krater  
Loc. 3518 LB II/IRON I+

Single fragment of thickened rim. P.H. 3.2, Th. 1.9. Reddish yellow fabric (5YR 7/6) with dark gray core (7.5YR 4/0) and numerous small to large white and medium brown inclusions. Parallels for general form of krater with thickened rim: Megiddo (Amiran 1970, fig. 69.8); Hazor (Yadin et al. 1961, pl. CCIII.12); Dan, Stratum V (Biran 1989, fig. 4.7.3). Closest parallel to the Anafa example is from Dan, Stratum VI (Biran 1989, fig. 4.12.2).



**PH 166** TA73 P476 Cooking pot  
Loc. 2374 MB contam.

Single fragment of elongated triangular rim. P.H. 3.4, Th. 0.7. Red fabric (2.5YR 5/6) with gray core (5YR 5/1) and numerous small white inclusions. Parallels: Hazor (Yadin et al. 1961, pl. CLXV.16), and Dan, Stratum V (Biran 1989, fig. 4.6.4).

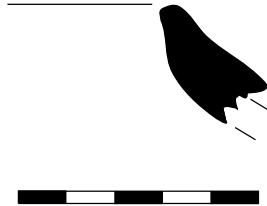


**PH 167**  
Loc. 3535

TA73 P408

Cooking pot  
LB II contam?

Single fragment of elongated triangular rim. P.H. 2.8, Th. 0.7. Reddish brown fabric (2.5YR 4/4) with numerous small white and gray inclusions and medium buff and red inclusions. Parallels: Hazor (Yadin et al. 1961, pl. CLXV.6), and Dan, Stratum V (Biran 1989, fig. 4.6.5).

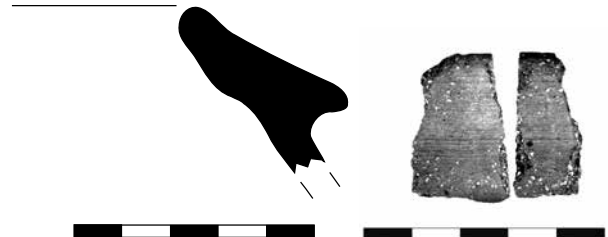


**PH 169**  
Loc. 3439.1

TA73 P366

Cooking pot  
IRON

Single fragment of elongated triangular rim. P.H. 4.0, Th. 0.6. Yellowish red surface (5YR 5/6) with gray core (7.5YR 5/0) and numerous small white inclusions. Parallels: Hazor (Yadin et al. 1961, pls. CCI.16, CCIII.7).

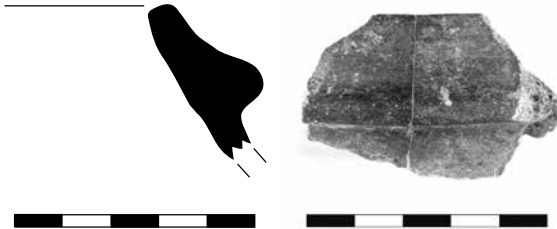


**PH 168**  
Loc. 3350.1

TA70 P315

Cooking pot

Single fragment of elongated triangular rim. P.H. 3.6, Th. 0.6. Reddish brown surface (5YR 4/4) with gray core (5YR 5/1) and numerous small white and brown inclusions. Parallel: Hazor (Yadin et al. 1961, pl. CCIII.8).

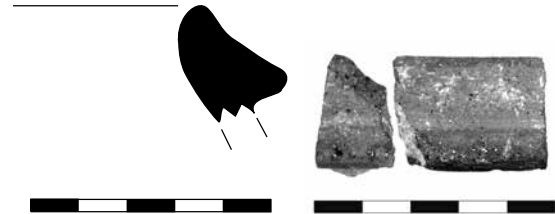


**PH 170**  
Loc. 2368

TA72 P298

Cooking pot  
MB contam.

Single fragment of elongated triangular rim. P.H. 2.5, Th. 0.7. Reddish brown fabric (5YR 5/4) with brown core (7.5YR 5/2) and numerous small white inclusions and a few medium buff and gray inclusions. Parallel: Near Hazor (Yadin et al. 1960, pl. LI.13).



### JUG (PH 171)

The jug type found in the IRON I Anafa pottery assemblage falls into the first of Amiran's six northern types (Amiran 1970, 251). Jugs with simple, straight necks and red slip and burnish are also found at Beth She'an in this period (Yadin and Geva 1986.16).

**PH 171**  
Loc. 3518

TA72 P258

Jug with simple rim  
LB II/IRON I+

Single fragment of rim and handle. P.H. 3.2, Th. 0.6. Light red fabric (2.5YR 6/6) with medium red and gray inclusions. Burnished. Parallels: Hazor (Yadin et al. 1961, pls. CCI.18, CCIII.18).



IRON II

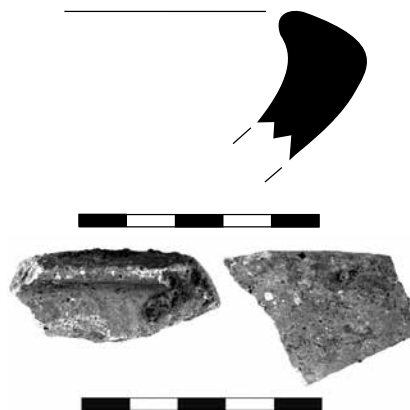
SAMARIA WARE BOWLS (PH 172-174)

Samaria bowls are a class of pottery of varying form, some with thin walls and some with thick walls, but all with a distinctive highly burnished surface treatment. This class of bowls derives its name from parallels found in Stratum III at Samaria (for example, Kenyon 1957, fig. 4.2). This nomenclature is misleading, however, since Samaria bowls are probably a Phoenician product (Tappy 1992, 159; Barkay 1992, 326). These bowls were very popular in northern Palestine (Yadin and Geva 1986, 12).

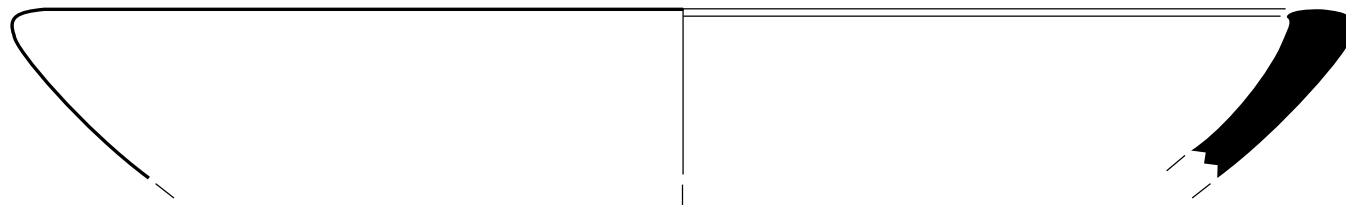
**PH 172** TA73 P554 Samaria bowl  
 Loc. 21412 IRON  
 Single fragment of inverted rim. P.H. 3.1, Th. 0.8. Red fabric (2.5YR 5/8), burnished in and out. Parallels: Hazor (Yadin et al. 1960, pls. LV.21,34, LXIII.33).



**PH 174** TA73 P560, TA73 P563 Samaria bowl  
 Loc. 21412, 21415 IRON  
 Two non-joining fragments of inverted rim. Largest fragment: P.H. 3.0, Th. 0.8. Reddish yellow fabric (5YR 7/6) with medium red inclusions. Burnished in and out. Parallels: as above, **PH 172**.



**PH 173** TA73 P555, TA73 P574 Samaria bowl  
 Loc. 21412, 21208 IRON  
 Eighteen joining and non-joining fragments of inverted rim and body. Est. D. 28.0. Red fabric (2.5YR 4/6), burnished in and out. Parallels: as above, **PH 172**.



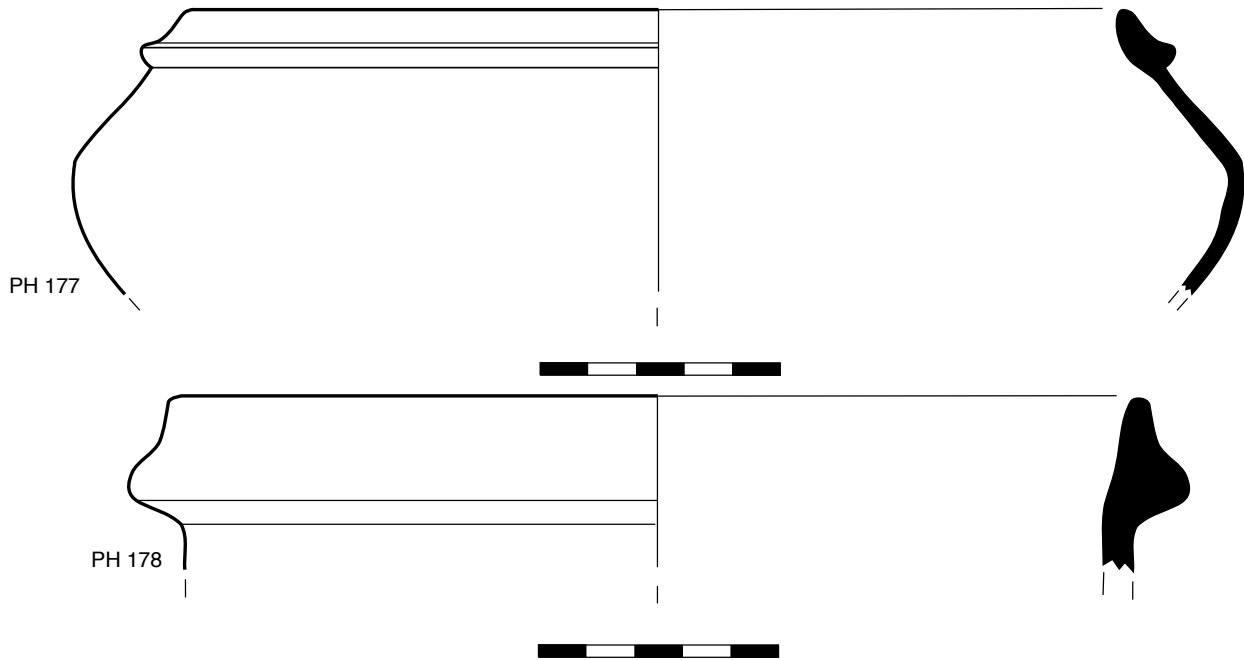
PH 173



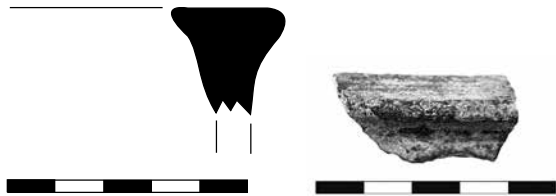
PH 173

*KRATERS AND COOKING POTS (PH 175–183)*

The krater form with thickened triangular rim begins in IRON I but becomes more common in IRON II (Amiran 1970, 217). In IRON II, cooking pot rims retain the same general concave triangular form as in the previous period, but the rims are often not as elongated (Amiran 1970, 227).



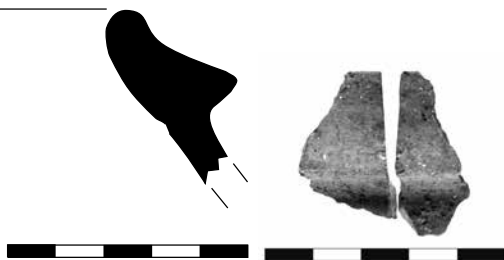
**PH 175** TA73 P539  
 Loc. 21419  
 Single fragment of triangular rim. P.H. 2.1. Reddish brown fabric (2.5YR 4/4). Parallel: Hazor (Yadin et al. 1960, pl. LXVIII.6).



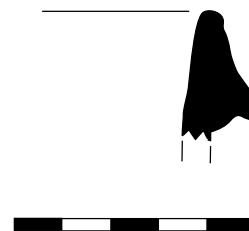
**PH 177** TA69 P343  
 Loc. 2705X  
 Two joining fragments of short, concave, triangular rim and shoulder. P.H. 6.0, est. D. rim 19.5. Brown fabric. Parallels: for rim, Hazor (Yadin et al. 1960, pl. LVII.13,16); for shoulder, Hazor (Yadin et al. 1960, pl. LVII.9).

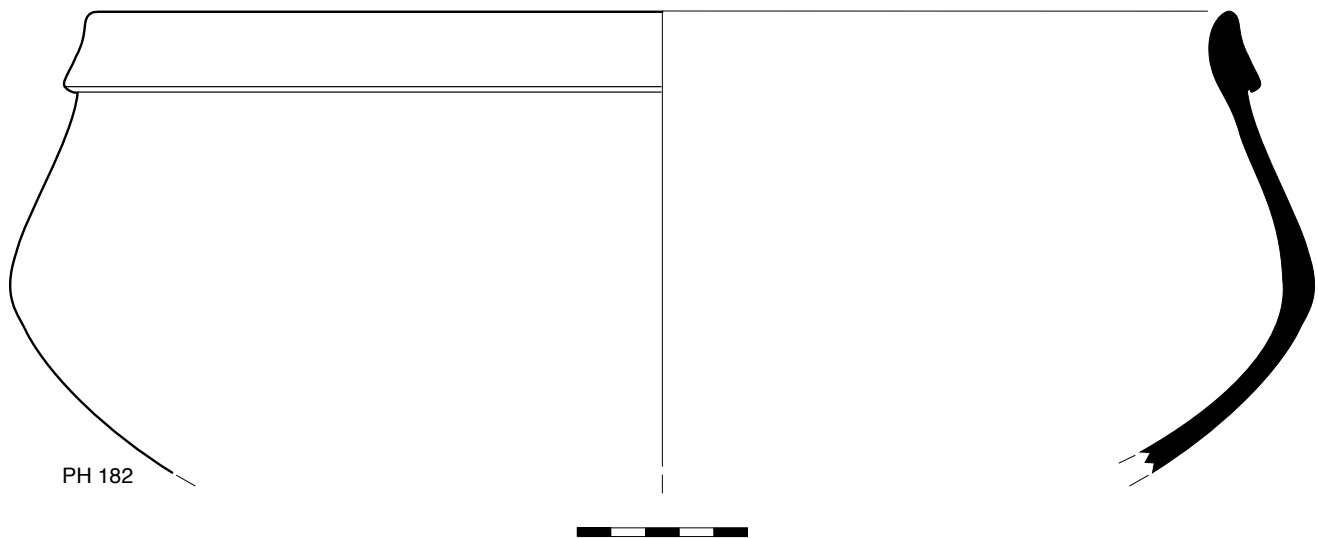
**PH 178** TA86 P1  
 Loc. 2619  
 Single fragment of short, concave, triangular rim. P.H. 3.5, est. D. rim 20.5. Gray core with red-brown surface. Parallels: Hazor (Yadin et al. 1958, pl. LXXIV.20; 1961, pl. LXXXV.17).

**PH 176** TA73 P477  
 Loc. 2376  
 Single fragment of short, concave, triangular rim. P.H. 3.3. Reddish gray fabric (5YR 5/2) with yellowish red surface (5YR 5/6) and numerous small white inclusions. Parallel: Hazor (Yadin et al. 1960, pl. LVII.13).

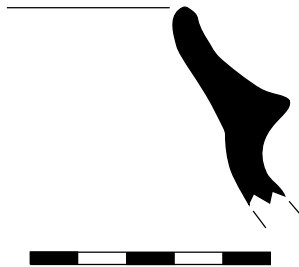


**PH 179** TA86 P2  
 Loc. 2619  
 Single fragment of short, concave, triangular rim. P.H. 2.5. Gray core with red-brown surface. Parallel: Hazor (Yadin et al. 1960, pl. LVII.8).



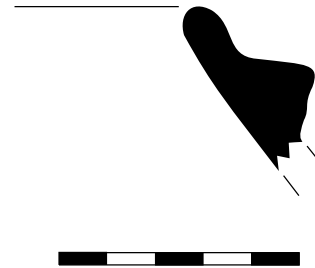


**PH 180** TA86 P3 Cooking pot  
Loc. 2619 IRON  
Single fragment of short, concave, triangular rim. P.H. 3.8. Gray core with red-brown surface. Parallels: Hazor (Yadin et al. 1960, pl. LVII.4; 1961, pl. CCXV.11).

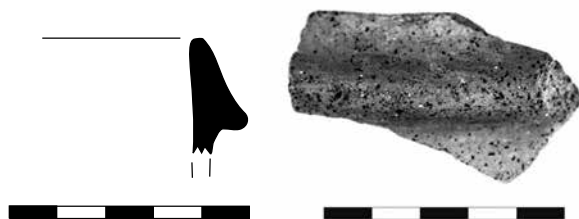


**PH 182** TA81 P40 Cooking pot  
Loc. 8341 IRON  
Two joining fragments of short, concave, triangular rim and shoulder. P.H. 13.2, est. D. rim 34.0. Reddish brown fabric (2.5YR 5/14). Parallel: Far'ah (N) (Amiran 1970, pl. 75.11).

**PH 183** TA73 P549 Cooking pot  
Loc. 21412 IRON  
Single fragment of short, concave, triangular rim. P.H. 3.0, Th. 0.6. Reddish brown fabric (5YR 5/3) with small white inclusions. Parallel: Hazor (Yadin et al. 1960, pl. LVII.17).

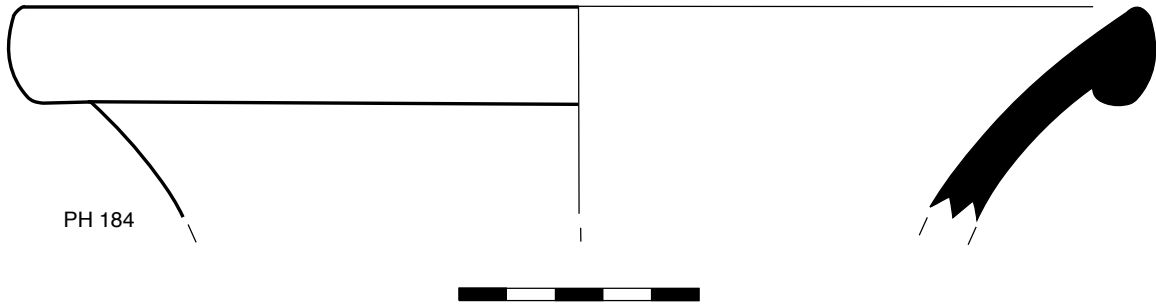


**PH 181** TA86 P4 Cooking pot  
Loc. 2619 IRON  
Single fragment of short, concave, triangular rim. P.H. 2.3. Light reddish brown fabric (5YR 6/4) with small white inclusions. Parallel: Hazor (Yadin et al. 1960, pl. LVII.8).



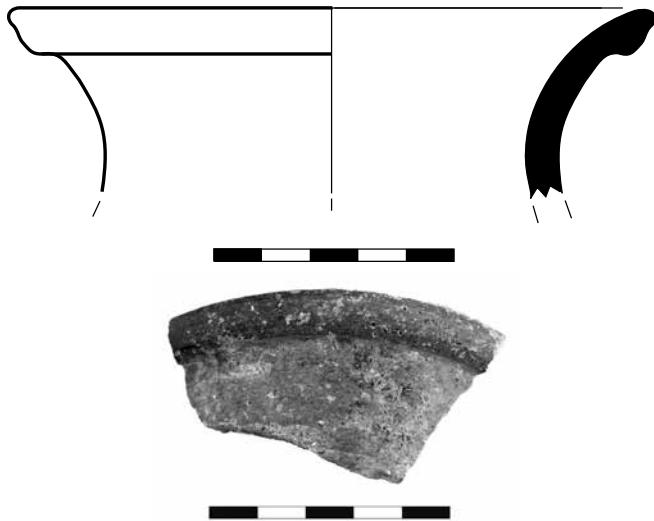
#### JARS AND JUGS (PH 184–187)

Both the jars and the jugs in the IRON II Anafa assemblage continue developments from IRON I forms (Amiran 1970, 238, 256). Jars with thickened everted rim and no ridge on the neck are the main type found. The jug with trefoil mouth and slightly profiled rim is the most common jug type in IRON II at Hazor. It is found in both plain-surfaced and red-burnished wares. The use of the ring foot still continues, although the depressed base becomes more common.



**PH 184** TA73 P568 Jar  
 Loc. 21417 EB/MB contam.  
 Single fragment of thickened everted rim and neck. P.H. 4.0, est. D. rim 22.8, Th. 0.10. Light red surface (2.5YR 6/6) with pinkish gray core (7.5YR 7/2). Parallel: Hazor (Yadin et al. 1960, pl. LXXV.13).

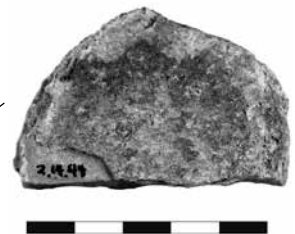
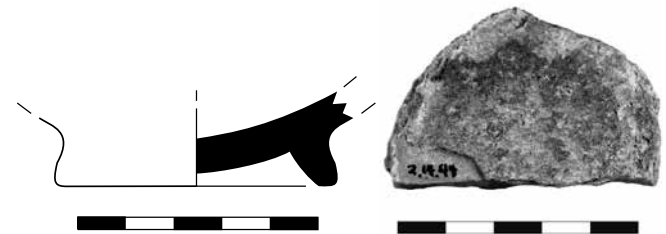
**PH 185** TA73 P561 Jar  
 Loc. 21413 IRON  
 Single fragment of thickened everted rim and neck. P.H. 3.8, est. D. rim 13.0, Th. 0.8. Yellowish red surface (5YR 5/6) with light brownish gray core (10YR 6/2). Parallel: Similar rims are found at Tel Qiri in ninth-century contexts (Hunt 1987, 187, fig. 35).



**PH 186** TA73 P562 Trefoil jug  
 Loc. 21413 IRON  
 Single fragment preserves trefoil mouth and neck. P.H. 6.2, Th. 0.7. Grayish brown surface (10YR 5/2) with light gray core (10YR 6/1). Parallel: Hazor (Yadin et al. 1958, pl. L.20).



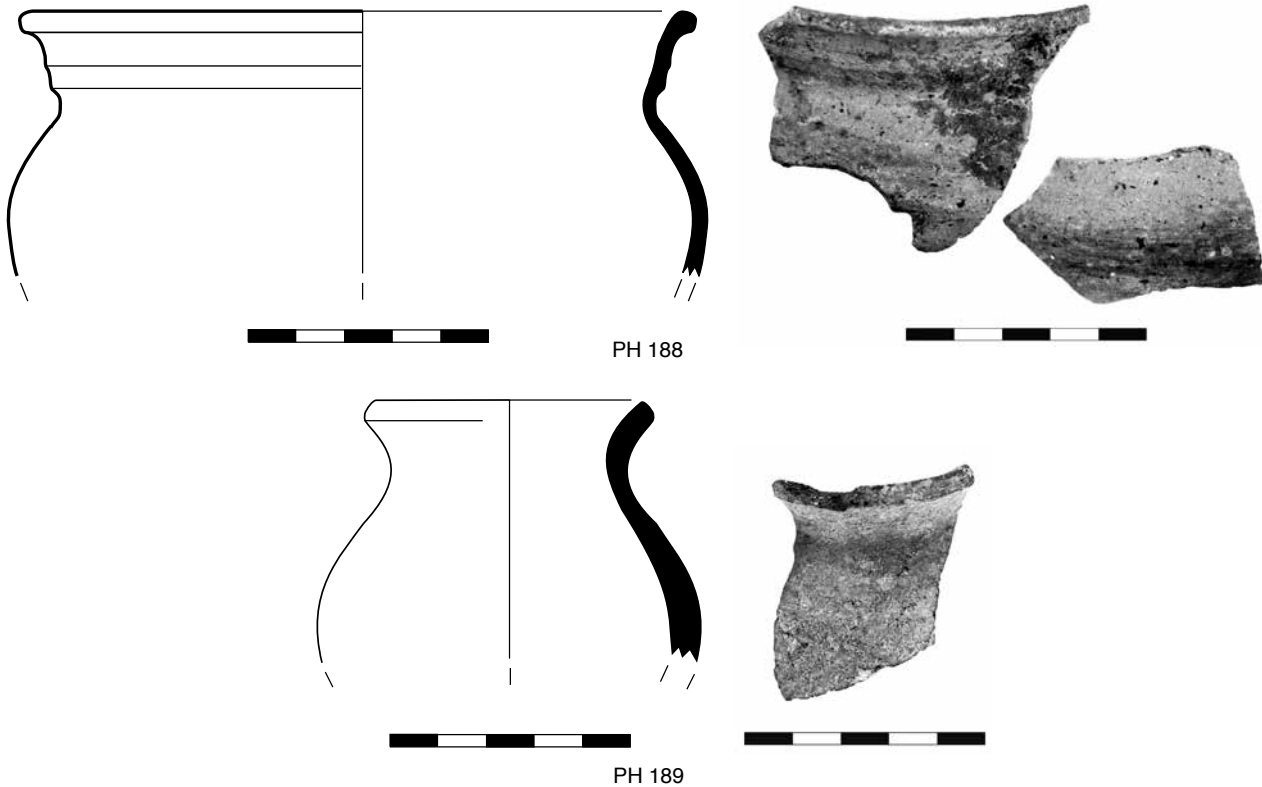
**PH 187** TA73 P587 Jug with ring foot  
 Loc. 21410 IRON  
 Single fragment of ring foot. Est. D. 6.0. Reddish yellow fabric (5YR 7/6). Burnished? Parallel: Samaria (Amiran 1970, pl. 86.3).





**ASSYRIAN PALACE WARE (PH 188–189)**

In 732 Tiglith-peleser III invaded the Galilee and destroyed Hazor. Connected with the subsequent Assyrian domination of the region is a type of pottery different from the local wares in both fabric and form, called Assyrian Palace ware. The two most common forms are the carinated bowl and the bottle. Assyrian Palace ware is generally dated post-conquest in the late eighth to seventh century.<sup>27</sup> The Anafa pottery may include locally made versions of this ware, which have the distinctive form but not the typical fabric.



<b>PH 188</b>	TA73 P578	Carinated Assyrian bowl	<b>PH 189</b>	TA73 P556	Imitation? Assyrian bottle
Loc. 21208		IRON	Loc. 21412		IRON
Two joining fragments preserve rim and shoulder. P.H. 5.4, est. D. rim 14.0. Pink hard fired fabric (7.5YR 7/4) with medium dark gray, red, and white inclusions. Parallels: Hazor (Yadin et al. 1960, pl. XCVIII.44) and Tell Qiri (Hunt 1987, fig. 44.5).			Single fragment of rim and neck. P.H. 5.1, est. D. rim 6.0. Dark gray fabric (5YR 4/1) with reddish brown surface (5YR 5/3) and medium white inclusions. Parallels for form: Tell Qiri (Hunt 1987, fig. 44.6) and Hazor (Yadin et al. 1960, pl. XCVII.11).		

**CYPRO-PHOENICIAN BLACK ON RED WARE (PH 190)**

Cypro-Phoenician Black on Red is a distinctive ware found in small quantities in many sites in northern Israel. There has been considerable controversy as to its origin and its chronology.<sup>28</sup> The questions involved in these issues will only be treated summarily here. As to the place of production for this ware, testing of the Black on Red ware from Tel Mevorakh led to the conclusion that the clay was Cypriot but with no precise match (Yellin and Perlman 1978,

<sup>27</sup> Although some Assyrian ware from Tell Qiri, if not later contamination in earlier levels, may be in a ninth-century context (Hunt 1987, 203). This correlates with an example of the ware in Stratum V at Hazor.

<sup>28</sup> For discussions of Black on Red ware, see Tappy 1992, 126–132; Mazar 1985, 82; Prausnitz 1982; Culican 1982; Stern 1978, 52–57, 61–62.

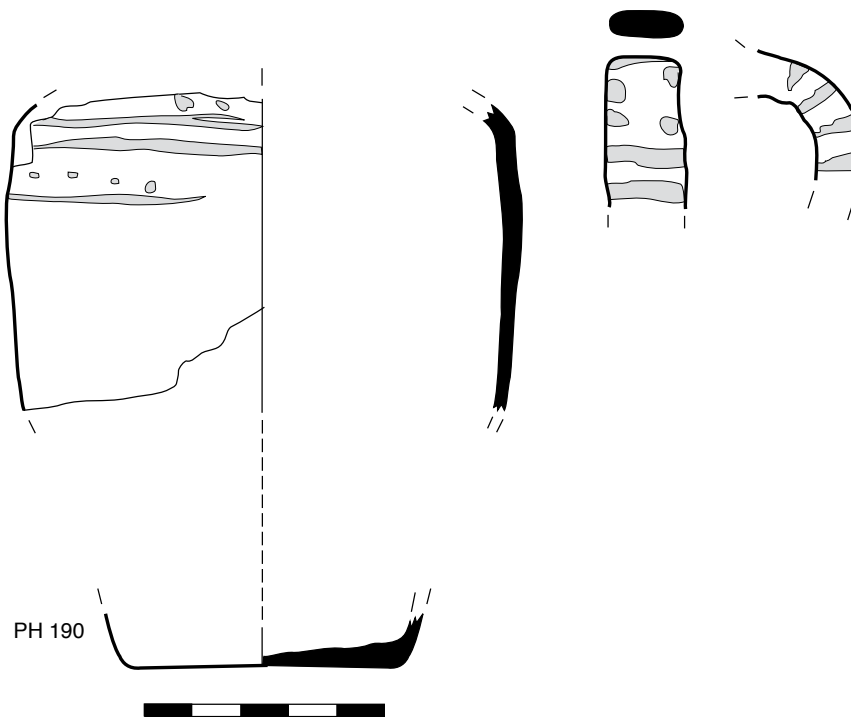
89–90). The problem of the dating of the ware has been caused by conflicting chronologies used for the examples found on Cyprus and in Palestine. Cypro-Phoenician pottery begins in IRON I, peaks in the tenth century, and continues through IRON II (Hunt 1987, 202). From examples found in stratified contexts, it would appear that Black on Red juglets in Palestine date primarily to the tenth century and decrease in the ninth century (Mazar 1985, 82).

**PH 190**  
Loc. 21207

TA72 P306

Juglet  
IRON

Eight joining and non-joining fragments preserve parts of flat base, body, and handle. Est. D. base 6.0, est. max. D. 10.5, Th. 0.4. Pinkish gray fabric (7.5YR 7/2) with red surface (2.5YR 5/8). Black on Red striped decoration. Parallel: The more cylindrical rather than globular form of the body and the flat base are found in a Black on Red juglet from Hurbat Rosh Zayit (Gal 1992a, fig. 5.7).



## CONTEXT CONCORDANCE

Loc. no.	Cat. no.	Inv. no.	Type	Stratum
2348	PH 008	TA73 P542	jar rim/neck, rope decoration	HELL 2A/B
2350	PH 006	TA78 P087	storage jar full profile	LB?
2351	PH 007	TA73 P010	body fragment, combed decoration	HELL 2B
2354	PH 019	TA73 P466	smear-dish body fragment	LB
2355	PH 038	TA73 P490	carinated bowl rim fragment	MB/LB
2355	PH 039	TA73 P534	rim, spout base of teapot	MB/LB
2355	PH 040	TA73 P544	hole-mouth rim/knob handle teapot fragment	MB/LB
2355	PH 041	TA70 P314	hole-mouth rim teapot fragment	MB/LB
2355	PH 042	TA73 P368	calciform rim/shoulder fragment	LB/MB
2355	PH 043	TA72 P299	calciform rim fragment	LB/MB
2356	PH 009	TA73 P432	jar everted rim fragment	HELL 2A
2368	PH 010	TA73 P429	hole-mouth jar rim fragment	MB contam.
2368	PH 011	TA72 P294	krater spout	MB contam.
2368	PH 012	TA73 P356	wavy ledge-handle fragment	MB contam.
2368	PH 013	TA73 P412	wavy ledge-handle fragment	MB contam.
2368	PH 014	TA72 P273	wavy ledge-handle fragment	MB contam.
2368	PH 015	TA73 P436	jug base fragment	MB contam.
2368, 2388, 23106, 23104	PH 016	TA73 P437	jug base fragment	
2368	PH 017	TA72 P283	jug base fragment	MB contam.
2368	PH 018	TA73 P434	rim/body fragment (drop-shaped vessel)	MB contam.
2368	PH 020	TA72 P291	rim fragment with "horned" lug-handle	MB contam.
2368	PH 045	TA73 P414	platter bowl rim, 2 joining fragments	MB contam.
2368	PH 046	TA73 P505	platter bowl ring foot fragment	MB contam.
2368	PH 047	TA73 P168	necked bowl rim fragment	MB contam.
2368	PH 049	TA73 P393	jar rim fragment	MB contam.
2368	PH 050	TA73 P502	jar rim fragment	MB contam.
2368	PH 051	TA73 P439	jar body fragment—shoulder	MB contam.
2368	PH 141	TA72 P249	cooking pot everted triangular rim, shoulder—2 joining fragments	MB contam.
2368	PH 142	TA73 P355	jar folded, grooved rim fragment	MB contam.
2368	PH 143	TA72 P253	jar folded, rounded rim fragment	MB contam.
2368	PH 144	TA72 P248	jar folded rim fragment	MB contam.
2368	PH 145	TA73 P331	dipper juglet trefoil rim fragment	MB contam.
2368	PH 146	TA73 P383	dipper juglet rounded base fragment	MB contam.
2368	PH 147	TA73 P367	bichrome krater body fragment	MB contam.
2368	PH 148	TA72 P034	closed vessel bichrome body fragment	MB contam.

Loc. no.	Cat. no.	Inv. no.	Type	Stratum
2368	PH 149	TA72 P036	closed vessel bichrome body fragment	MB contam.
2368	PH 150	TA72 P035	closed vessel bichrome body fragment	MB contam.
2369	PH 044	TA73 P456	platter bowl rim fragment	MB
2374	PH 135	TA73 P326	cooking pot everted triangular rim fragment	MB contam.
2376	PH 136	TA73 P450	cooking pot everted triangular rim fragment	HELL I/PERSIAN
2382	PH 137	TA72 P251	cooking pot everted triangular rim fragment	MB
2383, 2384	PH 138	TA72 P237	cooking pot everted triangular rim fragment	MB
2384	PH 139	TA72 P238	cooking pot everted triangular rim fragment	MB
2384	PH 140	TA72 P266	cooking pot everted triangular rim fragment, groove on exterior face	MB
2386	PH 054	TA73 P531	jug base fragment	MB
2386	PH 151	TA73 P360	juglet body fragment	
2386	PH 152	TA72 P272	juglet ring base fragment	MB
2386	PH 153	TA73 P349	juglet base ring fragment	
2386	PH 154	TA73 P334	bilbil body fragments	MB
2386	PH 155	TA73 P410	bilbil, 2 joining fragments of neck	MB
2386	PH 156	TA70 P319	milk bowl rim fragment	MB
2386	PH 157	TA72 P118	milk bowl body fragment	MB
2386	PH 158	TA72 P246	alabastron shoulder, handle fragment	MB
2386	PH 182	TA81 P040	cooking pot concave triangular rim/shoulder, 2 joining fragments	MB
2389	PH 159	TA73 P354	piriform jar body fragment	LB?
2389	PH 160	TA70 P316	flask body fragment	LB?
2389	PH 161	TA78 P011	stirrup jar false spout, handle fragment	LB?
2393	PH 162	TA72 P062	body fragment, closed vessel	MB
2393	PH 163	TA72 P241	carinated bowl rim/handle fragment	MB
2464	PH 121	TA73 P374	cooking pot everted triangular rim—3 joining fragments	HELL I
2472	PH 122	TA73 P350	jug everted triangular rim fragment	LB
2472	PH 123	TA73 P402	jar rounded rim fragment	LB
2474	PH 124	TA73 P327	jar rounded rim fragment	MB
2474	PH 125	TA73 P524	pithos folded rim fragment	MB
2474	PH 126	TA73 P372	jug ring foot base fragment	MB
2474	PH 127	TA73 P525	jug ring foot base fragment	MB
2474	PH 128	TA73 P359	platter bowl disc base fragment	MB
2474	PH 129	TA73 P0421	carinated bowl rim fragment	MB
2474	PH 130	TA72 P239	carinated bowl rim fragment	MB
2474	PH 131	TA72 P267	hemispherical bowl rim fragment	MB
2474	PH 132	TA72 P268	hemispherical bowl rim fragment	MB
2474	PH 133	TA72 P269	hemispherical bowl rim fragment	MB
2619	PH 187	TA73 P587	jug ring foot fragment	IRON
2619	PH 188	TA73 P578	carinated Assyrian bowl rim/shoulder, 2 joining fragments	IRON
2619	PH 189	TA73 P556	Assyrian bottle rim/neck fragment	IRON
2619	PH 190	TA72 P306	juglet, entire profile?	IRON

Loc. no.	Cat. no.	Inv. no.	Type	Stratum
2705X	PH 001	TA73 P488	platter rim	IRON
3350	PH 002	TA73 P516	platter rim	LB II/IRON I
3350	PH 004	TA73 P430	bowl rim	LB II/IRON I contam.
3350	PH 005	TA73 P431	storage jar rim/neck	LB II /IRON I contam.
3350	PH 021	TA73 P426	body fragment with wavy ledge-handle	LB II /IRON I
3350	PH 022	TA73 P379	body fragment with wavy ledge-handle	LB II /IRON I
3350	PH 023	TA72 P288	amphoriskos handle	LB II /IRON I
3350	PH 024	TA73 P463	amphoriskos handle	LB II/IRON I contam.
3350.1	PH 003	TA73 P435	platter rim	
3352.1	PH 025	TA73 P444	jar body fragment with ledge-handle, "stab" decorations	HELL 1/earlier
3364	PH 060	TA73 P420	lower body juglet body fragment	LB II
3364	PH 061	TA73 P588	juglet body fragment	LB II
3367.1	PH 062	TA72 P282	platter bowl rim fragment	LB II
3367.1	PH 063	TA73 P540	platter bowl rim, 3 joining fragments	LB II
3367.1	PH 064	TA73 P453	platter bowl rim, 2 joining fragments	LB II
3371	PH 065	TA73 P460	platter bowl rim fragment	MB/LB I contam.
3371	PH 066	TA73 P481	platter bowl, 2 joining fragments	MB/LB I contam.
3371	PH 067	TA72 P296	platter bowl rim fragment	MB/LB I contam.
3378	PH 068	TA73 P538	platter bowl rim fragment	MB/LB I contam.
3379	PH 069	TA72 P085	platter bowl rim, 2 joining fragments	MB/LB I
3379B?	PH 070	TA72 P084	platter bowl ring foot base fragment	
3380	PH 071	TA73 P471	platter bowl disc base fragment	MB/LB I contam.
3381	PH 072	TA72 P293	heavy bowl rim, 2 joining fragments	MB/LB I contam.
3382	PH 073	TA73 P482	heavy bowl rim fragment	LB II
3382	PH 074	TA73 P509	carinated bowl rim fragment	LB II
3382	PH 075	TA72 P081	carinated bowl, complete profile	LB II
3424	PH 076	TA72 P082	carinated bowl rim/body fragment	HELL 1/earlier
3424	PH 077	TA72 P083	carinated bowl complete profile	HELL 1/earlier
3425.1	PH 026	TA73 P480	jar body fragment with combed decoration	LB II/IRON I
3436	PH 027	TA73 P390	hole-mouth jar rim fragment	LB/IRON I
3437	PH 028	TA73 P382	hole-mouth jar rim fragment	LB/IRON I
3437	PH 029	TA73 P468	cooking pot flattened rim fragment	LB/IRON I
3439.1	PH 078	TA72 P089	carinated bowl, 2 joining rim/body fragments	IRON
3440	PH 053	TA73 P492	jar rim fragment	HELL 2A/earlier
3442	PH 079	TA72 P086	krater rim and upper bowl fragments	LB II
3444	PH 080	TA73 P508	cooking pot rim fragment everted	LB II
3445.1	PH 081	TA73 P353	cooking pot rim fragment everted, rounded edge	LB III
3446	PH 082	TA73 P425	cooking pot rim and handle fragment	LB II
3446	PH 083	TA72 P292	cooking pot everted rim fragment	LB II
3452	PH 084	TA73 P510	cooking pot everted rim and handle fragment	MB/LB I contam.
3452	PH 085	TA73 P335	cooking pot everted rim fragment	MB/LB I contam.
3452	PH 086	TA73 P336	cooking pot everted rim fragment	MB/LB I contam.

Loc. no.	Cat. no.	Inv. no.	Type	Stratum
3452	PH 087	TA73 P386	cooking pot everted rim fragment	MB/LB I contam.
3454	PH 088	TA73 P140	cooking pot T-shaped rim fragment	MB/LB I contam.
3454	PH 089	TA73 P141	cooking pot everted rim fragment	MB/LB I contam.
3454	PH 090	TA72 P279	jar rim fragment	MB/LB I contam.
3455	PH 091	TA73 P485	jar rim fragment	MB/LB I contam.
3458	PH 092	TA72 P280	jar gutter rim fragment	MB/LB I contam.
3458	PH 093	TA73 P461	jar triangular rim fragment	MB/LB I contam.
3458	PH 094	TA73 P537	jar projecting rim fragment	MB/LB I contam.
3518	PH 030	TA73 P451	cooking pot flattened rim fragment	LB II/IRON I+
3518	PH 031	TA73 P405	cooking pot everted rim—2 joining fragments	LB II/IRON I+
3528	PH 032	TA73 P388	hole-mouth jar—2 joining fragments	LB II/IRON I
3528	PH 033	TA73 P536	hole-mouth jar rim fragment	LB II/IRON I
3528	PH 034	TA73 P325	cooking pot hole-mouth rim fragment	LB II/IRON I
3528	PH 035	TA73 P380	straight-sided beaker rim fragment	LB II/IRON I
3530	PH 036	TA73 P433	straight-sided beaker rim fragment	LB II+
3530	PH 037	TA73 P389	incurving rim beaker fragment	LB II+
3534.1	PH 095	TA72 P281	jar ribbed rim fragment	LB II
3534.1	PH 096	TA73 P513	jar ribbed rim/neck fragments, 2 joining, 1 non-joining	LB II
3534.1	PH 097	TA73 P500	pithos thickened rim fragment	LB II
3534.1	PH 098	TA72 P277	pithos rim fragment	LB II
3534.1	PH 099	TA73 P529	pithos thickened rim fragment	LB II
3534.1	PH 100	TA73 P497	pithos elongated rim fragment	LB II
3535	PH 101	TA73 P498	pithos everted rim fragment	LB II contam?
3535	PH 102	TA73 P470	jug ring foot fragment	LB II contam?
3535	PH 103	TA72 P110	jug ring foot, body, handle	LB II contam?
3535	PH 104	TA73 P464	pointed bottom jug fragment	LB II contam.
3603	PH 105	TA72 P205	pointed bottom dipper juglet, complete profile	LB+
3603/3614	PH 134	TA73 P395	cooking pot everted triangular rim fragment	MB/LB I
3614	PH 106	TA73 P512	Chocolate-on-White bowl ring base fragment	MB/LB I
3615	PH 056	TA73 P487	painted juglet upper vessel	0
3619	PH 057	TA73 P521	painted juglet upper vessel	MB/LB I
3619	PH 058	TA72 P088	juglet body	MB/LB I
3619, 3614	PH 059	TA73 P495	juglet body fragment, spiral design	MB/LB I
3619	PH 107	TA73 P396	Chocolate-on-White body fragment of open vessel	MB/LB I
3619	PH 108	TA73 P472	chocolate-on-White body fragment of closed vessel	MB/LB I
3619	PH 109	TA73 P039	Chocolate-on-White 2 joining body fragments of closed vessel	MB/LB I
3619	PH 110	TA73 P040	Chocolate-on-White body fragment of closed vessel	MB/LB I
3619	PH 111	TA73 P403	platter bowl rounded rim fragment	MB/LB I
3619	PH 112	TA73 P401	carinated bowl rim fragment	MB/LB I
3620	PH 113	TA73 P404	carinated everted rim fragment	MB/LB I
3620	PH 114	TA73 P338	quatrefoil carinated bowl rim/handle fragment	MB I/LB I
3620	PH 115	TA73 P352	cooking pot everted rounded rim fragment	MB/LB I

Loc. no.	Cat. no.	Inv. no.	Type	Stratum
3620	<b>PH 116</b>	TA73 P399	cooking pot everted rounded rim fragment	MB/LB I
3620	<b>PH 117</b>	TA73 P523	cooking pot everted rounded rim fragment	MB/LB I
3620	<b>PH 118</b>	TA73 P400	cooking pot everted rounded rim fragment	MB/LB I
3620	<b>PH 119</b>	TA73 P351	cooking pot everted triangular rim fragment	MB/LB I
3620	<b>PH 120</b>	TA73 P375	cooking pot everted triangular rim fragment with gutter	MB/LB I
7201	<b>PH 183</b>	TA73 P549	cooking pot concave triangular rim fragment	ARAB
8107	<b>PH 184</b>	TA73 P568	jar everted rim fragment	MB?
8341	<b>PH 185</b>	TA73 P561	jar everted rim fragment	IRON
8341	<b>PH 186</b>	TA73 P562	trefoil jug mouth/neck fragment	IRON
21204.1	<b>PH 048</b>	TA73 P423	cooking pot fold-over rim fragment with gutter	MB I
21207	<b>PH 052</b>	TA73 P424	jar rim fragment	IRON
21208	<b>PH 180</b>	TA86 P003	cooking pot concave triangular rim fragment	IRON
21402	<b>PH 055</b>	TA73 P511	jug ring foot base fragment	HELL?
21410	<b>PH 181</b>	TA86 P004	cooking pot concave triangular rim fragment	IRON
21412	<b>PH 172</b>	TA73 P554	Samaria bowl rim fragment	IRON
21412	<b>PH 173</b>	TA73 P555, TA73 P574	Samaria rim and body fragments	IRON
21412, 21208	<b>PH 174</b>	TA73 P560, TA73 P563	Samaria rim, 2 joining fragments	IRON
21412	<b>PH 175</b>	TA73 P539	krater triangular rim fragment	IRON
21412, 21415	<b>PH 176</b>	TA73 P477	cooking pot concave triangular rim fragment	
21413	<b>PH 177</b>	TA69 P343	cooking pot concave triangular rim/shoulder, 2 joining fragments	IRON
21413	<b>PH 178</b>	TA86 P001	cooking pot concave triangular rim fragment	IRON
21417	<b>PH 179</b>	TA86 P002	cooking pot concave triangular rim fragment	EB/MB contam.
21419	<b>PH 168</b>	TA70 P315	cooking pot elongated triangular rim fragment	EB/MB contam.
23101	<b>PH 164</b>	TA81 P037	carinated bowl, 2 joining rim fragments	MB
23101	<b>PH 165</b>	TA72 P260	hole-mouth krater rim fragment	MB
23101	<b>PH 166</b>	TA73 P476	cooking pot elongated triangular rim fragment	MB
23101	<b>PH 167</b>	TA73 P408	cooking pot elongated triangular rim fragment	MB
23103	<b>PH 169</b>	TA73 P366	cooking pot elongated triangular rim fragment	MB I
23104	<b>PH 170</b>	TA72 P298	cooking pot elongated triangular rim fragment	MB II
23104	<b>PH 171</b>	TA72 P258	jug rim and handle fragment	MB II

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## **7. THE ATTIC POTTERY**

**by Ann Harrison  
and Andrea M. Berlin<sup>1</sup>**

<sup>1</sup>The catalogue and shape descriptions, written by Ann Harrison, were submitted in 1995, and have undergone only minimal editing. The introductory essay was written by Andrea Berlin.





# CONTENTS

I	Introduction . . . . .	339
II	Catalogue . . . . .	343
	Lekythoi (AW 1–6) . . . . .	343
	Open Vessels . . . . .	345
	Skyphoi (AW 7–10) . . . . .	345
	Cups (AW 11–14) . . . . .	346
	Mug (AW 15) . . . . .	347
	Bowls, Plates, and Other Open Forms . . . . .	347
	Rims . . . . .	347
	Incurved Rims (AW 16–19) . . . . .	347
	Bowls with Outturned Rims (AW 20–22) . . . . .	349
	Bases (AW 23–28) . . . . .	350
	Decorated Floors (AW 29–36) . . . . .	351
	West Slope Ware (AW 37–40) . . . . .	353
	Context Concordance . . . . .	355
	Bibliography . . . . .	356



## I. INTRODUCTION

The Attic pottery from Tel Anafa consists of 189 fragments, all saved and studied, and identified on the basis of their fabric and the quality of the glaze. Of these 189 fragments, forty are reasonably diagnostic and datable; these are presented here. Most are from black-glaze vessels; black-figure and red-figure styles are each represented by one fragment, and there are several examples of whiteground lekythoi. We also include at the end of this chapter the few examples of presumably Attic Hellenistic-period black glaze and West Slope Ware. Almost all of the Classical-era pottery dates between the later fifth and fourth centuries BCE; this range offers the best evidence for more precisely situating the site's Persian-period occupation.

Once the fragments are tallied into vessels, it is clear that the assemblage includes only a few forms, and not many vessels overall: about ten to twelve cups, mostly skyphoi; about twenty bowls and plates; and about six lekythoi. All are small and would have been easily transportable; there are no large vessels, such as kraters or hydrias.

The small number of vessels, as well as the narrow range of types, is not surprising. Tel Anafa is a small mound; in the later fifth to fourth centuries BCE probably only a few families lived here. There are no definitively identified architectural remains dating to these years; the settlement was almost certainly modest, the residents self-sufficient and poor. Furthermore the site is considerably inland, nestled beneath the high plateau of the Upper Galilee and some distance from the easily accessible basin of the Sea of Galilee. The small amount of Attic pottery found here might be fully explained by the site's small size, modest means, and inland location.<sup>2</sup>

This argument might be considered further corroborated by the pattern at coastal sites, which is quite different. The best comparison, because it is the most well studied and published, is from the town of Dor, situated at the northern edge of the Sharon coastal plain. A meticulous analysis by Andrew Stewart and Rebecca Martin allows a view of the totals and the typological breakdown of the Attic pottery found at Dor between 1980 and 2000.<sup>3</sup> There are about 1,700 fragments of Attic black-figure, red-figure, and black-glaze pottery, of which 75 percent (1,263 pieces) come from vessels for individual eating and drinking, and another 11 percent (just over 180 pieces) come from vessels for table service, such as kraters. Stewart and Martin conclude that in the fifth and fourth centuries BCE the site's inhabitants, though living at the far eastern end of the Mediterranean basin, largely set their tables with Attic pottery. That impression is bolstered by a piece of companion evidence: by the end of the fifth century practically no locally produced table vessels have been identified at Dor at all.

The picture seen at Dor—abundant amounts of Attic pottery at a sizeable, prosperous, well-connected coastal town—presents little mystery and could be seen as reinforcing an explanation based primarily on peoples' access to goods available from coastal suppliers. A closer look, however, suggests that there is more to the story. Situating the finds of Attic pottery from Tel Anafa against other vessels found at the site, as well as against the number and type of Attic vessels found at other inland sites in the southernmost Levant, offers evidence that size, wealth, and geography either are not as relevant as might be thought or cannot be the only explanations for the very small quantities found here.

To begin, other evidence from Tel Anafa and elsewhere in the region undermines the argument from geography. Among the Persian-period pottery from Tel Anafa itself are about forty oil flasks produced in clays that come from the region of Tyre.<sup>4</sup> Whether people would themselves have traveled to Tyre or merchants would have made the trip inland, the occurrence here of items from the coast clearly indicates that residents had access to the very markets where Attic vessels were widely available. The same argument could be made on the basis of the finds from the nearby site of Kedesh, situated a few hours' walk away, at the edge of the high plateau overlooking the Hula Valley. Around 500 BCE a large compound for the collection of agricultural commodities was built here, probably on behalf of the royal house of Tyre.<sup>5</sup> The amount of Attic pottery is slightly more: 284 fragments, dating from the early fifth through

<sup>2</sup> This line of reasoning has characterized most studies of Attic pottery in the Levant, beginning with Iliffe 1932. See, e.g., Cairmont 1955; 1956; Wenning 1981; Perreault 1984; 1986; Wenning 1990; and Shefton 2000.

<sup>3</sup> Stewart and Martin 2005. A similar picture appears at other coastal sites such as Tel Michal (Marchese 1989), Tel Mevorakh (Johnson 1978), and Apollonia-Arsuf (Tal 1999). For an overview, see Waldbaum 2003.

<sup>4</sup> Berlin TA II, i, 50–52 (PW 49–52), 54–56 (PW 65–68).

<sup>5</sup> Berlin and Herbert 2013, 373–376; 2015, 421–423.

the end of the fourth centuries BCE, although this number is certainly much higher than the number of actual vessels. Nonetheless it is dwarfed by the almost 2,000 Persian-era bottles, juglets, jugs, kraters, and cooking pots found at Kedesh, which petrographic analysis has shown originated in the area of Tyre.<sup>6</sup>

The evidence from Kedesh is critical also for the line of argumentation that is based on how wealthy or not a site's residents were. If poverty is one reason for the small amount of Attic pottery found at Tel Anafa, then at Kedesh there ought to be a great deal more Attic pottery. As an establishment belonging to the royal house of Tyre, the large compound included elegant reception spaces in addition to its collection capacities. Yet even there the quantities of Attic pottery found are so small as to be essentially meaningless; the total represents the acquisition of about one or two vessels per year.

The pattern exhibited at the small rural settlement of Tel Anafa and its adjacent large, important neighbor of Kedesh is replicated at another pair of sites of similar size, inland location, and topographic proximity: Shechem and Samaria. From Shechem, a modest village, come a total of 159 pieces of Attic pottery, which join up to form thirty-one vessels in total: twenty-two drinking cups, four kraters, and five lekythoi.<sup>7</sup> This quite insignificant tally is mirrored at neighboring Samaria, the provincial administrative center just 10 km northwest of Shechem. With the exception of one impressive red-figure krater by the Niobid Painter (discovered by the Harvard Expedition to Samaria in 1908 and currently on view in the Istanbul Archaeological Museum), there are just seventy-nine vessels and fragments published from the site, a figure that likely represents close to the total number found, given the excavators' interest in and reliance on Attic pottery as a chronological tool.<sup>8</sup>

Evidence from two more inland sites further affirms this picture of dramatic sparseness of Attic ceramics once away from the coast—no matter the evidence for wealth, ease of access, or other material finds that attest to coastal connections. First is the citadel mound of Lachish, located in the low rolling hills of the Shephelah. A journey from the southern coastal plain to Lachish is remarkably straightforward; the site is so near that a walk from shore would take no more than a few hours. In the fourth century BCE a large building, similar in layout and architectural adornment to that at Kedesh and called by excavators the Residency, was built on the acropolis.<sup>9</sup> The Residency was clearly an official or administrative structure; the plan included a large interior courtyard with an entry framed by columns. Yet despite status and proximity to the coast, a similarly modest amount of Attic pottery was found at Lachish: fragments of only about twelve bowls, six or seven cups, one krater, one oinochoe, one lekythos, and five lamps—about twenty-six items in all.<sup>10</sup>

The last inland site whose finds are relevant to this investigation is Mizpe Yammim, at the southeastern corner of the Upper Galilee plateau.<sup>11</sup> On the top of the mountain stood a small shrine and guard tower with an excellent view overlooking the juncture of the main east–west route from 'Akko and the north–south road running along the eastern side of the Sea of Galilee. Excavations here recovered a well-preserved two-room sanctuary with two stone platforms inside and over 100 offerings, some reasonably valuable: three bronze animal figures; a small bronze figurine of Osiris; a schist statuette of Horus, Isis, and Osiris; a bronze situla incised with an Egyptian funerary scene and an inscription in Phoenician to Astarte; and two silver coins from Tyre. Alongside these, clustered on and around the stone platforms, were about seventy-five small juglets probably for scented oil, which petrographic analyses show had almost all been made in the vicinity of Tyre. Thus the sanctuary's guardians and visitors came from the coast or had ready access to goods from there, including some that were exotic and probably also expensive.

The reason that all of this is pertinent to the issue of Attic pottery is that not a single fragment was found at Mizpe Yammim. The absence of Attic pottery at the sanctuary of Mizpe Yammim appears to be a true reflection of the ancient situation. Not only could at least some visitors have afforded it and easily acquired it, but in addition the entirety of the sanctuary was excavated and no other repositories of offerings were found. Since it is unlikely that a later visitor would have selectively removed Attic vessels while leaving behind the bronze objects, the conclusion seems to be that the site's visitors did not offer any deliberately.

<sup>6</sup> Stone 2012, 50–52, 73–74, and table A3.

<sup>7</sup> N. Lapp 1985; 2008, 33–40.

<sup>8</sup> Reisner, Fisher, and Lyon 1924, fig. 174.1–7, 17–27; Crowfoot, Crowfoot, and Kenyon 1957, 217–218, pl. 18.

<sup>9</sup> Tufnell 1953, 58–59 and pl. 119; Ussishkin 2004, 95–97, 840–846.

<sup>10</sup> Fantalkin and Tal 2004, 2187–2188; 2006, 171–172.

<sup>11</sup> Berlin and Frankel 2012.

The lack of Attic pottery at Mizpe Yammim should be added to the evidence from Lachish, Samaria, Shechem, Kedesh, and Tel Anafa. Together the impression gained is that sparseness is less a matter of logistics and more a matter of choice. Attic vessels were occasional, perhaps exotic objects but not sought-after additions to daily life. Two possible reasons (not mutually exclusive) may be advanced to explain why those living inland did not care for, and may even have avoided, Attic pottery: cultural disinterest and/or differing social structures at coastal and inland sites.

Cultural disinterest or even avoidance may have been against things Greek, but it may also have been, more simply, disinterest in things that were so visually different. Difference for its own sake is not always welcome. For residents of the southern Levant in the fifth and fourth centuries BCE, life was already an ongoing project of navigating difference: ethnic, linguistic, religious, political, and cultural. Tyrians, Samaritans, Judeans, and Idumeans (among others) lived in close proximity to one another but spoke distinct languages, wrote in slightly different alphabets, worshipped different gods, followed different internal social and legal codes—and on top of that accommodated themselves to the political dominion of the Achaemenid Persians, whose representatives brought yet another language, alphabet, and set of religious beliefs. Their world was a crowd of differences, a reality nicely acknowledged and even given a divine explanation by the old story of the Tower of Babel (Gen. 11:1–9). In this story the world’s peoples originally “had one language and the same words,” a utopia that Yahweh undid by dispersing them “over the surface of all the earth . . . and mix[ing] [their] languages” (Gen. 11:8–9). The story, though probably current only among Samaritans and Judeans at this time, nonetheless is instructive in that it explains the reality of multiple languages and cultures, each occupying their own distinct region. Theodore Hiebert suggests that the biblical author “appears to be wrestling with the profound tension at the heart of human experience between identity and difference, between the power of cultural solidarity, on the one hand, and the reality of cultural diversity, on the other.”<sup>12</sup>

In other words, it is possible to imagine that, from the vantage point of a Judean or Idumean, Attic pottery was yet another, and very obvious, emblem of yet one more foreign culture. It may be that to some Levantines, for whom divinely ordained cultural cacophony was the moral of one of their foundation stories and so part of their world view, such pottery, and the foreign culture that it represented, was one more very visible result of Yahweh’s great dismantling project. For those with such a view, a little may have been more than enough.

If true, however, avoidance of cultural difference cannot be the only explanation—and may not be a factor at all for Tel Anafa since that site lay within the sphere of Phoenician Tyre, and there is ample evidence for Tyrian, and Phoenician, receptivity to Greek culture. This brings us to the most likely explanation for the small amount of Attic pottery both here and at nearby Kedesh versus the tremendous quantities at coastal sites: different social hierarchies in each region. Briefly, the evidence suggests that once away from the coast, social organization comprised only two groups—elites and subsistence villagers—while in coastal towns there existed as well a third group, a kind of middle class, primarily composed of merchants and craftsmen. These are the people likely to have both the means and the interest to acquire Attic table vessels, items whose distinctiveness and obvious foreignness would have offered a visible signal of their owners’ knowledge and taste. In this explanation, the absence of Attic pottery at inland sites would be due to the absence of a middle class.

This explanation is, of course, hypothetical—and on present evidence impossible to prove. In the case of Tel Anafa, we cannot effectively characterize the Persian-period occupation because we lack any architectural remains, which might help to identify where and how people lived at that time. There is, of course, abundant evidence from all manner of places and periods that certain types of table settings were used by and/or signaled certain social classes. In the case of the Achaemenid world, there is also ample evidence that high-status table settings, the sort that would have been used at places such as Kedesh, Samaria, and Lachish, comprised metal cups and polished stone dishes. Metal vessels are quite common on the Apadana tribute reliefs at Persepolis, including from the Syrian delegates, who carry table amphoras and so-called Achaemenid cups that must have been bronze, silver, or gold. Metal cups and polished stone dishes were part of the holdings of Treasury at Persepolis, and they are also common in elite graves across the Achaemenid world.<sup>13</sup> Several small fragments of stone dishes from Kedesh show that such items were

<sup>12</sup> Hiebert 2007, 57.

<sup>13</sup> Iliffe 1935; Schmidt 1957, pls. 57, 62; Moorey 1980; Greenewalt, Rautman, and Cahill 1987, 80; Özgen and Öztürk 1996, 74–82, 150–151 (nos. 11–23, 106 silver and bronze jugs), 83–86, 152–153 (nos. 24–32, 107, silver ladles), 87–101 (nos. 33–50, silver and gold phylaxes), 103–107 (nos. 53–62, silver bowls and saucers), 109 (no. 64, silver strainer), 110–111 (nos. 65–66, silver goblets), 130 (no. 85, stone dish).

indeed used there.<sup>14</sup> All of this suggests that in most of the Achaemenid world, people of sufficient status and means would have used metal and stone vessels rather than ceramic, even Attic.

The abundance of Attic pottery along the Levantine coast is matched by the picture from coastal Asia Minor, where Attic table vessels or faithful Atticizing versions were standard components of peoples' household goods.<sup>15</sup> These vessels convey a new type of social behavior, one in which meals were enhanced by matched sets of cups and bowls, in designs that conveyed their owners' taste by virtue of a knowing evocation of Attic style. In addition to Attic table settings, other middle-class goods from these sites include perfumes, inexpensive jewelery, some interior décor such as stuccoed walls and mosaic floors—the sorts of items that people in all times and places have used to foster a more comfortable lifestyle as well as display themselves to one another. Such goods comprised a kind of social lubricant, easing the transition into a world of new opportunities, new negotiations, and new relationships.

It would seem that this connection, between the modest luxury of imported decorated table vessels and the new social dynamic that it supports, offers the best reason for the almost wholesale absence of Attic pottery inland. Here no middle class had yet developed. Instead the social dynamic remained imperial, with two classes only: a thin stratum of wealth and privilege at the top and a thick layer at the bottom, comprised of those working on behalf of their betters or simply just scraping by. The extremely small amount of Attic pottery from Tel Anafa is evidence that in the later fifth and fourth centuries BCE, the site was home to a few families doing just that.

<sup>14</sup> Stone dishes at Kedesh (unpublished): K99S023, K08S006, K08S022.

<sup>15</sup> Berlin and Lynch 2002.

## II. CATALOGUE

The catalogue entries are arranged in three broad divisions: closed forms, open forms, and West Slope Ware. Lekythoi, the only closed shape from the site, are presented first. The next section of the catalogue includes a variety of open forms, which are often impossible to identify precisely given the small size of the fragments. The third section contains examples of Hellenistic West Slope Ware, which may or may not be of Attic origin. Parallels for the catalogue entries are not meant to be comprehensive, rather only to provide general guidelines. All measurements are in centimeters.

In the catalogue entries, the following abbreviations appear:

Est. = estimated; H. = height; L. = length; P. = preserved; Th. = thickness; W. = width

*Agora XII* B. Sparkes and L. Talcott, *Agora XII: Black and Plain Pottery of the 6th, 5th, and 4th Centuries B.C.* (Princeton, 1970)

*Corinth XIII* C. Blegen, H. Palmer, and R. Young, *Corinth XIII: The North Cemetery* (Princeton, 1964)

### LEKYTHOI (AW 1–6)

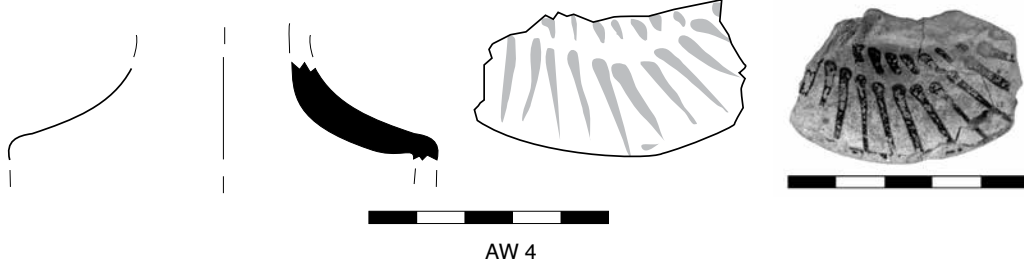
Amongst the imported pottery at Anafa are several fragments of lekythoi.<sup>16</sup> These are primarily white ground and probably carried pattern rather than figural decoration. There is also one red-figure fragment, and this most likely comes from a lekythos. As for further divisions in form, the lekythoi from Anafa all appear to have been cylindrical, with no evidence for squat lekythoi. The cylindrical lekythos is a good fifth-century marker and, if enough decoration is preserved, can be dated even more closely.

The Attic white-ground lekythoi from Anafa are similar to those produced by a group of interrelated Attic black-figure workshops, which included the Diosphos Painter, the Haimon Painter, and the Beldam Painter. These workshops produced white-ground lekythoi with black-figure decoration and also white-ground lekythoi with no incision and no figural representations, called pattern lekythoi. Pattern lekythoi are most closely tied to the work of the Beldam Painter (Haspels 1936, 181), but this need not mean that he is the only source since there is a tendency to attribute all pattern lekythoi to this painter (Kurtz 1975, 153). The lekythoi from Anafa are quite fragmentary, but certain features are indicative of these workshops. To begin with, the use of rays on the shoulder of a lekythos is frequent in the late period of the Diosphos Painter, the Haimon Painter, the Beldam Painter, and their workshops. In analyzing shoulder rays, in general the more volume the ray has, the earlier the work. For example, the use of double rays on the shoulder and the combination of white-ground body with red-ground shoulder, as seen on **AW 4**, are frequent traits of the late work of the Diosphos Painter (Haspels 1936, 131). As stated above, the majority of the Anafa fragments probably come from pattern lekythoi. One of the more closely identifiable lekythos sherds from Anafa is **AW 3**. While the pattern of cross-hatching found on this sherd is used occasionally in other contexts, it is found most frequently on ivy pattern lekythoi. The ivy pattern lekythoi date primarily to the second half of the fifth century (Kurtz 1975, 154). The extremely hasty rendering of double rays as mere lines, as on **AW 4**, is also a feature found on the shoulders of many pattern lekythoi.

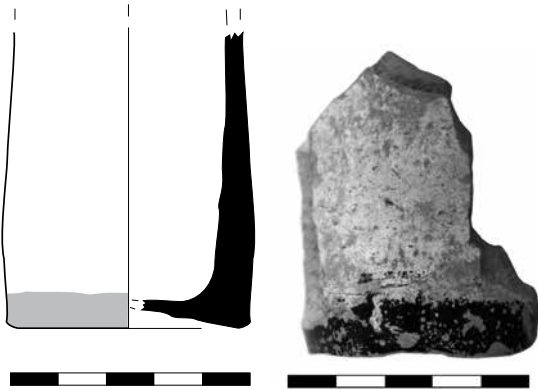
As for the presence of Attic lekythoi in Palestine, Clairmont noted that “lekythoi are rather numerous and one may wonder whether there was some special reason for importing them” (Clairmont 1955, 109). Stern cites thirty-six examples of lekythoi with black-figure decoration, seventeen with red-figure, and four with black glaze (Stern 1982, 283–286). In general when a site has much Attic, it has multiple lekythoi. At Shechem, for example, there are fifteen lekythos fragments (Lapp 1985, 40–41). Pattern lekythoi were heavily exported (Haspels 1936, 187), and white-ground ivy lekythoi are found in the Levant with particular frequency. For example, from Ta’anach, there is a white-ground ivy pattern lekythos, which has cross-hatching on the body corresponding to **AW 3** and degenerate shoulder rays on red ground corresponding to **AW 4** (Lapp 1964, fig. 24). To the north the site of Kamid el-Loz in the

<sup>16</sup>As well as the catalogued entries there is a black-glazed mouth from a lekythos (basket number illegible).

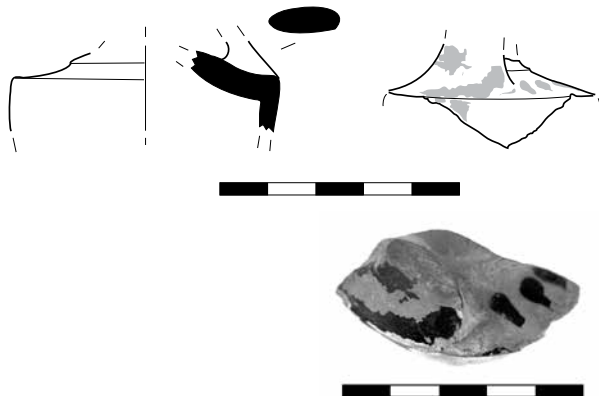
Beqa' Valley has produced a white-ground pattern lekythos attributed to the Beldam Painter with rays on the shoulder similar to **AW 4** (Kranz 1966, 97, fig. 29.9), as well as a fragment of an ivy pattern lekythos also attributed to near the Beldam Painter, which is comparable to **AW 3** (Kranz 1966, 100–101). Clairmont also cited several examples of ivy lekythoi from Tell Jemmeh, Atlit, and Samaria (Clairmont 1955, 115).



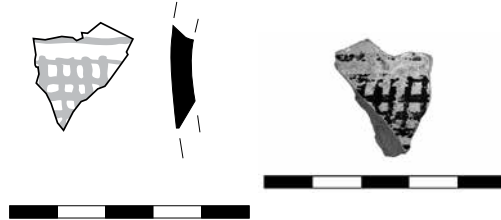
**AW 1** TA70 P303  
 Loc. 2322  
 Single body fragment preserving lower body of vessel and interior of floor. P.H. 6.2, est. D. 5.0, Th. 0.6. Cylindrical white-ground lekythos with glaze on lower body. No decoration preserved on the white ground. Date: fifth century BCE.



**AW 2** TA81 P121  
 Loc. 9122  
 Single fragment preserving ca. one-fifth shoulder and handle base. P.H. 2.5, est. D. at shoulder 5.3, Th. 0.6. Cylindrical white-ground lekythos with single row of rays on red ground on shoulder. Parallels: *Agora XII*, nos. 1115–1119. Date: first to second quarter of fifth century BCE.

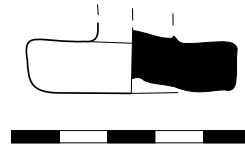


**AW 3** TA72 P60  
 Loc. 1375  
 Single body fragment. P.H. 2.3, P.W. 2.0, Th. 0.4. Cylindrical white-ground lekythos with decoration of cross-hatching in lustrous black paint. Probably from an ivy pattern lekythos. Parallels: *Corinth XIII*, pl. 51, grave 337, no. 12, grave 341, nos. 8 and 9; grave 342, no. 9; Kurtz 1975, pl. 70.6,7. Date: second half of fifth century BCE.



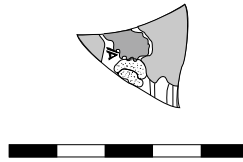
**AW 4** TA72 P311  
 Loc. 2564  
 Three joining shoulder fragments. P.H. 3.4, est. D. at shoulder 9.5, Th. 0.4. Cylindrical white-ground lekythos with two rows of thin, degenerate, slanting rays on red-ground shoulder. Date: second half of fifth century BCE.

**AW 5** TA68 P125  
 Loc. 3222A  
 Single fragment of lekythos disc foot. D. 4.8. Parallels: The disc foot is one of the main foot forms for cylindrical lekythoi in the fifth century, for example *Agora XII*, nos. 1115–1119. There is an example of this form from Stratum 11 of the excavations at Hazor (Yadin et al. 1961, pl. CCLVIII.5). Date: fifth century BCE.





**AW 6** TA73 P3 Lekythos?  
 Loc. 2539 HELL 2C+/ROM 1A  
 Single body fragment. P.H. 2.2, P.W. 2.3. Small fragment of a closed vessel, probably a lekythos, with red-figure decoration. Fragment preserves head, proper left shoulder, and proper left raised arm of male figure looking to the left. The upraised arm is probably grasping a spear. Date: fifth century BCE?



OPEN VESSELS

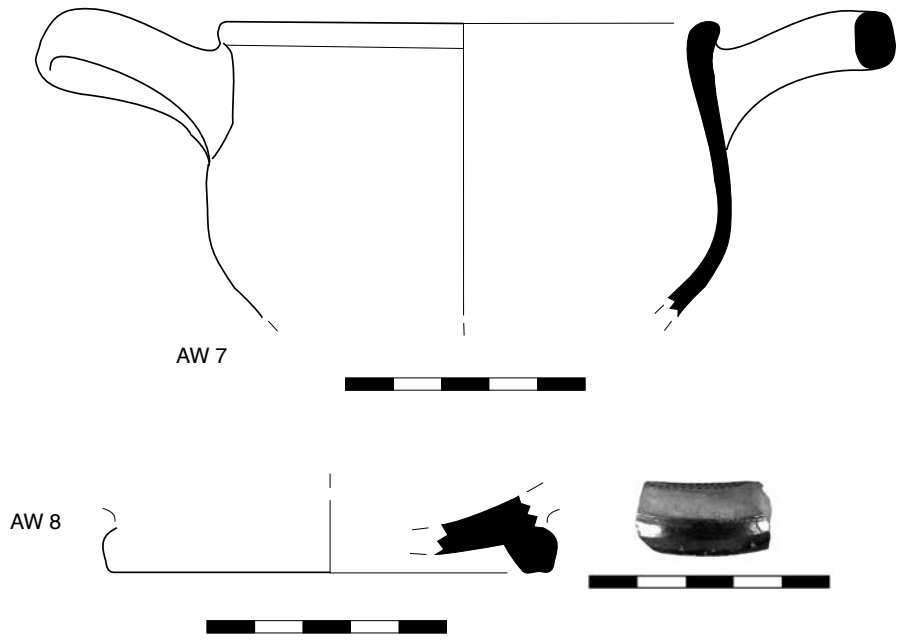
The largest proportion of fragments comes from open shapes: cups, bowls, or plates. It is often difficult to identify sherds as coming from precise shapes. The skyphos form is quite distinctive even in fragments, so these can be clearly separated and presented in a section (AW 7–10). Other fragments (AW 11–14) can be identified as elements of cups, but the precise form is impossible to determine. The remainder are presented as miscellaneous rims, bases, and decorated floor fragments that cannot be associated with a particular shape.

SKYPHOI (AW 7–10)

The skyphos was a popular shape in Attic black-glaze ware from the sixth through the fourth century. The form has several variants, but all the Anafa fragments belong to examples of Attic Type A skyphoi. This form gradually develops from the early fifth to the late fourth century BCE from a vessel with a single curve from rim to base to one with a double curve (Sparkes and Talcott 1970, 84). Skyphoi of this date are published from Tel Michal (Marchese 1989, fig. 10.2.8,9,10,15), from the favissa at Dor (Stern 1989, 118), and from Shechem (Lapp 1985, figs. 11.11 and 12.11).

**AW 7** TA78 P21 Skyphos  
 Loc. 13106, 13103 HELL 1A/B  
 Nine joining fragments preserving ca. two-thirds of rim and all of one handle. P.H. 0.6, D. rim 10.4, Th. 0.3. Attic Type A skyphos with pronounced double curve. Pinched, horizontal handle, placed below everted rim. Parallels: *Agora XII*, nos. 350–352. Date: second to third quarters of fourth century BCE.

**AW 8** TA79 P202 Skyphos  
 Loc. 7724 pre-HELL–ROM 1  
 Single fragment preserving part of ring foot and small portion of floor. Est D. foot 9.5. Attic Type A skyphos with ring foot. Reserved, flattened resting surface. Floor, as preserved, reserved with traces of miltos. Parallel: *Agora XII*, no. 342. Date: third quarter of fifth century BCE.

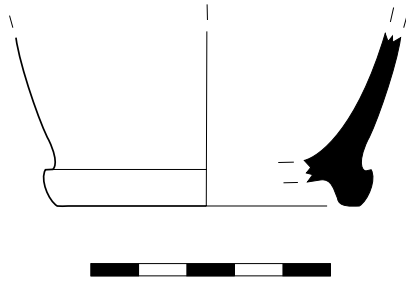


**AW 9**  
Loc. 7723

TA79 P35

Skyphos  
HELL 1

Single fragment preserving part of ring foot and lower body. P.H. 3.5, est. D. foot 6.5, Th. of floor 0.7. Attic Type A skyphos with ring foot. Convex single curvature in lower body. On underside of base, two unglazed bands with black-glazed band in between at junction of floor and ring foot. Parallels: *Agora XII*, no. 342. Date: third quarter of fifth century BCE.

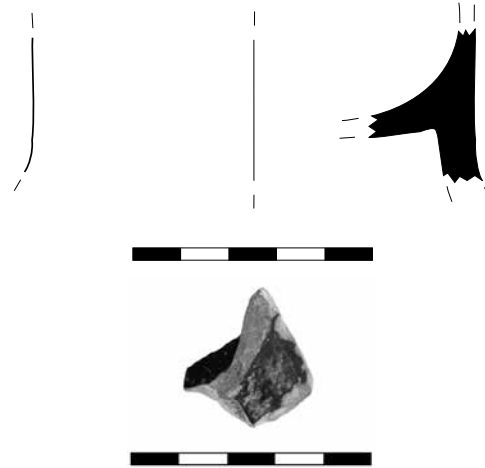


**AW 10**  
Loc. 2927

TA79 P194

Skyphos  
ROM 1B

Single fragment preserving fragment of ring foot. P.H. 2.8, max. pres. D. foot 9.0. Attic Type A skyphos with narrow foot. Completely glazed. Parallels: *Agora XII*, nos. 353–354. Date: late fourth century BCE.



#### CUPS (AW 11–14)

In Attic black-glaze, potters produced several forms of cup in both the stemmed and stemless classes. The most common stemmed cup is the Type C, which ranges in date from the late sixth century through the end of the Archaic period (Sparkes and Talcott 1970, 91–92). In the early fifth century the stemless cup takes the leading role, peaks in popularity in the third quarter of the fifth, and remains the most common cup form until sometime in the early fourth century, when it is superseded by the kantharos (Sparkes and Talcott 1970, 98). Fragments of several Attic cups are found at Anafa, but these pieces are too fragmentary to place precisely, lacking diagnostic elements such as rims and bases. Interestingly, the Anafa assemblage does not appear to have fragments of kantharoi, the form that replaced the stemless cup in the fourth century BCE. There are also a number of handle fragments that may belong to cups, found in loci 3212, 3319, and 3333.

**AW 11**  
Loc. 1393  
Not illustrated

TA72 P121

Cup  
HELL 2A/B

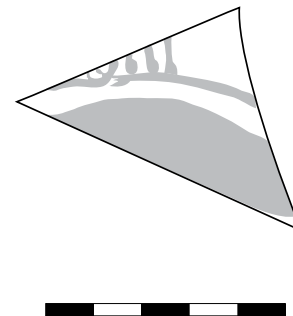
Single body fragment. P.H. 5.1, P.W. 11.3. The glaze is the highly lustrous deep black of the fifth century BCE.

**AW 12**  
Loc. 1250

TA72 P122

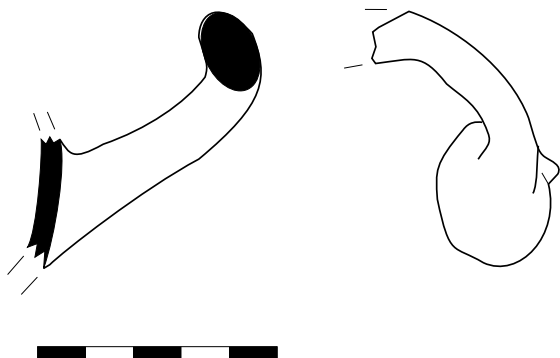
Cup  
HELL 1A

Single body fragment. P.H. 3.3, P.W. 5.8. Black-figure cup with reserved figure band. In band, three horse's legs in front of chariot wheel placed on a ground line. Lower part of fragment has black glaze. Parallels: chariot scene on band cup: *Corinth XIII*, pl. 93, Grave 250, no. 14. Date: possibly late sixth century, more likely early fifth century BCE.



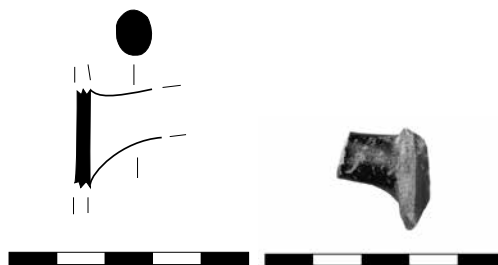
**AW 13** TA81 P32  
Loc. balk trim (basket 9.1.133)

Two joining fragments preserving over one-half of handle with one attachment and wall section. P.L. 5.9, P.W. 4.6, Th. 0.021. Horizontal handle with rounded section, rising from the body on an upward slant. No evidence for reserved handle panel. Possibly from a stemless cup. Parallels: the lack of reserved handle panel and the form of the handle found on stemless cup *Agora XII*, nos. 472–482. Date: third to second quarter of fifth century BCE.



**AW 14** TA80 P12  
Loc. 5502

Single handle fragment. P.L. 2.0, P.D. of handle 1.0. Horizontal handle with rounded section, rising from body on an upward slant. Area on body under handle reserved. Parallels: The use of a reserved handle panel is found on a wide range of stemmed and stemless cup types. In general, however, it can be said that often the reserved panel is indicative of an earlier cup. Date: late sixth to early fifth century BCE.



#### MUG (AW 15)

The mug of “Pheidian” shape is the most common mug form in Athens and is very popular in the second half of the fifth century BCE (Sparkes and Talcott 1970, 72).

**AW 15** TA68 P344  
Loc. number illegible  
Not illustrated

Mug

Single fragment of base. Est. D. base 7.0 Base and start of lower wall of mug. Ring foot with concave molding on inner surface. Reserved resting surface and underside. Scraped join on exterior. On lower wall horizontal groove below traces of two impressed ovules. Parallel: *Agora XII*, no. 207. Date: third quarter of fifth century BCE.

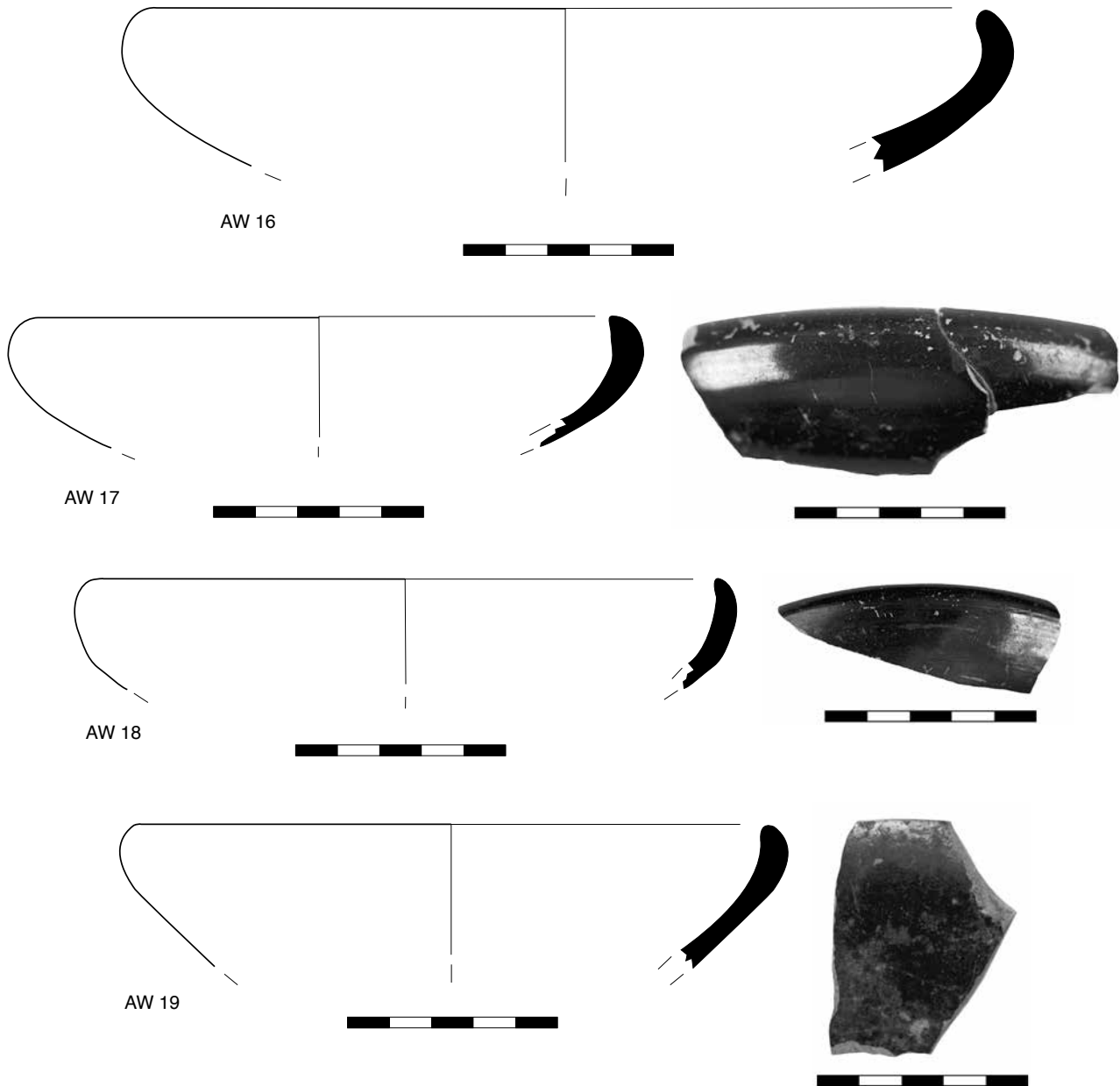
#### BOWLS, PLATES, AND OTHER OPEN FORMS

##### Rims

##### Incurved Rims (AW 16–19)

Incurved rims are found most commonly on two shapes in Attic black-glazed pottery: the bowl and the one-handler. Production of bowls began in the fourth century BCE and continued until well into the third century (Sparkes and Talcott 1970, 131–132; Rotroff 1983, 265). Dating criteria are based on the lower body and base; the incurved rims alone do not provide much help. Incurved rims can also be found on a form of one-handled cup in the late fifth and early fourth centuries (Sparkes and Talcott 1970, 127). However, since one-handlers with incurving rims generally have a deeper form than the Anafa sherds show, our examples probably come from bowls. The incurved rim form was very popular at the site; further examples of fourth-century date come from loci 1240, 13100, 13104, 7114, and a probable third-century example from locus 8106. This form was a popular import in Palestine; examples are found in fourth-century contexts at Tell Keisan (Pierre 1980, pl. 22.9) and at Tel Michal (Marchese 1989, 151).

- |  |  |
|--|--|
| <p><b>AW 16</b>            TA68 P122            Incurved rim bowl<br/>Loc. 3212B+            HELL 2A</p> <p>Single fragment of incurving rim. P.H. 3.4, est. D. 25.0. Parallel: for scale, <i>Agora XII</i>, fig. 8.835; for curvature of wall, <i>Agora XII</i>, no. 832. Date: second quarter of fourth century BCE.</p> | <p><b>AW 18</b>            TA81 P169            Incurved rim bowl<br/>Loc. 7938.1            HELL 2A/B</p> <p>Single fragment of incurving rim. P.H. 2.5, est. D. 15.0. Parallels: Cave Cistern (Rotroff 1983, no. 31). Date: early fourth quarter of fourth century BCE.</p>  |
| <p><b>AW 17</b>            TA70 P330            Incurved rim bowl<br/>Loc. 2463, 2029            HELL 1/2A</p> <p>Two joining fragments of incurving rim. P.H. 2.0, est. D. 14.0. Parallel: for curvature of wall, <i>Agora XII</i>, no. 830. Date: middle of fourth century BCE.</p>                                      | <p><b>AW 19</b>            TA78 P158            Incurved rim bowl<br/>Loc. 13102            00</p> <p>Single fragment of incurving rim. P.H. 3.0, est. D. 19.0. Parallels: for both the diameter and the shiny, metallic glaze from the Cave Cistern in the Athenian Agora (Rotroff 1983, nos. 34, 35). Date: first half of the third century BCE.</p> |



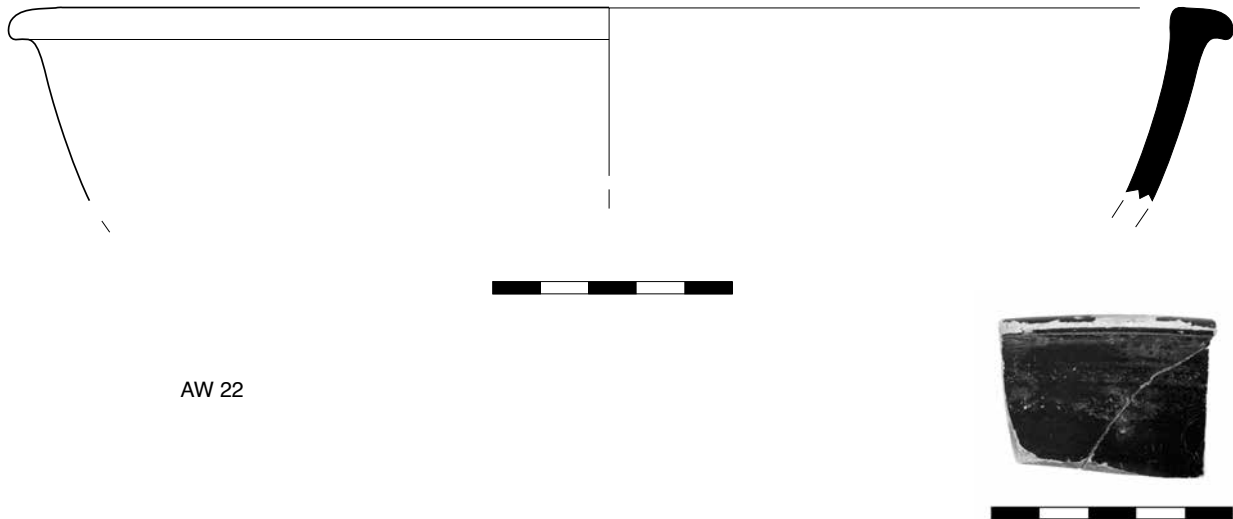
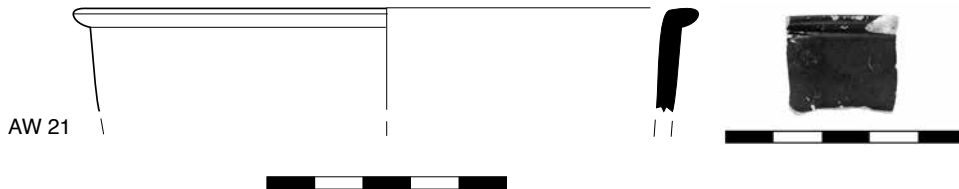
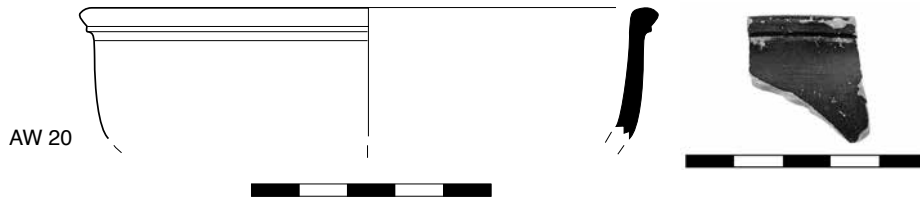
Bowls with Outturned Rims (AW 20–22)

Production of bowls with outturned rims began in Athens at the end of the fifth century BCE and became popular in the fourth (Sparkes and Talcott 1970, 128). The shape usually has a tall ring foot and stamped floor decoration. This form was not as common as the incurved rim bowl in Athens or as popular an export. In Israel, fourth-century examples of this form are found at Tell Keisan (Pierre 1980, pl. 22.8), and at Hazor (Yadin et al. 1961, pl. LXXV.24).

**AW 20** TA69 P334 Everted rim bowl  
 Loc. 1251 HELL 1A  
 Single fragment of everted rim. P.H. 2.6, est. D. 12.0. Bowl with tapered everted rim. Parallel: *Agora XII*, no. 803. Date: Early fourth century BCE.

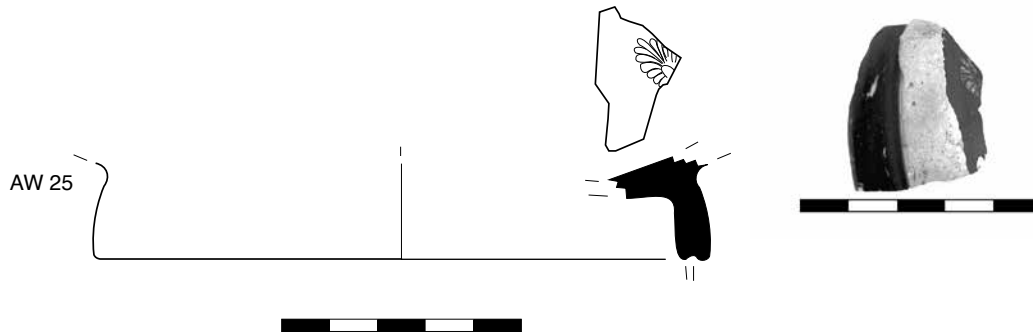
**AW 22** TA73 P590 Everted rim bowl  
 Basket 1398 HELL 2A/B  
 Two joining fragments of everted, tapering rim. P.H. 3.3, est. D. 25.0. Shiny glaze. Parallel: for angle of rim, *Agora XII*, no. 808. Date: last quarter of fourth century BCE.

**AW 21** TA73 P589 Everted rim bowl  
 Loc. 2367 HELL 1/earlier  
 Single fragment of everted rim. P.H. 2.1, est. D. 13.0. Parallel: *Agora XII*, no. 803. Date: early fourth century BCE.



*Bases (AW 23–28)*

In the fourth century BCE a canonical treatment for bases of several open shapes developed: a black underside with central nipple and a grooved resting surface. This base is used for bowls with incurved and outturned rims, and also for bolsals and plates. Other forms of ring foot still continued, however. The junction of the body and foot was often marked by a reserved line. Beginning in the late fifth and especially in the fourth century, this reserved effect was actually created by a scraped groove (Sparkes and Talcott 1970, 18). Some of the bases catalogued in this section also retain elements of stamped floor decoration (for which see section below).

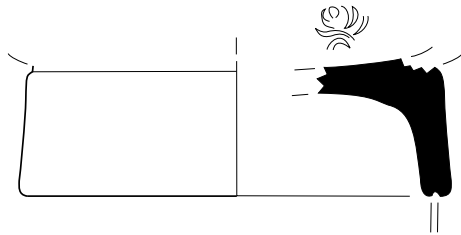


**AW 23**  
Loc. 7637

TA79 P89

HELL 1?

Single fragment. P.H. 2.6, est. D. 9.0. Tall ring foot with grooved resting surface. Foot curves into floor on interior of underside. Stamped palmette on floor. Possibly from rolled rim plate. Parallel: *Agora XII*, no. 1058. Date: third quarter of fourth century BCE.



**AW 25**  
Loc. 1388

TA72 P312

HELL 2A/B

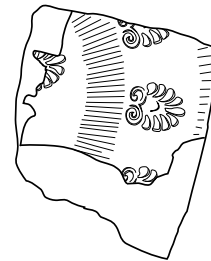
Single foot fragment. P.H. 2.3, est. D. 11.0. Tall ring foot with grooved resting surface. Break between foot and floor on interior of underside. Junction of wall and foot scraped. Stamped palmette on floor. Possibly from incurved rim bowl. Parallel: *Agora XII*, no. 835. Date: early last quarter of fourth century BCE.

**AW 26**  
Loc. 3400

TA70 P53

MODERN

Single floor and foot fragment. P.H. 2.5, P.L. 3.5, P.W. 4.0. Small ring foot, with flat resting surface. Floor decoration of stamped palmettes and rouletting. Date: third quarter to second quarter of fourth century BCE.

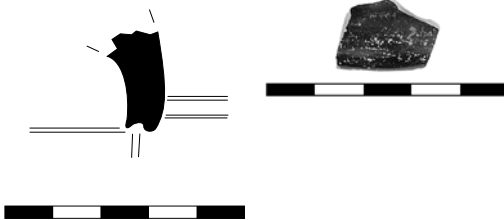


**AW 24**  
Loc. 1242

TA69 P535

HELL 2A/B

Single foot fragment. P.H. 2.0. Tall ring foot with grooved resting surface. Date: second half of fourth century BCE.



**AW 27**  
Loc. 13102

TA78 P164

Single fragment. P.H. 2.6, est. D. 11.0. Tall ring foot with flat resting surface. Foot curves into floor on interior of underside. Junction of wall and foot scraped. Two circles of rouletting. Date: late fourth century BCE.

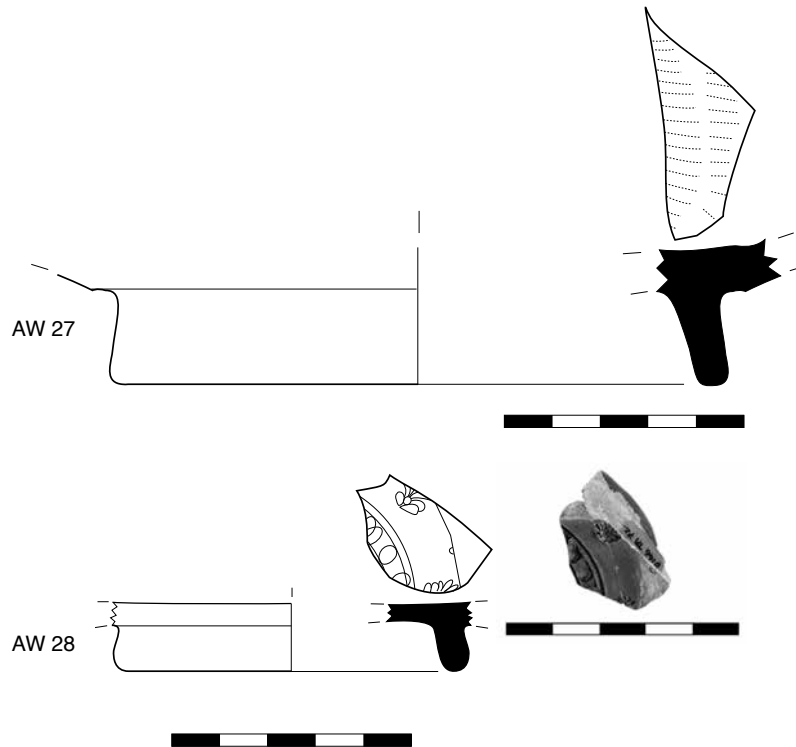
00

**AW 28**  
Loc. 2348

TA72 P166

HELL 2A/B

Single fragment. P.H. 2.0, est. D. foot 7.5. Small ring foot with tapering, glazed resting surface. Join between foot and floor reserved on underside. Decoration of palmettes and ovules. Possibly from a bolsal. Fragments from loci 7937 and 8110 may belong to this vessel. Parallel for decoration: *Agora XII*, no. 548. Date: late fifth century BCE?



#### *Decorated Floors (AW 29–36)*

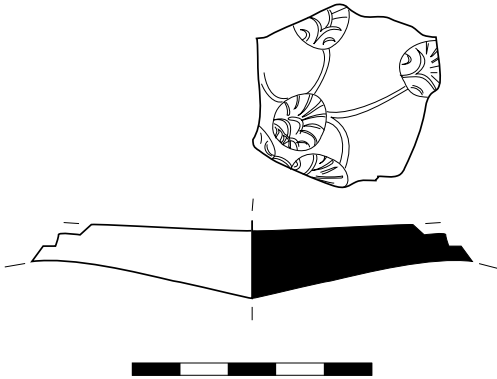
Stamped decoration appears on the floors of cups, bowls, and plates—in essence all open shapes (Sparkes and Talcott 1970, 24). It replaces earlier incised decoration, beginning in the middle of the fifth century BCE (Sparkes and Talcott 1970, 28). The main decorative elements were palmettes and ovules. The Anafa fragments are too small for the most part to be able to reconstruct the design of the floor as a whole. A major development in the decoration of floors came in the second decade of the fourth century with the creation of rouletting (Sparkes and Talcott 1970, 30–31). Although rouletting continued into the Hellenistic period, it peaked in popularity in the fourth century. It was often combined with stamped palmette designs or used as the only decorative motif. Precise dating of such small sherds is impossible, but certain broad divisions can be suggested. Bounded rouletting as on **AW 33** and **AW 34** tends to be found in the second quarter of the fourth century BCE. After this both the rouletting and the palmettes were often placed less neatly on the vessel. Numerous examples of vessels decorated with rouletting are found at Anafa. In addition to the catalogued items, rouletted fragments were found in loci 1297, 2929, 7208, and 7928.

**AW 29**  
Loc. 8203

TA79 P191

HELL 2A-ROM 1B/C

Single fragment. P.H. 4.5, P.W. 4.4. Floor of open vessel decorated with linked palmettes. Nipple on underside. Date: second to third quarter of fourth century BCE.

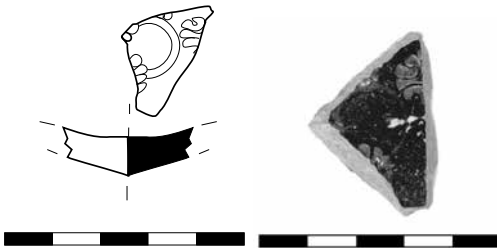


**AW 30**  
Loc. 7136

TA80 P258

ROM 1B

Single fragment. P.H. 2.7, P.W. 1.8. Floor of open vessel decorated with palmettes on central circle. Nipple on underside. Date: second to third quarter of fourth century BCE.

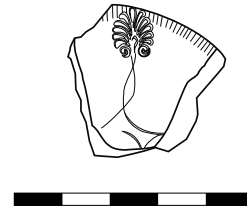


**AW 31**  
Loc. 2415

TA69 P320

ROM 1A

Single fragment. P.L. 3.25, P.W. 3.25. Floor of open vessel decorated with linked palmettes within rouletting. Date: second to third quarter of fourth century BCE.

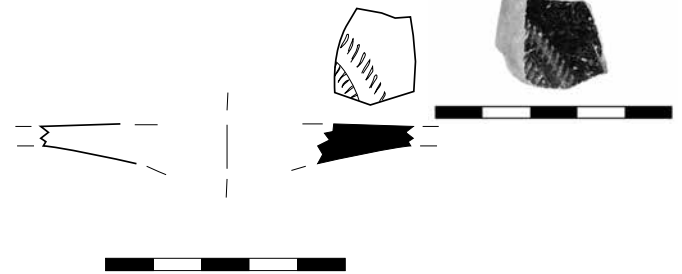


**AW 32**  
Loc. 7915

TA80 P259

ROM 1B

Single fragment. P.H. 2.0, P.W. 3.1. Floor of open vessel with rouletting. Date: fourth century BCE.

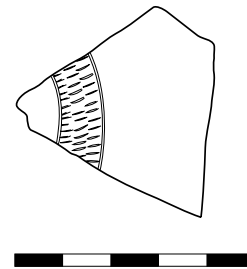


**AW 33**  
Loc. 2106

TA68 P76

ROM 1B

Single fragment. P.L. 4.3, P.W. 4.2, Th. 0.1. Floor of open vessel with rouletting. Date: second quarter of fourth century BCE.

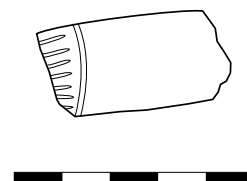


**AW 34**  
Loc. 2111A

TA68 P77

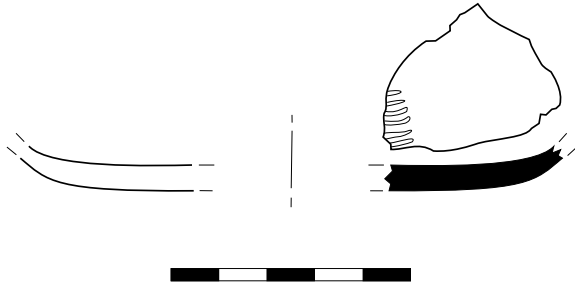
HELL 2C-ROM 1A

Single fragment. P.L. 4.1, P.W. 2.1, Th. 0.1. Floor of open vessel with rouletting. Date: second quarter of fourth century BCE.

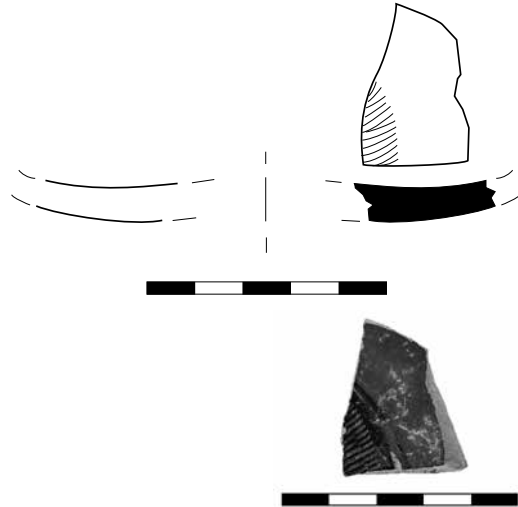




**AW 35** TA80 P260  
 Loc. 5419 HELL 2A  
 Single fragment. P.H. 3.8, P.W. 3.0. Floor of open vessel with rouletting. Date: fourth century BCE.



**AW 36** TA79 P192  
 Loc. 2932 HELL 1/2  
 Single fragment. P.H. 2.7, P.W. 3.4. Floor of open vessel with rouletting. Date: fourth century BCE.



**WEST SLOPE WARE (AW 37–40)**

The term “West Slope Ware” is used for a class of Hellenistic pottery decorated with designs in a dilute clay slip, white and buff in color, on the normal black glaze, and incision. Athens was a major production center for this type of pottery but not the only one. Of the examples listed below, **AW 37** may well be Attic. The following three entries, **AW 38–40**, probably represent one vessel, most likely an imitation of Attic West Slope Ware. The use of incision to carry out the majority of the design was not common in Athens (Rotroff 1990, 60).



**AW 37** TA72 P107  
 Loc. 1283 HELL 2A/B  
 Single fragment of body. P.H.1.9, P.W. 3.1, est. D. 12.0. Body fragment of open vessel. Fabric within the general range of Attic. Black glaze on interior and exterior. Large-scale spiral design in white. Parallel for design: from Athenian Agora, Rotroff 1990, no. 105. Date: third–first centuries BCE.

**AW 38** TA73 P161  
 Loc. 21206 HELL ?  
 Single fragment of body. P.H. 2.0, P.W. 3.2. Body fragment of open vessel. Fabric reddish buff. Black glaze on exterior, reddish glaze on interior. Decoration of incised leaves and white painted dots. Date: third–first centuries BCE.



**AW 39**

TA73 P90

Loc. 4110

ROM 1B/later contam.

Single fragment of body. P.H. 3.7, P.W. 3.7. Body fragment of open vessel. Fabric reddish buff. Black glaze on exterior, reddish glaze on interior. Decoration of incised leaves and white painted dots. Date: third–first centuries BCE.

**AW 40**

TA73 P163

Loc. 4110

ROM 1B/later contam.

Single fragment of body. P.H. 2.0, P.W. 0.15. Body fragment of open vessel. Fabric reddish buff. Black glaze on exterior, reddish glaze on interior. Decoration of incised leaves and white painted dots. Date: third–first centuries BCE.



## CONTEXT CONCORDANCE

Loc. no.	Cat. no.	Inv. no.	Stratum
1242	<b>AW 24</b>	TA69 P535	HELL 2A/B
1250	<b>AW 12</b>	TA72 P122	HELL 1A
1251	<b>AW 20</b>	TA69 P334	HELL 1A
1283	<b>AW 37</b>	TA72 P107	HELL 2A/B
1375	<b>AW 03</b>	TA72 P060	HELL 2A/B
1388	<b>AW 25</b>	TA72 P312	HELL 2A/B
1393	<b>AW 11</b>	TA72 P121	HELL 2A/B
1398	<b>AW 22</b>	TA73 P590	HELL 2A/B
2106	<b>AW 33</b>	TA68 P066	ROM 1B
2111A	<b>AW 34</b>	TA68 P077	HELL 2C/ROM 1A
2322	<b>AW 01</b>	TA70 P303	HELL 2C
2348	<b>AW 28</b>	TA72 P166	HELL 2A/B
2367	<b>AW 21</b>	TA73 P589	HELL 1/earlier
2415	<b>AW 31</b>	TA69 P320	ROM 1A
2463 and 2029	<b>AW 17</b>	TA70 P330	HELL 1, 2A
2539	<b>AW 06</b>	TA73 P003	HELL 2C+/ROM 1A
2564	<b>AW 04</b>	TA72 P311	HELL 1?
2927	<b>AW 10</b>	TA79 P194	ROM 1B
2932	<b>AW 36</b>	TA79 P192	HELL 1/2
3212B+	<b>AW 16</b>	TA68 P122	HELL 2A
3222A	<b>AW 05</b>	TA68 P125	HELL 1/2A

Loc. no.	Cat. no.	Inv. no.	Stratum
3400	<b>AW 26</b>	TA70 P053	MODERN
4110	<b>AW 39</b>	TA73 P090	ROM 1B/later contam.
4110	<b>AW 40</b>	TA73 P163	ROM 1B/later contam.
5419	<b>AW 35</b>	TA80 P260	HELL 2A
5502	<b>AW 14</b>	TA80 P012	ROM 1C/2
7136	<b>AW 30</b>	TA80 P258	ROM 1B
7637	<b>AW 23</b>	TA79 P089	HELL 1?
7723	<b>AW 09</b>	TA79 P035	HELL 1
7724	<b>AW 08</b>	TA79 P202	pre-HELL-ROM 1
7915	<b>AW 32</b>	TA80 P259	ROM 1B
7938.1	<b>AW 18</b>	TA81 P169	HELL 2A/B
8203	<b>AW 29</b>	TA79 P191	HELL 2A-ROM 1B/C
9122	<b>AW 02</b>	TA81 P121	HELL 2A-C
13102	<b>AW 19</b>	TA78 P158	00
13102	<b>AW 27</b>	TA78 P164	00
13106 and 13103	<b>AW 07</b>	TA79 P021	HELL 1A, HELL 1B
21206	<b>AW 38</b>	TA73 P161	HELL ?
balk trim (basket 9.1.133)	<b>AW 13</b>	TA81 P032	
illegible	<b>AW 15</b>	TA68 P344	

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## 8. MEDIEVAL CERAMICS

by Adrian J. Boas

This small corpus of medieval ceramics represents the last phase of occupation at the site. Having come from loci situated on the surface itself or directly below it, most of the material was very fragmentary and so of little typological value. However, there were some larger pieces and one intact vessel (a spherico-conical flask possibly used for storage of valuable liquid or as a “Greek fire” vessel). The identifiable sherds have proven, on the whole, to belong to a homogeneous assemblage of Abbasid and Fatimid material. These include buff ware water jugs, splash-glazed bowls, and glazed cooking pots. The one exception to this dating is a sgraffito-decorated bowl of eleventh- or twelfth-century date. There are no new types in this group, and the importance of it lies chiefly in that it provides a date range for the simple one-room structures and pits that comprise the last construction level on the tel.

In the catalogue that follows, dimensions are given in centimeters.

### COOKING VESSEL

There are a number of sherds of glazed cooking vessels, all globular cooking pots with rounded, outturned rims. These pots have colorless lead glaze on the bottom of the interior and traces of glaze on the exterior at shoulder level. Glazed cooking pots make their appearance possibly as early as the eighth century and continue through to the end of the Crusader and early Mamluk period (Thalmann 1978, fig. 32.1–7; Ben-Tor et al. 1979, 77, fig. 5.12; Loffreda 1983, 360–363, figs. 7, 9; Pringle 1985, 176, fig. 2.3–8). Later in the Mamluk and Ottoman periods, deep-glazed casseroles and hand-made cooking pots are more commonly found.

**MC 1** Globular cooking pot

Loc. 21300, basket 2.13.2

MODERN

Not illustrated

Rim, strap handle fragments, and non-joining body sherds. D. of rim 16. Fabric: 7.5R 4/6. Thinly patted ware. Traces of glaze on the interior of sherds from the lower part of the vessel and on the handle. Rounded rim.

### STORAGE JAR

**MC 2** Jar

Loc. 21300, basket 2.13.141

MODERN

Not illustrated

Three thickly potted, non-joining body sherds. Fabric: many small and large inclusions, mica and semi-angular voids. There are broad combed wavy lines on the exterior.

### BUFF WARE

These are vessels made from clay with a low iron content. They were used principally as water containers—jars and jugs. They appear in the Abbasid period and continue with many changes in form and in the ware itself into the

Ottoman period. Spouted water jugs with decorated strainers in the neck are one of the more typical forms. They were placed in windows in the sun so that the vessel would absorb the water, perspire, and cool the water within. The strainer would prevent insects or dust from falling into the water. For parallels of the vessels presented here, see Ben-Tor and Rosenthal 1978, fig. 7.4; Ben-Tor et al. 1979, fig. 6.7.

**MC 3**

Loc. 5201, basket 5.2.15  
Not illustrated

Rim and strainer. D. 9.7. Fabric: 2.SY8/2. Some large inclusions and angular voids. Strainer is pierced and knife cut.

**MC 4**

N/A, basket 7.4.75  
Not illustrated

Rim and neck. D. 5. Fabric: 7.5YR 8/2. There are some small voids.

**MC 5**

TA78 P65

Loc. 8309

Water jug  
ARAB/MODERN

Base to lower neck and handle stumps. Est. D. base 6. Fabric: 5Y 8/2. Wheel ridges on the interior and upper exterior.

**MC 6**

Loc. 21305, basket 2.13.113  
Not illustrated

Neck fragment. D. at broadest point 7. Fabric: greenish buff 5Y 8/3. Many angular voids. Uprturned ridge on exterior. See Hamat Gader.

Water jug  
ARAB**MC 7**

TA80 P2

Loc. 8309

Water jug  
ARAB/MODERN

String-cut disc base and lower half of the body to carination, and lower part of the upper half. D. base 6.7. Fabric: 5Y 8/3. Thinly potted, with voids and inclusions. The lower half of the body is knife pared. Above the carination are wheel marks. The base is somewhat convex.

**MC 8**

Loc. 2404/2418, 2416, baskets 2.4.193, 2.4.174  
Not illustrated

Water jug  
Balk trim,  
MODERN

Two joining sherds of a string-cut disc base. D. base 4.4. Fabric: 5Y 8/3. Many voids and inclusions. The interior has pronounced wheel marks.

**MC 9**

Loc. 2405, basket 2.4.45  
Not illustrated

Water jug  
ROM 1B+, possibly contam.

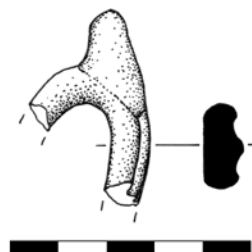
Disc base. D. base 8. Fabric: 5Y 8/3. The interior has wheel marks.

**MC 10**

N/A, basket 2.3.248

Water jug  
Cleaning

Handle with knob. Fabric: 5Y 8/3. Some voids. There are three ridges on the outer side. At the curve is a pointed knob.





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|--|--|--|--|
| <p><b>MC 11</b><br/>                 Loc. 21300, basket 2.13.105<br/>                 Not illustrated<br/>                 Body sherd. Fabric: 2.5Y 8/2. Thickly potted. Combed decoration on the exterior.</p>                | <p>Jar<br/>                 MODERN</p>       | <p><b>MC 13</b><br/>                 Loc. 21300, basket 2.13.106<br/>                 Not illustrated<br/>                 Body sherd. Fabric: 5Y 8/3. Some voids. There is part of an incised design on the exterior.</p> | <p>Water jug<br/>                 MODERN</p> |
| <p><b>MC 12</b><br/>                 Loc. 21300, basket 2.13.141<br/>                 Not illustrated<br/>                 Thin body sherd. Fabric: 5Y8/3. Some voids. There is part of an incised design on the exterior.</p> | <p>Water jug<br/>                 MODERN</p> |  |  |

FINE RED WARE

These are very fine, thinly potted vessels, usually jugs, and date to the tenth–eleventh centuries (see Boas 1992, fig. 71.9,10).

- |  |            |  |                 |
|--|------------|--|-----------------|
| <p><b>MC 14</b><br/>                 Locus lost, location lost<br/>                 Not illustrated<br/>                 Body sherds and handle and handle fragment. Fabric: 2.5YR 5/6. These may come from more than one vessel. One piece has part of an incised design on the exterior.</p> | <p>Jug</p> | <p><b>MC 15</b><br/>                 Locus lost, location lost<br/>                 Not illustrated<br/>                 Part of a strainer. Fabric: 2.5YR 5/6, 2.5YR 5/0. Very thinly potted. On the lower part are rows of small, pierced holes.</p> | <p>Strainer</p> |
|--|------------|--|-----------------|

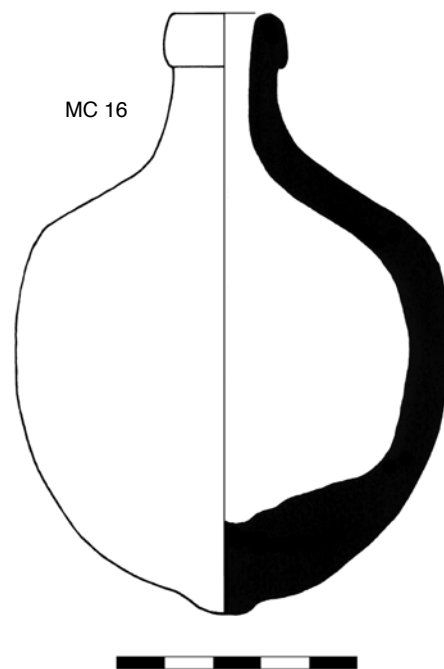
SPHERO-CONICAL VESSELS

These simple, undecorated flasks have been found in Abbasid contexts in several as yet unpublished sites. Two examples on display at the Rockefeller Museum in Jerusalem come from Khirbet el-Mefjar (Whitcomb 1978).

- |   |   |              |
|---|---|--------------|
| <p><b>MC 16</b><br/>                 Loc. 8309<br/>                 Small button base. Globular bottle with carinated shoulder sloping into short, tapering neck and outward thickened rim.</p> | <p>TA80 P6<br/>                 ARAB/MODERN</p> | <p>Flask</p> |
|---|---|--------------|

BOWLS

- |   |   |
|---|---|
| <p><b>MC 17</b><br/>                 Loc. 2500, basket 2.5.4<br/>                 Not illustrated<br/>                 “S”-shaped rim and upper body. D. 24. Fabric: 7.5YR 7/4. Cream-colored glaze on the interior, stained with yellow and green. Traces of slip on the exterior.</p>         | <p>Bowl<br/>                 MODERN</p> |
| <p><b>MC 18</b><br/>                 Loc. 1306, basket 1.3.29<br/>                 Not illustrated<br/>                 Rim and upper part of a carinated bowl. D. 13.5. Fabric: 7.5YR 7/4. White slip on the interior and exterior. A yellow glaze covers the interior and upper exterior.</p> | <p>Bowl<br/>                 ARAB 2</p> |



**MC 19**

Loc. 2500, basket 2.5.168  
Not illustrated

Ring base. D. of base 6. Fabric: 5YR 7/4. Slip over the interior and exterior. On the interior is green glaze. Traces of glaze on the exterior.

**MC 20**

TA78 P80

Loc. 7302, 7414

Rim and most of the wall. D. 28. Fabric: Pale yellow glaze stained with green, yellow, and manganese and decorated with sgraffito. The design is not clear. On the exterior narrow green stripes run from the rim to the base, dividing the area into segments that are alternately glazed yellow and cream.

**MC 21**

TA79 P84a-d

Loc. 7302, 7306

Non-joining base fragments, possibly of more than one bowl.

Bowl  
MODERN

D. base 14. Fabric: pinkish buff ware 7.5YR 7/6. The base has a sloping, square profile. These fragments all share the same design.

**MC 22**

TA80 P10

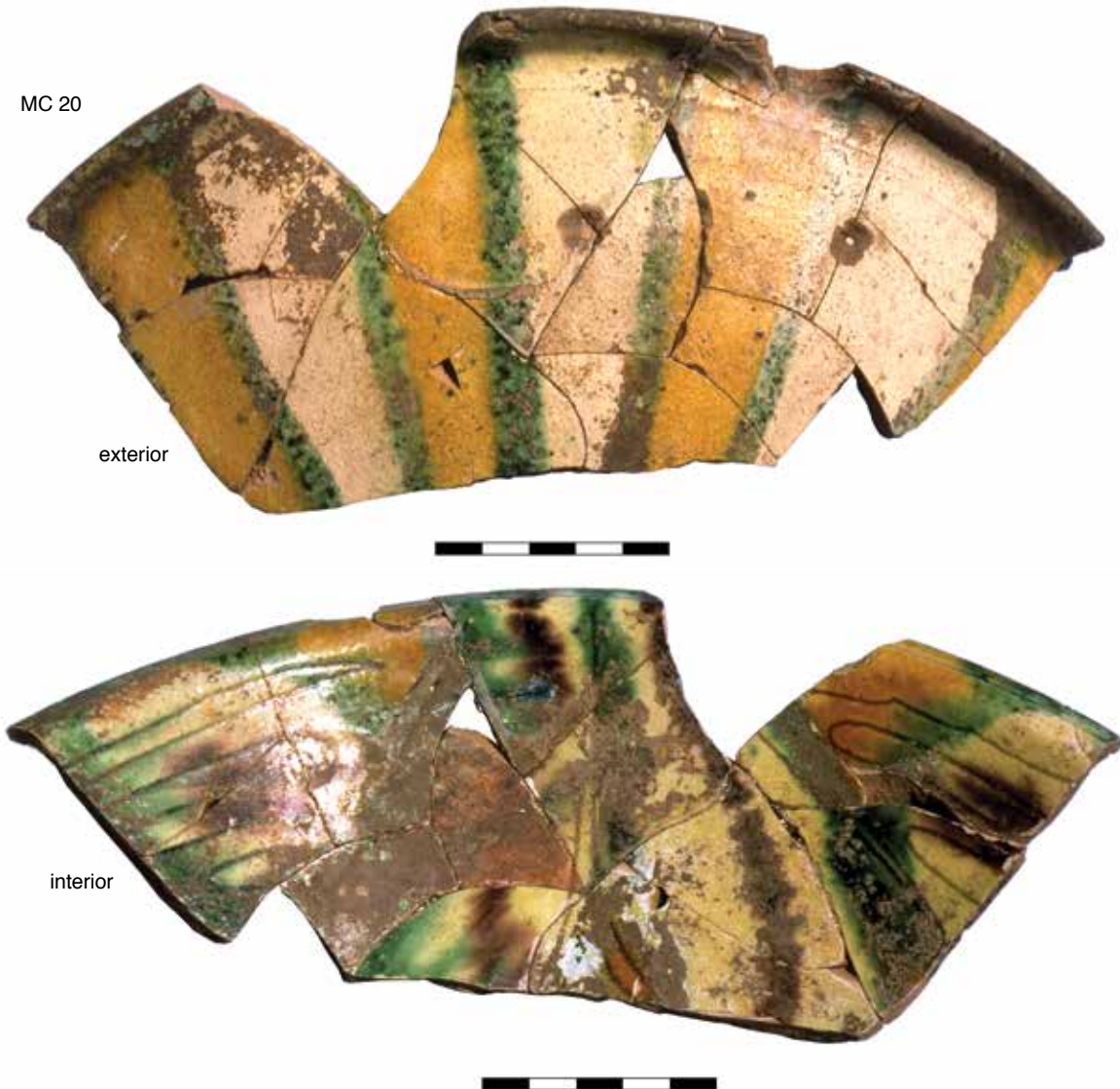
Loc. 7821

Bowl  
ARAB

Rim and upper wall of hemispherical bowl in bichrome sgraffito ware. D. 23. Fabric: 10R 5/6. Very fine inclusions and some voids. The interior and exterior are covered with slip. On the interior is a pale yellow glaze with a splash of green glaze that also runs down the exterior. The interior has a champlévé design, incised and gouged, contained within two parallel incised lines below the rim. On the exterior 6 cm below the rim there is a broad wheel mark. The exterior was knife pared. These have been dated to the eleventh century from a shipwreck find from Serçe Limani on the southern Turkish coast (Jenkins 1992). This vessel is the latest piece in this assemblage.

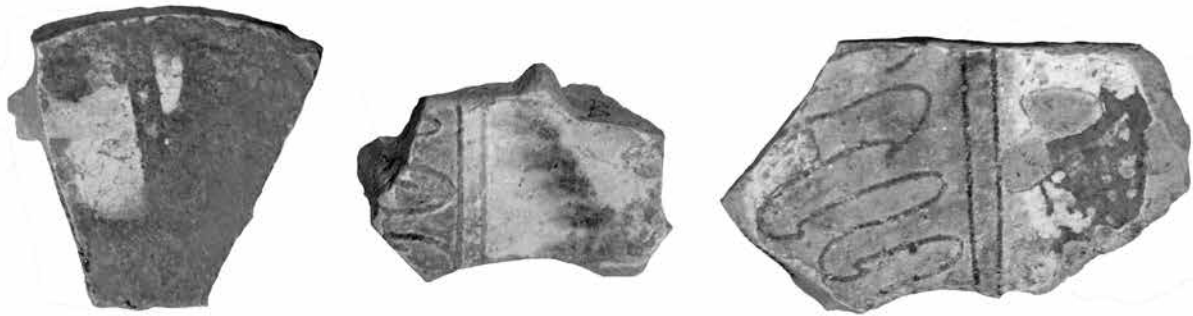
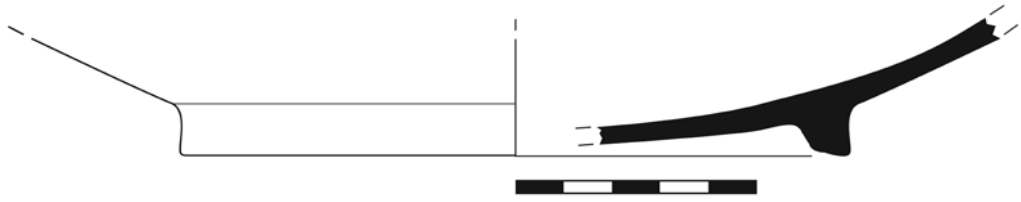
MC 20

exterior

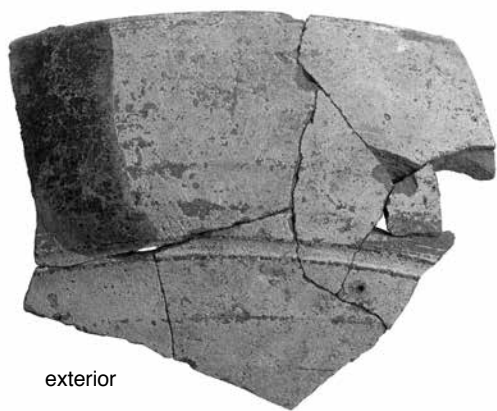
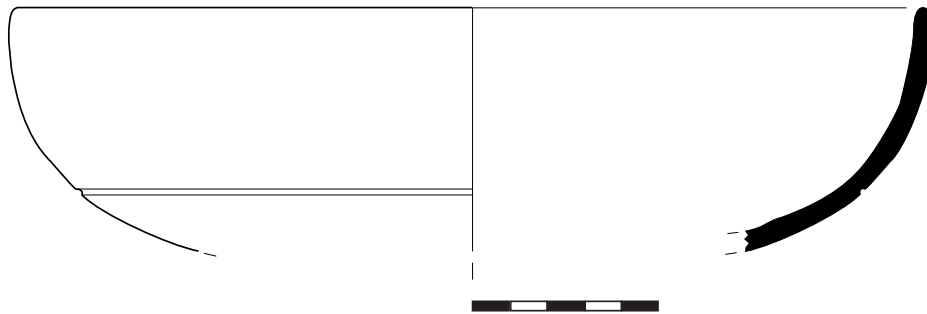


interior

MC 21



MC 22



exterior



interior

## CONTEXT CONCORDANCE

Loc. no.	Cat. no.	Inv. no.	Stratum
1306	MC018	basket 1.3.29	ARAB 2
2404, 2418, 2416	MC008	basket 2.4.193, 2.4.174	MODERN
2405	MC009	basket 2.4.45	
2500	MC017	basket 2.4.5	MODERN
2500	MC019	basket 2.5.168	
5201	MC003	basket 5.2.15	ARAB/MODERN
7302, 7306	MC021	TA79 P084A-D	MODERN and ARAB/MODERN
7302, 7414	MC020	TA78 P080	MODERN/ARAB
7821	MC022	TA80 P10	ARAB
8309	MC005	TA78 P065	ARAB/MODERN
8309	MC007	TA80 P002	ARAB/MODERN
8309	MC016	TA80 P006	ARAB/MODERN
21300	MC001	basket 2.13.2	MODERN
21300	MC002	basket 2.13.141	MODERN
21300	MC011	basket 2.13.105	
21300	MC012	basket 2.13.141	
21300	MC013	basket 2.13.106	
21305	MC006	basket 2.13.113	ARAB
	MC004	basket 7.4.75	balk trim
	MC010	basket 2.3.248	cleaning
	MC014		
	MC015		

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