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Special Issue:

CYPRUS, THE SEA PEOPLES AND THE EASTERN MEDITERRANEAN: REGIONAL PERSPECTIVES OF CONTINUITY AND CHANGE

Guest Editor: Timothy P. Harrison

CONTENTS

Northern Levantine Perspectives

Southern Levantine Perspectives.

LIST OF ABBREVIATIONS

AASOR	*Annual of the American Schools of Oriental Research*
ABSA	*Annual of the British School at Athens*
AJA	*American Journal of Archaeology*
AJAH	*American Journal of Ancient History*
Anat. St.	*Anatolian Studies*
ANESS	*Ancient Near Eastern Supplement Series*
ARE	*Ancient Records of Egypt*
ASAE	*Annales du Service des Antiquités de l'Égypte*
ASOR	*American Schools of Oriental Research*
BAR	*British Archaeological Reports*
BA	*Biblical Archaeologist*
BAR	*Biblical Archaeology Review*
BASOR	*Bulletin of the American Schools of Oriental Research*
BN	*Biblische Notizen*
BSAA	*British School of Archaeology at Athens*
CAD	*Chicago Assyrian Dictionary*
CMAO	*Contributi e materiali di archeologia orientale*
EI	*Eretz Israel*
ELES	*Ekron Limited Edition Series*
FS Otten	*Festschrift Otten (Documenten asia minoris antiquae: Festschrift für Heinrich Otten zum 75. Geburtstag)*
IAA	*Israel Antiquities Authority*
IEJ	*Israel Exploration Journal*
IJZ	*Israel Journal of Zoology*
JANES	*Journal of the Ancient Near Eastern Society*
JAS	*Journal of Archaeological Science*
JBL	*Journal of Biblical Literature*
JEA	*Journal of Egyptian Archaeology*
JMA	*Journal of Mediterranean Archaeology*
JNES	*Journal of Near Eastern Studies*
JSOT	*Journal for the Study of the Old Testament*
JSSEA	*Journal of the Society for the Study of Egyptian Antiquities*
KAI	*Kanaanäische und Aramäische Inschriften*
Klio	*Beiträge zur Alten Geschichte*
KTU	*Die keilalphabetischen Texts aus Ugarit*

KUB	*Keilschrifturkunden aus Boghazköi*
LA	*London Archaeologist*
NEA	*Near Eastern Archaeology*
NEAEHL	*New Encyclopedia of Archaeological Excavations in the Holy Land*
OJA	*Oxford Journal of Archaeology*
OLA	*Orientalia Lovaniensia Analecta*
PEQ	*Palestine Exploration Quarterly*
QDAP	*Quarterly of the Department of Antiquities of Palestine*
RAI	*Rencontre Assyriologique Internationale*
RB	*Revue Biblique*
RDAC	*Report of the Department of Antiquities, Cyprus*
RIMA	*Royal Inscriptions of Mesopotamia Assyrian Periods*
SAA	*State Archives of Assyria*
SAOC	*Studies in Ancient Oriental Civilization*
SBLMS	*Society of Biblical Literature Monograph Series*
SIMA	*Studies in Mediterranean Archaeology*
TA	*Tel Aviv*
UF	*Ugarit Forschungen*
Urk	*Urkunden des aegyptischen Altertums*
WA	*World Archaeology*

Timothy P. Harrison

INTRODUCTION

Recent scholarship has begun to emphasize the formative role Cyprus and the Aegean world played in the development of the small territorial states that emerged in the eastern Mediterranean during the early centuries of the first millennium BCE. Central to this discussion has been the contribution of the Sea Peoples, who conveniently have assumed a role as the 'Vikings' of the Mediterranean world, responsible for destroying the venerable Bronze Age civilizations of the ancient Near East, and ushering the region into a historical 'Dark Age' during the ensuing centuries of the Early Iron Age (ca. 1200-900 BCE).

Ancient textual sources do indeed portray a turbulent world at the end of the thirteenth century, marking the transition from the Late Bronze to Early Iron Ages that coincided with the collapse of the centralized state bureaucracies of the preceding era, with their extensive commercial networks and rich cuneiform scribal traditions. However, increasingly, syntheses of the archaeological record have begun to note the evidence for cultural continuity, and to articulate a more gradual process of consolidation and transformation during this period, characterized by the emergence of regionalized settlement networks and the formation of small, ethnically defined territorial states. Concurrently, and perhaps ironically, excavations are uncovering an ever expanding material cultural assemblage with strong links to the Aegean, the presumed homeland of the Sea Peoples. Whether these remains are the cultural signature of a distinctive socio-ethnic group, of multiple groups, or should be seen as the by-product of expanding inter-regional commercial activity during this period, predictably, has become the focus of intensified scholarly debate.

However, while the Sea Peoples are increasingly acknowledged to have played an important role in the development of Early Iron Age society, particularly in the context of the biblical Philistines, the archaeological evidence for an expanding presence remains surprisingly under-explored. To date, Aegean-style pottery (specifically Mycenaean IIIC:1) has been reported at a growing number of Early Iron Age sites, mostly in the southern Levant, but also increasingly at northern Levantine and Cilician/southern Anatolian sites. It seems likely, therefore, that the evidence of contact with the Aegean world during this formative period remains under-represented in the archaeological record, and was considerably more widespread than has been recognized thus far.

The literary accounts of the Sea Peoples, which include the annals (and wall reliefs) of New Kingdom Egyptian pharaohs, the biblical narratives of early Israel, particularly as portrayed in the Book of Judges, and even the Homeric epics of classical Greece, also convey

important historical insights. While historians have questioned the veracity of these accounts, read broadly, they clearly constitute the formative expressions of corporate self identity, and therefore provide revealing glimpses of the competing cultural and ethnic identities in play during this dynamic era.

Particularly intriguing has been the suggested possibility that there were distinct cultural zones distributed along the eastern Mediterranean seaboard, and that these might reflect the territorial settlement of specific sub-groups within the broader Sea Peoples cultural movement. Concerted archaeological investigations along the southern coast of Israel, for example, have outlined the distinctive material cultural signature of one such group, typically identified with the Peleset, and it is now widely accepted that this group should be equated with the biblical Philistines. Until recently, however, very little empirical evidence could be linked confidently to other groups named in the ancient sources, such as the Tjekker, the Sherden, or the Denyen, despite the fact these groups are often associated with specific regions of the eastern Mediterranean (the Tjekker with the central Levantine coast, the Sherden with Cyprus, and the Denyen with Cilicia and the northern Levant). The expanding scholarly interest in this period now renders a broader, inter-regional approach to the study of the Sea Peoples both possible and timely.

As a result, in 2006, an international conference was convened at the University of Toronto on the subject of "Cyprus, the Sea Peoples and the Eastern Mediterranean." The primary aims of the conference were to explore the role of the Sea Peoples during this formative period from the perspectives of the principal cultural traditions and regions involved, and to better articulate the range and diversity of their material cultural expression in the archaeological records of these regions. It was also hoped that such a gathering might help transcend the geographical and political barriers that have often impeded inter-regional collaboration in the eastern Mediterranean, while identifying new avenues and opportunities for interdisciplinary research.

Over the course of the day-long event, sixteen scholars presented papers organized around four thematic sessions: (1) Cyprus and the Aegean Connection, (2) Textual and Iconographic Perspectives, (3) Southern Anatolian and Northern Levantine Perspectives, and (4) The Southern Levantine Perspective. These conference presentations, and ensuing discussions, have provided the primary content for the edited papers that appear in this volume. Several papers submitted following the conference have also been included.

As the papers in this volume demonstrate, the conference identified a number of important trends, or themes. In particular, they give witness to the rapidly expanding evidentiary knowledge base on this subject, and to the surprisingly widespread distribution of Aegean-style material culture throughout the eastern Mediterranean. As several of the authors in this volume report, this distinctive cultural expression is well-represented not only on Cyprus and in the southern Levant, but in Cilicia and the northern and central Levant as well. At the same time, the assembled cultural record betrays a remarkable

diversity and significant regional variation, suggestive of a considerably more complex and heterogeneous developmental trajectory than most have assumed. The result has been a growing disillusionment with the mono-causal explanations that have long held sway, and a breakdown, or a 'fragmenting', of scholarly consensus, to invoke the lead title of Ayelet Gilboa's perceptive paper.

In light of this, as several authors emphasize, future research efforts will need to focus on developing more detailed, or nuanced, 'local histories', if we are to achieve a deeper understanding of the complex socio-cultural experience of this era. To accomplish this task, excavations will need to continue developing detailed stratigraphic sequences and greater chronometric precision. As several authors argue, field research strategies must also incorporate a multi-scalar approach to the archaeological record, while employing multi-disciplinary analytical methods and techniques that more thoroughly exploit the rich and diverse archaeological evidence available. Clearly, there is considerable research still to be done, and many exciting discoveries still to be made. It is hoped this volume represents a modest step forward in that endeavor.

The conference was hosted by St. Michael's College of the University of Toronto, and sponsored by the following institutions and organizations: the Canadian Institute for Mediterranean Studies, the Ministry of Education and Culture of the Republic of Cyprus, the Consulate of Israel and the United Jewish Agency, the Department of Classics and Ancient Mediterranean Studies at Pennsylvania State University, and the Royal Ontario Museum. Major funding was provided by the Connaught Fund of the University of Toronto and the Social Sciences and Humanities Research Council of Canada. I wish to acknowledge and thank each of these sponsors and funding agencies. The conference would not have been a success without their support, and the encouragement of my colleagues on the Board of the Canadian Institute for Mediterranean Studies.

I would also like to thank the anonymous reviewers who generously read each paper and provided constructive critical feedback. This volume has certainly benefited from their input, though they do not bear any responsibility for whatever errors might remain. The production of this volume has also benefited from the help of numerous individuals. In particular, I wish to acknowledge the dedicated editorial assistance of Stanley Klassen and Heather Snow. Their contribution has been indispensable. Anthony Percival and Jorge Guerrero were instrumental during the early stages of the editorial process, while Stephen Batiuk and Taber James provided invaluable assistance formatting images and producing page layouts. To each I owe thanks. Finally, I wish to voice appreciation for my colleague John S. Holladay, Jr., and his unflagging support, patient ear, and good counsel throughout the production of this volume. I will be forever grateful.

Donald Redford

THE *TJEKER*

In recent studies on the Sea Peoples, a consensus seems to be emerging that the ethnonym known as the *Sì - k3 - r* is to be identified with the Σικελοί (Albright 1934: 65; Rainey 1982: 134; Edel 1984: 7; Görg 1985: 7–8; Singer 1988: 2000, to name but a few). There are, however, counter-arguments yet to be heard. First, to introduce *Sicels* in the 12th century BCE is to invoke an ethnic term which in fact was not to appear for six centuries. While this is not, of itself, a difficulty, and in spite of the Mycenaean remains on the island which show that it was within the penumbra of the Aegean (Boardman 1980: 189; Mountjoy 1993: 173), there is no evidence that *Sicels* were then in residence. The strongest tradition would bring them from Italy, not the east (Hellanicus *FgrH* I F 79b; Thucydides vi.25; Cornell [1995: 38]; Lehman [1979: 493–494] and Schachermeyer [1982: 39–40] favor the northern Adriatic as the place of origin). In the one region known to have been settled by *Tjeker*, viz. the coastal plain north of Philistia, there is nothing remotely "Sicel", if this term is taken in its classical connotation: all the foundation legends and cultural connections point elsewhere.

While the above argument, ingenious though it may be, is undoubtedly spurious, a second objection must be considered. The standard spelling in the Egyptian transcription employing the group *-r3-* suggests an /r/ in the original word, not an /l/ (Hoch 1994: 509). Egyptian scribes from the earliest times faced a problem in rendering liquids in foreign tongues, often employing *alif* in the Old Kingdom for the lateral, "dark" /l/. In the imperial chancery of the New Kingdom, *n + r* came increasingly to be used to render an emphatic Semitic (or Egyptian dialectic) /l/ (Schneider 1992: 380; Hoch 1994: 407, 432). But from the 14th century to the end of the New Kingdom, scribal tradition faced a new challenge in rendering *Aegean* or *Anatolian* words from non-Semitic roots. One tradition suggests an attempt to reserve *- ru -* for a strong /l/ (cf. the transcriptions of Lukka and Shekelesh), but there are plenty of exceptions. In fact, the regular elision of *r* and *l* in word- or syllable-final position in Linear B (Hooker 1980: 49; Chadwick 1987: 26) suggests that the Egyptian scribes were faced with two weak sounds which they had difficulty in distinguishing. That being the case, the consistent spelling with *- r3 -* in the Medinet Habu texts (Gauthier 1929: VI, 69; Wenamun follows a different orthographic tradition) could as easily, and arguably more cogently, represent an original *r* than an *l*.

Finally, there is the rendering of the initial syllable by *sì*. In Late Egyptian syllabic orthography, the scribal tradition employed the unvoiced palatal plosive /č/ (< *t'*: Vergote 1972: 99; Hoch 1994: 407), most often in the group *sì* (Helck, 1971: 563-64),[1] to render West

[1] Note, however, that because of internal phonetic developments, /*t'*/ is frequently written for /*t*/ in Late Egyptian (Junge 1996: 35).

Semitic /s/ (Burchardt 1909–10: sec. 138, 142; Edel 1966: 82–3; Hoch 1994: 436; Loprieno 1995: 29). While this mechanism is well attested in Egyptian group writing (in fact, as late as the 8th century BCE; see Edwards 1960: 3, n. 21; Grimal 1981: 60, n. 133), this is not the whole story. The Egyptian graphemes V 14 / G 47 (Gardiner 1957: 523, 473) share, along with I 10 (Gardiner 1957: 476), the task of rendering Semitic /ḏ/ and occasionally /ṯ/ and /ḍ/ (Garr 1985: 27–28). It has been suggested that the sound conveyed by *samekh* was an affricative *ts* (Bromhard 1988: 123–25). However, it could as easily have been a frictionless continuant in which sibilance had been lessened, rather like the occasional pronunciation of intervocalic and word-final *s* in modern Greek. By the Iron Age, when *samekh* renders *s/š* in Egyptian, this was no longer true (Bing 1985: 118, n. 54).

At this juncture, some might find it tempting to cite an entry in Thutmose III's great Syrian list of place names (*Urk.* IV, 788, no. 136; see Jirku 1937: 19, n. 3) as another attestation of the Tjeker, and one which militates in favor of a Near Eastern locale and derivation. However, while the spelling is similar (*T3-k3-rw* or *sì-ka-ru*), the argument suffers from an *embarras de richesse*, for the form appears not once, but no less than three times under slightly different spellings: *t3-gr-rw* (*sì-g-r-ru*: *Urk.* IV, 789, no. 161), *iw t3-k-r3* (*iyē - sì-k-ra/l*: *Urk.* IV, 790, no. 197) and *d3 t3-k3-r3* (*zu sì-ku-ra/l*: *Urk.* IV, 792, no. 271). The repetition makes it virtually certain that we are not dealing with a toponym, much less an ethnic term, but rather a generic noun for a *land formation*. Thutmose III's lists, and perhaps some of the lists of Ramesses II and III, are itineraries, in which landmarks such as springs (Thutmose III, nos. 5, 46, 86, 95, and 113), water courses (Thutmose III nos. 43, 90, 99, and 151), mountains or heights (Thutmose III, nos. 77, 85, and 272) are as necessary as settlement names (Redford 1982). *T3-k3-r* in the great Syrian list thus very probably has nothing to do with the *Tjeker* of the Sea Peoples coalition, but is a common noun derived from the Semitic SKR/SGR, "to block up, dam (a canal or water course)" (Murtonen 1988: 300; *CAD* 15: 210ff), and probably should be translated "dam," or "dyke." Significantly, all four examples are to be found in contexts suggesting the presence of water: no. 136 is followed by *T3-nr-t* (Akk. *Silittu*), "branching off of a canal" (*CAD* 15: 263), no. 161 is preceded by *Š3-wi-r3-n-t*, (E)shawa-rnt, "far side of the Orontes" (*CAD* 4: 352), no. 197 (read "the island/bank of *s'*-) is followed by *Abattu(m)*, the city at the crossing of the Euphrates between Emar and Tuttul (Heimpel 2003: 605), and no. 271 (read *zu sekēri*, "the spoil heap of the dam") is immediately followed by Carchemish.

There is no existing textual evidence, therefore, to seek the origins of the *Tjeker* in the Near East, and the likelihood remains that, in concert with most if not all of the members of the Sea Peoples coalition, they hailed from Western Anatolia or the Aegean. For terms in Hittite, Hurrian and Luwian, the *t3-* group was used by Egyptian scribes to convey the affricative double sound *t* + *s* (written with *z* in cuneiform), not *š* / *s* (see Albright 1934: 33, 64; Friedrich 1960: 32; Helck 1971: 280; Edel 1973: 63–64, 66–67; Laroche 1966: no. 1583; Held et al. 1987: 7–8; Ruijgh 1998: 664, 666). Since some Anatolian dialects

(e.g. Lydian) were "intolerant of double palatal clusters" (Kearns 1994: 55), and - *ts* - was rendered in Greek by /t/ (Kearns 1994: 44), we ought to look for an equivalent *T* (< ts) - *k* - *r* in our search for an eponym, ethnic group or region. Any connection between the *Tjeker* and the *Sicels*, therefore, appears to be unlikely, and the *Šikalayu* of Ugarit might more convincingly be equated with the *Shekelesh*.

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Baruch Halpern

THE SEA-PEOPLES AND IDENTITY

Attention to the Peoples of the Sea tends to focus on the Philistines. Egyptian sources imply that these caused the collapse of empire in Canaan. More explicitly, they imply the overall onslaught precipitated the end of the Hittite empire and kingdoms, such as those of Ugarit and Alashiya, the kingdom at or near the site of Alassa (Biblical Elisha'), which commanded the territory between the mountain copper mines and the coast, especially at the port of Kourion, in the center of southern Cyprus.[1] It is also often suggested that Sea-People movements caused the change from the Late Bronze Age city-state palace-temple economy to the localized, almost autarkic, economies that predominated in the Iron I period.

The Sea Peoples fall into two groups. Ramesses III claims that the later group (see Table 1) dwelled on islands or coastlands. His Weshesh (*w'-š'-š'*) are enigmatic. The Philistines (*pw-r'-s'-ṯ*) settled the southern coastland of Canaan, giving their name to it (Philistia, Biblical Pleshet, Assyrian Palashtu, Greek Palestina) no later than the 11th century BCE (Exodus 15) (on the Tjekker [*ṯ'-k-k'-r'*] and Shekelesh [*š'-k-rw-š'*], see below). The Denyen (*d-n-y-n*) are the Danuna or Danaoi, later associated with the plain of Argos; the latter term denotes Greeks in the Iron Age. The term also identified Cilician elements at Amarna. In a letter responding in part to the Pharaoh's request for intelligence on Canaan, Abimilki of Tyre relates that "the king of (the land) Danuna is dead" and proceeds to relate news of a fire at Ugarit, the accession of Etakkama at Qadesh, and an attack by Aziru on Biryawaza, presumably in the northern hinterland of Damascus (EA 151: 49–68); the order of the report runs from north to south, placing Danuna north of Ugarit. The term recurs for the same area in the 8th (probably reaching back into the 9th) and later centuries, denoting the population of the Plain of Adana, long ruled from Que in the west.[2] Indeed, one possible origin for the name of Cyprus in neo-Assyrian texts, Iadnana, is "the isle of the Danuna". In any case, as the Danuna are Hittite vassals, Cilicia was their Late Bronze Age home.

The earlier group included the Sherden (*š'-r'-d-n, š'-r'-d-n-n'*), who appear at Amarna (EA 81:16; 122:35; 123:15, *širdanu*), and thereafter

[1] Note Weippert (1971: 12) on the forms of the name, and on the equation of Apollo of Alashiya with Phoenician Resheph *'lyts*. For the identification of Alashiya at Amarna with Cyprus, see now Goren et al. (2004: 48–75).

[2] *Dnn* in the Karatepe inscription of Azitawadd, KAI 26 (probably from the mid-8th century). Danaoi appears in Iliad 1.42, among other passages. For an (improbable) identification of Tanaya in the annals of Thutmosis III with the Argive plain, see Helck (1969: 73).

as mercenaries under Ramesses II. Under Merneptah, these and other voyagers menaced Egypt (see Table 1). Merneptah reports that the Sherden and Shekelesh joined Libyan elements along with the Teresh (*tw-ry-š'*, often identified with the Tiras of Genesis 10:2, near Tabal, Phrygia and Ionia, so, somewhere in the vicinity of Anatolia), Lukku (*rw-kw*, Lycians) and Ekewesh (*'-k'-w'-š'*, *'-q'-y-w'-š'*, usually represented Ekwesh). He relates that the Shekelesh, the Ekewesh and perhaps other members of the group were "of the countries of the sea." These same elements "had no foreskins."[3]

Table 1. Sea People Opponents of Merneptah and Ramesses III.

Merneptah	**Ramesses III**
Sherden	Peleset
Shekelesh	Tjekker
Teresh	Weshesh
Lukku	Shekelesh
Ekewesh	Denyen

The Wen Amun story of the 11th century BCE attests a Tjekker presence at Dor. The 11th-century Onomasticon of Amenope mentions the Sherden, Tjekker and Philistines in Canaan, in the 11th century; but between the "Philistine" towns and the mention of the Sea Peoples in question, three other entities are named, all presumably to the north of Philistia (Gardiner 1947: 47, 192).[4] While archaeologists have attempted to locate Sherden colonies, the evidence does not sustain the inference.[5] The other groups did not apparently colonize Canaan, though some may have done so in the south only to be conquered by Philistines in the 12th and 11th centuries.

The "peoples of the sea", or the Sea Peoples, were Anatolian,

[3] That is, it was not possible to collect their uncircumcised members as trophies, as Merneptah did with the Libyans and as David is later said to have done with the Philistines. See ARE 3, 579, 588.

[4] Note that Sherden-like horned helmets have also been found along the northern shore of the Black Sea and on statuettes in Sardinia, but that these lack the central disks, and may reflect coincidence, appropriation, trade or migration rather than indicate a place of origin. The iconographic connections of the horns and disk would suggest devotion to a lunar god; see Bernett and Keel (1998).

[5] Excavators assume based on the Onomasticon that the Sherden refounded Akko around 1200 BCE. For Akko's connections with the Sea Peoples, see Artzy (1987: 75–84), who argues that the ships depicted on a small altar there resemble those in the reliefs of Ramses III. The order of the Onomasticon is not strictly geographical, in any case. It enumerates the ethnic groups separately from the Philistine settlements. An excavator of Tell es-Sa'idiyeh, in central Transjordan, has proposed the presence of Sherden there (see Tubb 2000: 181–96), but this thesis is no better founded than the other.

Dodekanese and Cretan (see Singer 1988: 239–50).[6] A. Killebrew (1998) has shown that Philistine pottery production mimics Anatolian and Cypriot techniques. Later biblical evidence associates the Philistines with Crete, possibly based on legends about Teuker's connection with that island. But did the Sea Peoples cause Hatti's collapse? Did Myceneans sack Troy, or were they identified later as its attackers? The king of Ugarit reports that "enemy" ships have ravaged his coastlands and asks that the king of Alashiya signal information about any further ships (cf. *Ugaritica V*: 87–88 [RS 20.238], and 85–86 [RSL 1]).[7] However, the raiding vessels number only seven.

The Medinet Habu Account

Ramesses III encountered Philistines, Tjekker,[8] Shekelesh, Denyen and Weshesh in the 1170s. He met them on his land and sea borders and settled the prisoners he took in Egyptian strongholds. Ramesses implies that they struck inland as far as Carchemish, where there is no trace of them (see especially Güterbock 1992: 53–55; also Hawkins 1988: 99–108).

> No one stood before them. From Hatti, Qode (Cilicia), Carchemish (on the Euphrates), Arzawa (Lycia, in southwestern Turkey), Alashiya (on Cyprus) they were cut off.... (ARE 4.64)[9]

Again:

> [They pitched] a camp in the land of Amurru (a Hittite vassal state in the northern Lebanon). They devastated its people and land. (ARE 3.580)

So, the invaders struck the Lebanese coast north of Byblos. Again, Ramesses' Asiatic enemies were unable to withstand the onslaught. The action has the earmarks of vassals turning on the Hittites by striking at their periphery. Merneptah blamed the Hittites, in part, for the trouble.

Ramesses campaigns in Libya when the Philistines and Tjekker devastated Amurru. Amurru, he claims, appealed to him for aid (ARE 4.39, 44). The Philistines and Tjekker established themselves in Canaan. Is Amurru just the coast of Canaan here (see below)?

[6] For the view that at least some of the Sea Peoples stemmed from central Europe, see Wachsman (2000: 122). As this conclusion is based on the appearance of some bird mastheads on the stern of some representations of Sea People vessels, however, it is not clear that it holds.

[7] Alashiya was in a real or honorific position of seniority to Ugarit, and possibly enjoyed some sort of sovereignty over it.

[8] For the foundation of Salamis on Cyprus, by Teuker, brother of Ajax, see Pausanias 2.29.4; 8.15.6; Apollodorus 3.10.8; 3.12.7. For Teukrians settling in the Troad, in northwestern Anatolia, with an eponymous king, Teuker, see Apollodorus 3.12.1, with an etiology of the name Dardanelles. The relation of the Dardanoi to the Trojan War is an interesting teaser; compare with the Biblical name, Dedan.

[9] Breasted, however, read Arwad for Arzawa. Kitchen (2002: 120) treats Hatti and Qode as a single compound term referring to Cilicia.

Ramesses, however, does not stipulate where he won the battle of year eight. He fortified his territory in Asia, and disposed naval forces in harbors, Asiatic or Egyptian, but he suggests the fight was over Asian harbors. On came the enemy, and then comes Ramesses's claim of victory:

> As to those who reached my border, their seed is not (ARE 4.65–66).

Is this a claim that he repulsed an attack on the Delta? Literally, he claims only to have killed some of those whom he met.

Other reliefs leave no doubt that Ramesses did set out for Asia. In one text, he claims he entrapped the enemy into naval encounters on Egypt's border.[10] Yet the enemy also arrives by ox-cart, in a full-scale population migration. This land battle might have taken place in the southernmost reaches of the Asian empire, and Ramesses can be claiming victory on the basis of having kept the enemy out of Egypt proper.

This reading assumes royal autobiography is constant in the ancient Near East (for the principles, see Halpern 2001: 107–226). Royal inscriptions walk a line between truth and risibility. If a text is truthful, then the negative side of the king's adventures lies exposed. If the text is untruthful, it is risible. Ancient thrones were not so immune from smoldering resentment as to permit extensive scoffing. So scribes paint the king's achievements as epic. No king credits allies with helping him. And the infliction of casualties is the equivalent of territorial gain. Too, one omits detail, such as the location of a battle when that would indicate a loss of territory, or domestic casualties. This is the Tiglath-Pileser principle. Any incursion is tantamount to the conquest of a territory: landing on Cyprus is taking the entire island; burning a shepherd's hut is the destruction of an entire town. Some scholars, for example, have mocked Hammurabi's claim that he destroyed Mari three times during his reign. But kings use terms meaning "to slaughter", when claiming that they fought, and this language should not be understood simplistically as a claim of victory.

Second, if the king does not take credit for an accomplishment, he cannot take credit. The principle of omission is central to understanding royal literature. Sherlock Holmes, in "The Adventure of the Silver Blaize," famously commended to a constable's attention "the curious incident of the dog in the night-time." The constable protested, "But the dog did nothing in the night-time." Holmes's reply: "That was the curious incident." There are many dogs in the night-time in the royal inscriptions of the ancient Near East.

So, Ramesses claims to have defended and even extended Egypt's borders. What does this mean? Ramesses claims that he killed Denyen, Tjekker and Philistines. He adds, "The Sherden and the Weshesh of the sea were made as those that are not, captured together, brought captive to Egypt...I settled them in fortresses..." (ARE 4.405). Since Ramesses had Sherden mercenaries in his army, who are depicted

[10] See generally ARE 4.72–75; for the ambush in Egyptian territory, ARE 4.77. Against a naval battle in the Delta, see Singer (1985: 109–22, especially 109 n. 1).

as his troops in the Libyan campaign of Year Five, he could claim to have them in custody. He may have taken Weshesh captive in Year 5 or in Year 8, but he took no captives from among the Tjekker and Philistines.

By Year 5, Ramesses reports that Philistines and Tjekker were devastating "northern lands," probably southern Canaan. Those lands (Amurru?) implored him for aid (ARE 4.44–45).[11] The Year 8 campaign, against Canaan, is his response to the aggression. And yet, except in reliefs, he takes no prisoners from the groups that seized the southern coast (ARE 4.82–83, with Denyen and Philistines respectively). Ramesses lost the coast: Dor to the Tjekker, and Gaza, Ashkelon and Ashdod to the Philistines (with Denyen integrated among them?), as confirmed by the absence of 20th Dynasty artifacts from coastal contexts.

In Year 8, Ramesses impaled Philistines "in their towns", so in Canaan (ARE 4.71). In Year 11, he implies that he reached Qadesh (on the problem of dating this foray, see O'Connor 2000: 88). More likely, he faced opponents coming from Syria, who were on campaign, elsewhere, to the south. He takes one Tjekker (calling him a chieftain), a Sherden, a Teresh and a Philistine, and a Bedouin (or pastoralist) (ARE 4.129). The list reflects the earlier influx of Tjekker, Philistines and Sherden.

So the Sea Peoples were ensconced by Year 11, and probably earlier. Possibly, Ramesses's Sea-People camp in "Amurru" refers to the arrival of the Philistines and Tjekker (for the contrarian view, see Finkelstein and Silberman 2001, with bibliography). In the north, Hatti survived only at Carchemish. Mesopotamia entered a prolonged recession. People with Mycenaean pottery took over western Anatolia, Cilicia and northern Syria. Emar, Qadesh and Qatna fell at the same time (see Caubet 1992: 129; 2003: 17–22; for evidence of crop shortage, see Singer 2000: 24–25).

The Dynamics of Collapse and Socioeconomic Transformation

The economic collapse is more complex. Drought contributed to impoverishment in Iron IA.[12] It is attested in Mesopotamia and Egypt: artisans struck in Year 29 of Ramesses III; depression also bedeviled the 20th Dynasty, with the Nile silting in the 11th–10th centuries. Stiebing cites climate change (Stiebing 1989: 167–87),[13] but Egypt's water depends on Ugandan rainfall, and the activities of Ramesses II reflect unprecedented plenty. So, inflation in 20th-Dynasty grain

[11] For a superb introduction to the historiography of the Medinet Habu inscriptions and reliefs, followed here, see Redford (2000: 1–20).

[12] See Neumann and Parpola (1987: 161–82), for evidence of warming, salinization and reduced Tigris-Euphrates stream flow, from about 1200 to about 900 BCE.

[13] I embraced a similar suggestion in *The Emergence of Israel in Canaan* (1983: 96–98, 100–1), largely based on the work of Carpenter (1966: 59ff), Stiebing (1980: 7–21), and especially Bryson et al. (1974: 46–50). However, the evidence for drought stems from a time later than the end of the Late Bronze Age.

prices more likely indicates economic distortion caused by political upheaval than by climate.

Climate change, on a minor scale, appears to have followed the collapse, despite R. Carpenter's explanation for the fall of Mycenae in the 1960s (1966; see further evidence in Kuniholm 1990: 645–55). Nor did invaders, such as the Mushku (Biblical Meshekh, later Phrygians), propel populations into migration.[14] Troy VIIb did trade with those quarters. The absence of a trade vortex at Hattusas, mediating the exchange especially of people, may have had a knock-on effect. A theory of Rube-Goldberg population movements, each invasion propelling the next, is implausible; invaders in the Near East assimilate to rather than replace populations. If the Mushku did invade, their assimilation was rapid, as there is less evidence for a northern colonization than there is for a Mycenaean colonization of the Tyrrhenian basin.

However, two migrations clearly did occur: the first to Cilicia, Cyprus and the Syrian coast by people whose pottery is of a Mycenaean cast (Singer 2000: 27),[15] and the second the settlement of Philistia and Dor, devastating "the northern lands" along the coast of Canaan. The Israelites and other "Hebrews" (Ammon, Moab, Midian) also appeared in the 13th–12th centuries.[16] In house forms and ceramics, a new culture appears. Settlement of the hills is also new: Late Bronze settlements between Jerusalem and the Jezreel Valley numbered about 25; Iron I settlements rose to about ten times that number. A similar phenomenon occurred in Transjordan. But all of this was probably secondary.

The fall of Hatti included states along the littoral and likely involved western Anatolians and Cycladic elements revolting against a former overlord. If, as is possible, Hatti activated vassals to launch assaults on Egyptian interests, the same vassals may have recoiled against Hatti herself, perhaps after she attempted to rein them in, in quest of Egyptian grain shipments. All one can know is that the "Sea Peoples" turned on Cyprus, and probably Ugarit, and, on both sides, Troy, and that what had been a fight against Egypt became a disaster for Hatti. Crop shortfall alone did not bring on the revolt. Still, trade went into decline in the 13th century. One scholar (Betancourt 1976: 40–47) has hypothesized depression in the Aegean basin (LH IIIB), theorizing that it resulted from overpopulation.

In the 13th century, Assyria interposed itself between Hatti and Babylon. From the time of Shalmaneser I (1273–1244), Hatti could

[14] On the Mushku (Muscovites?), usually identified as Phrygians based on the mention of a king, Meta (Midas), in the late 7th century BCE, of Mushku in Anatolia, see SAA 1.1:3. The same name appears in the annals of Tiglath-Pileser I, in the late 12th or early 11th century BCE (RIMAP 1 A.0.87 1.i.62–ii.35; 2:18–20; 4:18–19; 10:21–23). Whether the peoples are identical is a question, but see Small (1990: 3–25) for a compelling argument to long-term Phrygian presence in Cappadocia.

[15] It seems less likely that the elite pottery reflects trade alone.

[16] Merneptah, late in the 13th century, reports that he eradicated Israel: "its seed is not". Thus, the Israelites were a people, or political entity, in the hills at that time. This is coeval with the appearance of the Philistines in the coastal plain.

exact no tribute east of the Euphrates. Tukulti-Ninurta I compounded the difficulty.[17] Hatti was increasingly dependent on its western vassals, and Assyria attempted to by-pass Hatti, at Ugarit certainly and probably in the Cyclades as well. Restiveness regarding Hatti registers in Ugarit's last decades (Singer 2000: 22).

Assyrian expansion meant the withdrawal of capital from the imperial economy. The local manufacture of goods increased at the end of the Late Bronze (see especially Muhly 1992: 10–26, and particularly 13–15; also Rutter 1992: 62–70, on ivories, decorated weaponry and stone-cutting in the Aegean; and Kling 2000: 287), and markets closed, as did sources of copper and timber. As local manufacture replaced imports with imitations, economic dislocation ensued. Populations formerly dependent on exports, or on the transportation of goods, will have been impelled to measures of desperation. Most vulnerable of all were the ports.

Local politics were also involved. Almost everywhere that one finds Aegean-connected populations after 1200, there was trade in the preceding period (LH IIIB; e.g., for Ashkelon, see Bergoffen 1988: 161–68; note also Barako 2000: 513–30). Thus, Aegean traders were involved with elites involved in local politics. The analogy is to the British in India, where elites enlisted Europeans against local competitors. In the Near East, the Sea Peoples raided or traded with coastal communities going as far back as the 15th century (Wachsmann 2000: 103–5, including the argument to leaguing with local populations). Coastal communities called on the traders to intervene in the politics of towns who were redefining their internal relations, and their relations particularly with the Hittite empire. It was in the traders' economic interest to reduce imperial demands.

The Iron I decline in trade was severe. Writing of early Hallstatt in central Europe, for example, Peter Wells remarks, "It is surprising that more actual imports from the Mycenaean world have not been reported in the Balkans and farther north and west" (1992: 37–38). A culture of appropriation succeeded one of exchange. Comparative advantage ceased to operate at an international level. Imitation Mycenaean pottery characterizes such regions as Cyprus (see Karageorghis 2000: 256),[18] northern Lebanon (see Caubet 1992: 123–31), Israel, Sicily, Sardinia and the Gulf of Taranto.

Italy and the Tyrrhenian Sea, for example, developed olive cultivation on an industrial scale, obviating the need for imports. The fast wheel led almost exclusively to the local manufacture of Mycenean-type pottery, supplanting imports.[19] In Italy and Sardinia, smiths schooled elsewhere manufactured bronzes using the lost wax method to imitate eastern Mediterranean forms. Faience was

[17] Assyrian depradations probably also explain the rampant inflation in grain prices in Emar before the Egyptian rise. For bibliography, see Singer (2000: 24–25).

[18] Karageorghis remarks that Mycenaean IIIC:1b pottery virtually supplants the local ceramic traditions, but contrast with Kling (2000: 287). Note also the manufacture of "Canaanite jars" on Cyprus, in Karageorghis (1986: 63–66).

[19] The development begins with LH IIIB; see generally Vagnetti (2000: 312–13).

manufactured on the Adriatic (Holloway 1992: 40–45).

The multiplication of local elites accelerated the multiplication of production centres, which at a local level superseded trading partners as suppliers. Raw materials were being processed locally, rather than shipped to traditional crafts centres. Crafts traveled more than goods. Technologies such as metallurgy traveled rather than the finished products themselves, partly as a result of colonization, and partly as a result of the pent-up demand created by the accumulation of wealth through trade (see especially the prescient treatment of Burkert 1992). The rise of protectionism also responded to demography: in the Levant, at least, the number of hinterland sites was 75 to 90 percent lower than in the Middle Bronze or the Iron Ages.[20] On the coast and inland valleys, there was also a contraction, complemented by increasing Egyptian control (see generally, Gonen 1984: 61–73).[21]

As crafts and technologies spread, the elite economies became more homogeneous. The small markets, increasingly centralized, confined exchange. When the Assyrian crisis struck the Hittites, the imperial economy was more vulnerable than it had been a century earlier. Indeed, the market for luxury imports dried up in the early 12th century. As the peripheries grew increasingly autarkic, producing cheaper local imitations of elite imports, depression ensued.

Small settlements in zones occupied by the Sea Peoples, such as parts of Cyprus or the Philistine coast, and especially in Greece, dwindled for half a century. Foundations of new settlements tended to be large urban centers. In Italy, for example, one sees already in the 13th century the beginnings of an urbanization that would characterize later Sea Peoples zones, probably reflecting the prevalence of protectionism that occurred there (see Vagnetti 2000: 308, with a Sicilian forerunner at Thapsos, 311).

The Rise of Ethnic Identities

Related to these dynamic socioeconomic processes was the dawn, or perhaps rediscovery, of ethnic identity in an imperial vacuum. In Canaan, one suddenly had not just towns and 'Apiru, but Philistines, Canaanites of various sorts (the term Canaanite is never ethnic except in the Bible), Israelites, Moabites and Aramaeans, prompting a rise in xenophobia. Israelite texts from and about this era register this tension.[22] Later in the sources, but not necessarily in historical development, we

[20] In Moab, between the wadis Mujib and Hasa, for example, surveys have located 52 Middle Bronze sites, but only 13 in the Late Bronze; see Miller (1989: 11). For early Late Bronze occupation, see Redford (1982: 115–20).

[21] In the central hill country of what would become Israel, surveys have located only 25 settlements, whereas those of the Middle Bronze and the Iron Age number in the hundreds; see Finkelstein (1998: 120–31).

[22] Note the chapter by Weitzmann in the first final report on the current Beth Shemesh excavations (Bunimovitz and Lederman forthcoming). See also Judges 5; Exodus 15; the Exodus myth generally, and the narratives and notices in 1 Samuel 9–2 Samuel 8 about Saul's and David's relations with various foreign groups; also 2 Kings 11: 15–16.

hear also of Midianites, Ammonites, Tjekker and Sherden, and new groups such as the Phoenicians (surely from Egyptian "Fenkhu", a term applied to the Lebanon). Early biblical materials, such as J (9th or early 8th century), mention a number of communities whose existence is unattested before the Iron II.

This context explains the birth of national territoriality in the region.[23] New also was the emergence of territorial high gods. The state adoption of an emblematic regional god (Qaus in Edom, Kemosh in Moab, Milcom in Ammon or Yahweh in Israel) reinforced borders, at least in the ideology of the central elites. These areas were already somewhat populated in the Late Bronze. Thus, in Edom, the first references to Seir, a name for the region, come from the inscriptions of Ramesses II, while Seti II refers to it as Edom. Ramesses II also refers to the land of Moab as such. Our earliest reference to Israel's high god comes in a mention of the Shasu (pastoralists) to YHWH, in Edom, under Amenhotep III and Ramesses II (for references, see Ahituv 1984).[24]

Concomitantly, it is foremost in the Iron I that we have evidence of warfare against populations rather than against armies. Late Bronze Age warfare in the west mainly involved the capture (and often ransom) of populations. Kings treated populations as assets for increasing production and taxation. In the east, however, Assyria stands out. Against the Hurrians, Assyrian kings commonly blinded captives, until the region's annexation was an immediate prospect. Similar conditions came to affect warfare in southern Canaan in the Iron Age.[25]

Still, when the Late Bronze world order (with its emphasis on imperial territory) vanished, its echoes did not.[26] They reverberated

[23] The concept of the territorial state as an Iron Age innovation in the area was first articulated by Buccellati, in his *Cities and Nations of Ancient Syria* (1967).

[24] The names are spelled *ś3-'-r-i* (*-r3*) (at Amara West), *'-d-w-m* (in Pap. Anastasi VI.51–61), *m-w-'-b-w* (at Amara West) and *y-h-w3* (at Soleb). Seir and Yahweh are each referred to as a "land of the Shasu", which is to say, of transhumant pastoralists. Edom also is associated with herders, who were admitted to Egypt in search of pasturage.

[25] See 1 Samuel 11:2 (4QSam[a]) relating that Nahash the Ammonite had blinded the rest of Israel in Transjordan, a tradition also reflected in Josephus (cf. Cross 1983: 148–58); 1 Samuel 15; 17:54; and 18:25–27. Although these texts may be late in origin, they do emblematize the era, as do the more reliable 1 Samuel 30:17; 31:4–5, 9–10; 2 Samuel 8:2; 1 Kings 11:15–16; KAI 181 (Mesha), and the concept of the Holy War.

[26] The Late Bronze Age in Canaan came to an end with a resounding, if prolonged, collapse of the Egyptian and Hittite empires. However, the ideals and events of that era remained programmatic in local thought for centuries thereafter. Egypt's empire in Canaan was vital for the spread of the Exodus story as the central narrative of Israelite state religion, even if Israel did not commemorate that imperial presence. The borders of the Egyptian empire much later became the idealized boundaries of the Israelite state, as imagined in Judah (see Na'aman 1989: 29–44; and on a related note, 1986: 463–88). Moreover, the monument building of the pharaohs, especially of the 19th Dynasty, furnished the backdrop for the story of the Exodus (cf. Halpern 1993: 89*–96*). At a more popular level, there was

through the centuries, including in the Egyptianization of Phoenician and Israelite art, to shape the identification of Israelites and Judahites, Greeks and Italians, and probably Philistines, with peoples of distant "ancestry". They also formed the basis for the reinvention of these cultures centuries after they had expired.

The Shekelesh, as noted, are to be identified with the Sikils, reputedly migrants to Sicily, and the Tjekker correspond to the Greek Teukroi. Shuppiluliuma II of Hatti even writes a Ugaritic prefect to send a captive from "the land of the city of the Shikalayyu, who dwell in ships" (cf. Judges 5:17, "Dan, let him not dwell in ships"), for debriefing (Malbran-Labat 1991: 38, No.12 [RS 34.129]). These are the Shekelesh.[27] So the Sikils were in the ambit of Hatti, or just beyond its borders.[28] Only later could they have colonized Sicily (see particularly Holloway 1992: 40–44).[29]

The Sikils are no isolated case. The Sherden lent their name to Sardinia, and possibly Sardis.[30] The Teresh are identified, more speculatively, with the Etruscans (or Tyrsenoi, [t]rasenna) in Etruria.[31] They also lent their name to the Tyrrhenian Sea. But a Hittite text names the Taruisha as vassals in western Anatolia; if so, they lent

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a tradition in the southern Levant of collecting Egyptian scarabs, many of them produced later. The three most popular royal scarabs: Thutmosis III, Ramesses II, and a figure from the Iron Age, Shishaq (Shoshenq). Even if the biblical materials preserve no recollection of Egyptian empire in Canaan, people in Canaan, not least in Philistia, certainly did, and Shoshenq's stela at Megiddo was, for a time at least, a stark reminder, as were the monuments, and no doubt the diplomatic claims of kings both in Luxor and in the Delta.

[27] The correspondence of Egyptian *ṯ* to non-Egyptian /*t*/ is more common in this period than its correspondence to /*s*/. Conversely, Egyptian *š* corresponds to Canaanite and Greek *s*. Semitic /**š*/ almost always corresponds to Greek /*s*/; and, Tjekker has a doubled -kk-, which would have been resolved before the -r- of Teukroi, whereas Shikila does not. Note that Shikila has a vowel between the -k- and the liquid, as in "Sikil".

[28] A town, *šql* (= Shiqila) is attested in KTU 1.91:25; 4.355:17; 365:32; 661:6; 684:6; 693:36; 770:15; 784:17, at one time inside the territory of or at least on good terms with Ugarit. Though it is improbable, this could conceivably be the reference in the letter mentioned above. See Raban (1987: 118–26) for the claim that it was Sikils who brought thin ashlar header construction to the Phoenician cultural realm.

[29] Note also the absence of the LH IIIC ceramic that seems to have characterized these peoples in 13th–12th-century Sicily (see below).

[30] They would have been neighbors of the Danuna. The Sherden (*ṯrtnm*) appear in conjunction with the *maryannu* (presumably, charioteers) at Ugarit (KTU 4.163:9; 4.173:4; 4.174:7; 4.179:5), and have been understood to be mercenaries (see Loretz 1995: 125–36). However, it is equally possible that they represent a specialized military agency, possibly identified with a particular geographic source. Compare the treatments cited above. For the connection with Sardis, see Tubb (2000: 189).

[31] Although the later indigenous term for Etruscans, Rasenna, is sometimes adduced against the identification, it may well be an apocopated form of Tyrsenoi < Tarwisha < Tursha. That is, Tyrsenoi > *Trsenna > Rasenna. I am grateful to my colleague, Philip Baldi, for his advice in this connection.

their name to Tarshish,[32] and possibly the Taurus mountain range (*trws* > *twrs*). Etruscan shares the dialect of a stela from Lemnos, near Troy (from Kaminios; see Rix 1995: 119–38; de Simone 1996). Troy, too, may be cognate with Teresh; its eponym is Tros. Tradition has it that the Trojans migrated to Italy. Teuker migrated from Crete to Phrygia, where he married Aeneas's kin (Strabo 13.1.48; Servius on Aeneid 3.108; Tzetzes on Lycophron 1302),[33] and Tjekker (Teukrian) colonization registers in the 11th century.

These peoples settled the west no later than the eighth century, and there *are* corresponding shifts. The Etruscans, for example, abandon cremation for burial in tombs, usually situated on heights enjoying impressive vistas. The tombs incorporate depictions of banquets, influenced by the *marzeah*, the Levantine funerary society, and by Egyptian tomb traditions. And the Nora tablet, dated to ca. 800 BCE, mentions the Sherden in Sardinia, and also attests a "Tarsus" (probably reflecting Teresh) in the region (see Cross 1986: 117–30).[34] However, Sardinia's earlier name was Ichnussa, and the alleged Libyan origin of its eponym, Sardos (see Pausanias 10.17.1–2), may echo the Sherden presence in Africa at the time of Merneptah.

The concentration of all these peoples is in or very near Asia Minor.[35] The Lukku (Lycians) appear at Kadesh as Hittite vassals,[36] from Anatolia's southwestern coast (see the superb study by Poetto 1993: 75–84). The Weshesh are traced to Asia Minor, Crete or Libya. The Ekewesh can be identified with the Achaeans, a Homeric term for Greeks comparable to Denyen/Danaans, and with the Ahhiyawa

[32] Or Tarsus, which would make them neighbors of the Danuna as well. For continuity in Tarsus from the Late Bronze to the Iron Age, at least in the cult of the god, Šanda, later equated with Marduk, Nergal and Herakles, see Dalley (1999: 73–80). The equation with a "storm god" (Marduk) suggests an analogy to the lunar god of the Sherden (Bernett and Keel 1998, above n.4), reinforced by Anatolian iconographic evidence (cf. Ornan 2001: 1–26).

[33] On Aeneas, borne by Aphrodite to Anchises, grandson of Tros, see Hyginus, Fabula 115; Iliad 13.460ff; 20.181ff; Hesiod, Theogony 1007. For Aeneas's trip with the Palladium to Italy, Dionysius of Halicarnassus 1.68ff; Ovid, Fasti 6.434. On Trojans founding towns on the Adriatic and in northern Italy, including Padua, see Pausanias 10.27.2; Livy 1.1.

[34] The text speaks of an expulsion from Tarshish: *btršš wngrš h' bšrdn šlm h' šlm ṣb' mlktn bn šbn ngd lpmy*: "In Tarshish/Tarsus, he/it was expelled; in Sardinia, he/it had well-being. There is well-being for the host of Milkyaton, son of Sheben, official of Pygmalion." Whether the reference here to Tarshish/Tarsus is related to the Sardinian river (Thorsus), or to Etruria, is unclear.

[35] The west did trade with Mycenaean Greece and Cyprus. Still, 12thcentury sub-Mycenaean pottery is absent from Sicily, for example, and there is no tradition of stone architecture, as in Greece and Turkey, in Etruria. See generally, Vagnetti (2000: 305–26).

[36] Note *Ugaritica V* 89:20–24, which indicates that the troops of Ugarit were in Hittite home territory, and the fleet in Lukka (Lycia). Since the point of the passage is that neither had yet returned home, it is safe to assume that Lycia, like Hatti, was friendly territory, and that the two branches of the service were doing their duty to the overlord power. Certainly, Lycia is not the source of "the enemy" raiders to which the letter refers.

in the 14th and 13th centuries BCE, on or just off the Turkish coast; the Hittite court treated them as equals.[37] Kings of the Philistine cities of Gath and Ekron bear the same name in the tenth and seventh centuries respectively (Achish [Hebrew and Philistine *'-k-y-š*], Assyrian Ikausu, Greek Achaios; see Gitin et al. 1997). Their names indicate that inland Philistines identified with the Ekewesh. However, the Ekewesh were circumcised (above), whereas early Israelite texts refer to the Philistines as "uncircumcised", although in no text about a period after the 10th century. Circumcision was also alien to Greece. So how did "Achaean" become, in Homeric epic, a generalized term for early Greeks?

Ethnic Archaization

Exactly what caused the ethnonyms of peoples from the Late Bronze Age or start of the Iron Age to reappear in the 8th and 7th centuries? The Israelites were rediscovering their roots in the form of Mosaic reformation, and a rejection of traditional funerary customs, including the desecration of tombs (cf. Halpern 1996; 2003). The Greeks were discovering their roots in the form of Homeric epic, and in the case of the Ionian philosophers (excluding Heracleitus), were rejecting traditional ideas of the afterlife. Beginning in the 8th century, kings began taking on the names of dynasty founders: Jeroboam II in Israel, Hiram II in Tyre, and Sargon II in Assyria. Even the term "omen of Sargon" in Assyrian texts of the 7th century suggests a concern with archaizing. The reappearance of the names of other peoples, such as Teukroi, Danuna, Sardinians, Sicilians and Etruscans, must be taken in light of this archaizing tendency (note also the recurrence of the name Shiqila; Tadmor 1994: 66, 2).

This sort of archaizing differs from that found in Egypt (to Old Kingdom models) in the 26th Dynasty, in that it subverts and indeed rejects models between the idealized past (which is, in large measure, of course invented) and the corrupt present. In that respect, it resembles the Protestant rejection of Catholic iconography and other symbolism, particularly the denial of a more or less bodily afterlife (in Jeremiah, Anaximander, Anaximenes, Xenophanes, Ezekiel, Heracleitus and Deutero-Isaiah; cf. Tadmor 1994; Halpern forthcoming), combined as it is with the idea that the stars and sun circulate to the underside of the earth, and effects a revolutionary impact on all traditional culture. In Judah, the revolution was incorporated into state policy under Josiah (640–609). In Greece, it remained confined to the elite, such that Socrates (whose ideas about astronomy are lampooned in Aristophanes' *Clouds*) could be executed for what amounted to apostasy (killing off the gods, rather than the God), although it is likely that his political sympathies, with Sparta and against democracy, had something to do with his death sentence (almost all the pre-Socratics were wealthy, and many wound up as advisors to tyrants, in effect, as Quislings).

[37] Specifically, in the treaty of Tudhaliya IV with Shaushgamuwa of Amurru, along with Egypt, Babylon, and Ashur (KUB XXIII 1.iv.1–3). Contrast this with the earlier list of Muwattalis: Egypt, Babylon, Mitanni and Ashur.

The Codification of National Mythologies

At the same time, and in a similar vein, the 8th–7th centuries witnessed the codification of cultures and the systematization of mythologies. This was true in Greece, with the Homeric epic creating a national myth that reached back into the Late Bronze Age, and Hesiod attempting, against the Ionian judgment underlying Hecateus' rejection of the "ridiculous" or Archilochus' rejection of traditional values, to reconcile and assemble into a single theological and narrative matrix otherwise temporally or spatially local repertoires of Greek myth. It was also the case in Judah, where P was composed as an alternative to the earlier JE (a product of the late 8th century) and the Deuteronomistic History codified Israel's and Judah's history in the land, while both P and D preserve legal codifications whose origins are projected back to Moses. In Phoenicia, as well, where our evidence is thinner, Sakkunyaton, probably in the 7th century, produced a systematized mythology. And in Assyria, starting in the 8th century and continuing in the 7th, scholars in various locations undertook systematic observation of the night sky, assembled comprehensive collections of omens, and canonized literary classics, including the final form of the Babylonian Creation Epic, which effectively wed theogony to cosmogony in a manner attested in Hesiod, but not in the West Semitic cultural realm.

At this new dawn of international trade, both the codification and the rejection of traditional culture were mediated by expanding literacy, with its tendency to homogenize the quirks and idiosyncrasies of local practice. But the logical antecedent for elites to appeal to—and it is, after all, elites, and mostly the ruling elites, who determined the ethnic identification projected by the states involved, whether in Greece or Tuscany or in Ionia or Phoenicia—was the most recent period in which an international elite culture had been developed and shared, irrespective of local variation in tradition. The previous age of empire, and of international exchange, was that of the Late Bronze era. Now, competing and collaborating elites invoked it as they engaged in exchange again that would survive through the Roman era, despite occasional interruptions and a succession of empires and trade zones. They did so initially, of course, when elites could organize as tyrannies or oligarchies.

The process of reformation thus involved the rejection of state Iron Age forerunners of the polities of this late era. In a sense, the rediscovery of antecedents recapitulated the racinating[38] processes that went on at the end of the Late Bronze Age, which also made it an appropriate period in which to search for origins. The 8th and 7th centuries saw, after all, the birth of new ethnic identities, based on archaizing, in response to the height of exchange that took place in this period; an influx of foreign goods, clothing, art, literature and customs, opening the elite cultural canon immeasurably. Reformations, that is, follow renaissances, in an attempt to define local identities in the presence of intense exchange. Out of this particular reformation grew

[38] I took this term from Mark Munn, in conversation, March 2006.

western culture, based primarily on the rejection of tradition and the embrace of identities from the past.

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PHILISTINE RELIGION: TEXT AND ARCHAEOLOGY

Introduction

Concluding the second act of George Frideric Handel's oratorio "Samson" is the baroque equivalent of a modern "battle of the bands," in which antiphonal choirs of Israelites and Philistines call upon and praise their respective gods, Jehovah (i.e., Yahweh) and Dagon. While I would love to discuss the sublime music of this my favourite Handel oratorio, what interests me here is Newburgh Hamilton's libretto, itself based upon John Milton's poem *Samson Agonistes*. In the aforementioned dramatic scene, more appropriate perhaps to an opera than an oratorio (and indeed, in recent years it has often been staged as an opera), Hamilton has the Philistines sing:

> Dagon, arise! Attend thy sacred feast!
> Thy honour calls, this day admits no rest.
> To song and dance we give the day,
> Which shows thy universal sway.
> Protect us by thy mighty hand,
> And sweep this race [i.e., the Israelites] from out the land!
> Fix'd in his everlasting seat,
> Great Dagon rules the world in state.
> His thunder roars, heav'n shakes, and earth's aghast,
> The stars with deep amaze,
> Remain in steadfast gaze:
> Great Dagon is of Gods the first and last.[1]

One does not have to be an expert in biblical or ancient Near Eastern studies (nor a rocket scientist) to realize that this depiction of presumably polytheistic *Philistine* religion is based on a much later monotheistic understanding of *Israelite* religion. In particular, the allusions to "universal sway" and being "of Gods the first and last" are more appropriate in reference to a late or post-exilic Yahwism than they are to either pre-exilic Yahwism or other poly- or henotheistic traditions. And indeed, these words—as of "Fix'd in his everlasting seat"—are echoed antiphonally by the Israelites in reference to Jehovah, as Yahweh was called in the pre-modern period. In effect, what Hamilton has done here is present us with a depiction

[1] This text is copied from the booklet provided with the recording of Handel's "Samson" by the Concentus Musicus Wien under the direction of Nikolaus Harnoncourt (Teldec 9031-74871-2: 112, 114).

of Philistine religion that is an echo of Israelite religion, an effect that is achieved by substituting Dagon for Yahweh. Writing in the mid eighteenth century,[2] Hamilton filtered Philistine religion through his biblically based Christianity, laying another layer of distortion on the Hebrew Bible's assuredly polemical portrayal of the Philistine cult. Indeed, this same distorted view of Philistine religion can be found in Camille Saint-Saëns' great opera "Samson et Dalila." However, what choice did Hamilton and Saint-Saëns' librettist Ferdinand Lemaire have in choosing how to depict Philistine religion?

Essentially, until the 1960s, most of our information about the Philistines, their cult and culture (or lack of same in the popular imagination) came from late-redacted texts written by their antagonists. Indeed, when Stewart Macalister published the first modern study on *The Philistines* in 1914, he had to rely mainly on the biblical texts in his reconstruction of Philistine religion (1914: 90–114). He was able to supplement his discussion of the topic by recourse to Egyptian and Akkadian references—among others—to the town of Beth-Dagon (*bit-daganna*) and to various classical texts that hearkened back to a long-lost time and civilization. What he was at that time unable to include in his argument was artefactual evidence for the Philistine cult, although the first steps in the identification of a Philistine material culture had already been made at the very end of the nineteenth century. It has only been in the past four decades or so that we have been able to supplement the textual evidence for Philistine religion with artefacts—including even a couple of short inscriptions—found in archaeological excavations of the Philistine heartland, particularly at the sites of Ashdod beginning in the 1960s, of Tell Qasile beginning in the 1970s,[3] of Ekron (Tel Miqne/Khirbet al-Muqanna) and Ashkelon beginning in the 1980s, and of Gath (Tell es-Safi) beginning less than a decade ago.

It is often decried that the archaeological and biblical narratives and their respective interpreters have little to say to each other.[4] And when they do, their practitioners are more likely to engage in mutual recriminations than in reasoned debate and discussion. Archaeologists feel abandoned and ignored by the modern generation of biblicists, who have taken a greater interest in the text as literature than as history and evidence for the past. And biblicists have in turn criticized archaeologists, who take the text at face value and fail to see its redactional complexity and artifice. Be that as it may (and in my opinion these polemical lines of argumentation are subject to hyperbole on both sides of the equation), I would like to attempt in this essay to look in brief at the biblical evidence for Philistine religion, following that to glance at the relevant archaeological evidence, and

[2] Handel began working on "Samson" in 1741. The completed work was premiered at London's Covent Garden Theatre on February 18, 1743. See Fürstauer (1993: 25–26).

[3] Following upon earlier excavations conducted by Benjamin Mazar in 1948–1950.

[4] See Gitin (2003: 279–83) for a recent restatement of this truism castigating biblicists and their alleged lack of interest in archaeology.

then to attempt to see in what way—if any—these two corpora of evidence may elucidate one another.

Biblical Evidence[5]

Except for the occasional anachronistic mention of Philistines and their relationship with Israel's God in Genesis, passages that tell us nothing about actual Philistine religious practice, our first encounter with Philistine religion is at the end of the Samson cycle in Judges 16. According to the well-known story, the Danite hero Samson, who had some relationship issues with (mainly) foreign women,[6] fell in love with a certain Delilah. She rewarded his love by betraying him to the Philistines, who blinded and enslaved him. At the end of the story, "the lords of the Philistines gathered to offer a great sacrifice to their god Dagon" (Judges 16:23a) in honour of his allowing them to capture their great enemy. Because Samson had previously been brought to Gaza in fetters (Judges 16:21) and is brought up out of his dungeon to the temple (Judges 16:25), it is generally assumed that the dénouement of his story in the Temple of Dagon must also have taken place in Gaza. At any rate, the tale ends with Samson bringing down the house on himself and all the Philistines gathered to celebrate in the temple, one which incredibly and hyperbolically accommodated 3000 people on its roof alone (Judges 16:27). Of particular relevance to a discussion of the Hebrew Bible's depiction of the Philistine cult are the following aspects of this narrative: first, the Philistines' worship of a god, presumably their chief god, named Dagon in a story set in the eleventh century BCE; second, the location of a large temple to Dagon at Gaza; and third, their engaging in a sacrificial cult.

While the sacrificial cult is commonplace in ancient Near Eastern religions and, hence, not a distinctive aspect of the Hebrew Bible's depiction of the Philistine cult, and while Gaza remains for the most part unexcavated, the association of the Philistines with the god Dagon is worthy of mention. Although a god Dagon, or Dagan, is known from texts in northern Mesopotamia and Syria (e.g., in Ebla, Mari, and Ugarit) dating back to the third millennium BCE, in other words long before the Philistines appeared on the scene, the Hebrew Bible associates this supposedly Semitic god only with the presumably non-Semitic Philistines. The source and origin of Dagon worship has long been a matter of debate (see the discussions in Singer 1992; Healey 1999; Machinist 2000: 59–58; and Rubio 2005a). Ancient and medieval homiletic or midrashic tradition (e.g., Jerome, Rashi, and Radak), which nonetheless found an echo among scholars such as Julius Wellhausen (see Singer 1992: 433), derived the name Dagon from the common Semitic root meaning "fish" and speculated that Dagon was an ichthyoid and therianthropic deity. A more common derivation of the name is from the West Semitic word for grain, namely *dagan*, although the possibility that it is related to a similar root found in Arabic

[5] On this subject see also Machinist (2000: 59–63).

[6] As Exum (1996: 184–85) points out, nowhere is it explicitly stated that Delilah was a Philistine, although this is the common assumption.

(*dajana*)—meaning "cloudy" or "rainy"—has also been proposed, as has an Indo-European etymology.[7] Nonetheless, a West Semitic origin of Dagon worship remains the most common assumption, in which case the questions arise: when, how, and where did the Philistines adopt him as a deity?

The most influential answer to these questions has been provided by I. Singer (1992), who has argued that since Dagon or, without the so-called Canaanite shift of /ā/ to /ō/, Dagan was at home in the northern Levant and unknown in Canaan before the arrival of the Philistines, the latter must have adopted his worship during their travels to the land that was to bear their name during the transitional period between the Late Bronze and Early Iron Ages.[8] He further assumes that when the Philistines left their homeland to travel to the Levant, they brought with them the worship of the great mother-goddess Kybele or Kybebe (Hittite Kubaba), whose home was in Anatolia (Singer 1992: 444–49). Owing to her association with grain and fertility, the Philistines then identified her with the Semitic grain god Dagon and changed her sex to accord with her new identity. In Singer's support one may note that sex changes among deities are a well-known phenomenon, particularly in the movement of divine beings from one cultural sphere to another. S. Dalley (2002: 120) has discussed the phenomenon of ancient Near Eastern gods with originally indeterminate gender assuming different genders depending on the cultural sphere involved. Outside of the ancient Near East one might mention the transformation of the South Asian male bodhisattva (potential Buddha) Avalokiteśvara into the East Asian female "goddess of mercy" Guanyin (Amore and Ching 2002: 246–47, 273).

Our next encounter with a description of aspects of the Philistine cult is within the context of the so-called Ark Narrative early in the Book of First Samuel (1 Samuel 4:1–7:1), a humorous[9] tale whose historical basis—if any—cannot be determined. This story serves a number of purposes, among which one may mention the exaltation of the power of the Ark of the Covenant, and the heaping of ridicule on the Philistines and their devotion to Dagon. The narrative begins with the Israelites and the Philistines at war. Needing divine help, the Israelites bring the Ark of the Covenant into their camp in order to

[7] On these possible etymologies, see Singer (1992: 436) and Rubio (2005a: 2126).

[8] On the other hand, since there is evidence of the worship of West Semitic gods on Cyprus, there may be no need to assume that the worship of Dagon was acquired by the Philistines on their journey to Canaan. They may have already been familiar with him from their homeland or Cyprus. See Noort (1994: 176–78). For a discussion of Phoenician influence on the religious art of Cyprus in the eighth to sixth centuries BCE, see Karageorghis (2003).

[9] Dietrich and Naumann (1995: 129) note with approval Bentzen's (1948: 47) reference to the "humorous tone" of the narrative, while questioning his underlying use of the narrative as a "myth and ritual" text. Indeed, Bentzen goes even farther and refers on p. 46 to the "boldly humorous tone of the narratives in I Samuel 6."

have it lead them into battle. When the Philistines find out about this, they become fearful and cry out, "Woe is us! Who will save us from the hand of these mighty gods?" (1 Samuel 4:8). As it happens, bringing the Ark into battle avails the Israelites nothing, since it is captured and taken in triumph to the temple of Dagon in Ashdod, where it is placed next to the statue of Dagon. It is there that the power of the Ark becomes manifest when the Ashdodites find the statue of Dagon toppled on the ground, with its extremities broken off.[10] This is given as the source for the Philistine custom of avoiding stepping on the threshold of Dagon's temple in Ashdod (1 Samuel 5:5), a detail which may well be a false aetiology, but in its description of the avoidance of the area where the divine and the human worlds intersect may also preserve an accurate understanding of Ashdodite custom. That a temple of Dagon in Ashdod did indeed exist, at a much later date to be sure, is supported by references to the Temple of Dagon in Ashdod that Jonathan the Hasmonean is said to have destroyed in the mid second century BCE (1 Maccabees 10:83–84; 11:4).

The Ark Narrative continues with Yahweh afflicting the Ashdodites with tumours, if we follow the consonantal text (*ketiv*), or haemorrhoids, if we follow the marginal reading (*qere'*) (1 Samuel 5:6). I can readily imagine the ancient Israelites telling this tale and having a good laugh at the Philistines' expense. Recognizing the power of the Ark and of the God it represented, the lords of Ashdod consequently sent the Ark to Gath and—when the whole episode was repeated there—to Ekron, all of which were located in northern Philistia, the latter two on the border with Israel. Realizing that the Ark was a source of trouble, the Philistines finally sent it on its way to Israel, along with offerings of five golden mice and five tumours or haemorrhoids,[11] in accordance with the number of the cities of the Philistine pentapolis.

The mention of golden tumours or haemorrhoids in this text has long been a conundrum. How does one represent these items in an artistic manner? Not to mention why? A. Maeir, the chief excavator of Gath, has conjectured that the consonantal text's reference to tumours, from a root meaning "to swell" (עפל), should be understood as a euphemism for the male genitalia (Maeir 2007). Since, in the view of the Hebrew Bible, the Philistines stood out by virtue of their being uncircumcised, in distinction to most other peoples in the Levant, their punishment fit the crime. The uncircumcised Philistines, therefore, were afflicted on their uncircumcised members.

Another temple to a presumably Philistine deity is mentioned in the account of what the Philistines did to the corpse of Israel's first king, Saul, subsequent to their crushing defeat of him at the battle of Mount Gilboa (1 Samuel 31). After beheading him, they dedicated his armour in the temple of Ashtarot, a plural—and presumably

[10] This mutilation of the image of Dagon is probably meant to indicate its loss of efficacy. Cf. the references to mutilated statuary at Hazor during the waning days of the Late Bronze Age in Ben-Tor and Rubiato (1999).

[11] The association of mice and tumours has led many to propose that the illness that afflicted the Philistines was an outbreak of bubonic plague; see McCarter (1980: 123).

derogatory—form of the name of the goddess Ashtoret or Astarte, and hung his body on the wall of Beth-Shean in the Jordan Valley. Most commentators assume that this temple of Ashtarot must have been located in Beth-Shean. It should be noted, however, that this city lay well outside the Philistine heartland, although centuries later it was to become a major city of the Hellenistic period named Scythopolis. It is interesting that once again a deity associated with the Philistines, even if only tangentially,[12] bears the same name as a Canaanite one. Indeed, in the later retelling of this tale in 1 Chronicles, the temple of Ashtarot has been changed into the temple of Dagon (1 Chronicles 10:10), reflecting the Hebrew Bible's more common association of the Philistines with gods rather than goddesses.

The phenomenon of ascribing Canaanite deities to the Philistines is encountered again in 2 Kings 1, in which the ailing King Ahaziah of Judah sends a delegation to inquire of the god Baalzebub of Philistine Ekron concerning his chances of recovery (2 Kings 1:2), divination being outlawed in Israel according to the authors of the Hebrew Bible. Although the Hebrew Baalzebub, later Beelzebub, means "lord of the fly" (and is the source of the title of William Golding's famous novel), convincing arguments have been adduced positing that the name is an intentional distortion of Baal-zebul (e.g., de Moor and Mulder 1977: 194; Rubio 2005b: 7103), Prince Baal, a well-known epithet of the Canaanite storm-god Baal (e.g., in his chthonic aspect as *zbl b'l 'rṣ*; see Herrmann 1999: 135), who was himself the son of Dagon (de Moor and Mulder 1977: 187). Once more, the biblical tradition ascribes the Canaanite cult of a male divinity to the Philistines, one who at least had a familial relationship with Dagon.

The association of the Philistines with divination is alluded to in a difficult passage from the book of Isaiah (Isaiah 2:6), in which the house of Jacob is accused of engaging in sorcery/soothsaying as the Philistines supposedly did (עננים). This follows up on the mention of Philistine priests (כהנים) and diviners (קסמים) in the Ark Narrative (1 Samuel 6:2).

To summarize, according to the Hebrew Bible, the chief god of the Philistines was Dagon, who had temples in Gaza and Ashdod. Two other deities in their pantheon were Prince Baal (Baal-zebul), whose home was Ekron, and possibly Ashtarot/Ashtoret, who had a temple presumably in the area of—if not in—Beth-Shean. In the view of the Bible, the Philistines were associated with divination, had priests, offered sacrifices to their gods, and made votive objects.

Archaeological Evidence

As mentioned above, it is only in the last four to five decades that the actual world of the Philistines and their cult has been revealed to us through the medium of archaeological investigation. In my all-too brief survey of this material evidence, I will limit myself to the data

[12] Singer (1992: 434) claims that "there is presently no evidence for the inclusion of Ashtoret in the Philistine Pantheon," a claim with which the present author is in sympathy.

uncovered at the major sites of Ashdod, Tell Qasile, Tel Miqne/Ekron, and Tell es-Safi/Gath, mirroring the approximate order in which these sites have been excavated during the past four or so decades, and in which their major discoveries have been made.

Ashdod

The first significant modern and thorough excavation of a Philistine site was that of Ashdod in the 1960s and 1970s. A number of finds made there are of interest in reconstructing the Philistine cult and its origins.

In Area H, a complex of buildings was found that appears to have had a cultic function. Trude Dothan draws particular attention to an apsidal structure (Building 5233), unknown in this part of the world since the Neolithic Age, which has contemporaneous parallels with cultic buildings in the Aegean world (Dothan 2003: 200–1). Nearby, another public building with a raised rectangular hearth (Building 5337) also evidences connections with the Aegean. The finds made in it include both Mycenaean and Philistine objects. In this general vicinity was made one of the most significant discoveries at Ashdod, namely a complete figurine in the shape of a female chair (on the discovery of Ashdoda, see Dothan and Dothan 1992: 153–57). Nicknamed "Ashdoda" by its discoverers, the figurine depicts a seated woman in which the woman and her chair (or throne) merge into one (Fig. 1). Although only one complete example has been found, numerous fragments dating from the Iron Ib until close to the time of the destruction of Philistine Ashdod by the Babylonians at the end of the seventh century BCE have been found. Interestingly, by theninth century the preponderance of these figurines had changed sex, and in their later phases were male (Hachlili 1971: 129–30, 133–34; Dothan 1982: 251). Be that as it may, in the opinion of its excavators, the Ashdoda evidences direct links to Aegean figurines of seated women. However, as critics (see, for example, Noort 1994: 134–37) of a facile one-to-one analogy point out, the decoration of the Ashdoda differs from the Aegean models in inclining more toward the Egyptian artistic tradition.[13] In addition, the Aegean models are generally moulded in the round, with the chair and the woman as distinct entities. Here, the woman and the chair are one.[14] Nonetheless, the Ashdoda is a significant piece of evidence in positing that the Philistines, particularly in the earliest phases of their settlement, worshipped a Great Mother Goddess in the Aegean mould.[15]

[13] As pointed out to me by M. Trumpour of the Royal Ontario Museum, the chair/throne is one of the symbols of the goddess Isis.

[14] There are some Aegean figurines in which this also appears to be the case. However, these examples differ from the Ashdoda in being moulded in the round rather than in a rectangular fashion.

[15] See Dothan and Dothan (1992: 157), who claim that for at least the first century of their settlement in Canaan the Philistines "remained faithful to the Great Mother Goddess of the Aegean world."

The importance of music in the Philistine cult is evidenced by the Stratum X musician stand[16] and an eighth-century clay figurine of a man playing a lyre (Dothan 1993: 96–100).[17] Indeed, in this area both Händel and Saint-Saëns unwittingly anticipated later archaeological discovery! Finally, a terracotta bathtub was discovered in the same room as another hearth in Ashdod Area G. Parallels at other Philistine sites, such as Ekron, and at sites on Cyprus are taken by many to indicate that the bathtubs were not meant simply for everyday cleansing, but had an important function in a cult associated with hearths and ritual ablutions (Dothan 2003: 202–6; for Cypriot parallels, see Karageorghis 1998).[18]

Fig. 1. "Ashdoda" (adapted from Dothan 1982: 235, fig. 9)

[16] Originally identified as a late Iron IB (11th century BCE) artifact (Dothan and Dothan 1992: 175), it is now more commonly attributed to the early Iron IIA (10th century); see Ben-Shlomo (2005: 180–84).

[17] Mention should also be made of a seal of a lyre-player found at Ashdod, although its cultic connection is not evident; see Dothan (1993: 98).

[18] However, L. Mazow has argued that these bathtubs were also used for fulling wool; see this issue.

Tell Qasile

Tell Qasile, whose ancient identity is unknown, lies on the banks of the Yarkon River in northern Tel Aviv at the northernmost extent of Philistine territory. It was founded during the second phase, the so called bichrome phase, of Philistine settlement sometime before 1100 BCE, and has revealed a wealth of information relating to the Philistine cult during the early Iron Age.

Pride of place among these finds belongs to three superimposed temples dating to the late twelfth to tenth centuries BCE. Constantly expanding, the layouts of the temples conform to no set patterns. Parallels for this irregular plan have been drawn from Late Bronze Age Canaanite (e.g., the Fosse Temples at Lachish and the Tel Mevorakh temple), Cypriot (Kition and Enkomi), and Mycenaean (Mycenae) examples (Mazar 1980: 62–68). A hearth in the Aegean mould was uncovered near the main temples. Among the many cultic objects found were pottery masks (including fragments of an anthropomorphic one),[19] cult stands (Mazar 1980: 87–100), libation vessels (including kernoi and "rhyta"; Mazar 1980: 101–12), and various small finds, all of which indicate continuity with both the world of the Aegean and with the Levant. Of particular interest is an open libation vessel in the shape of a woman (Fig. 2; Mazar 1980: 78–81). The breasts of this gynomorphic vessel served as its spouts. Many scholars assume some connection between this vessel and the Aegean worship of a Great Mother Goddess, thus pointing once again to a strong Aegean element in the Philistine cult, although a local cultic development cannot be ruled out.[20] In addition to this gynomorphic vessel, mention must be made of another anthropomorphic vessel found at Qasile in Stratum XII, which has been identified by A. Mazar as a juglet depicting a male, possibly a deity, if he has identified the protrusions on the sides correctly as rams' horns (Mazar 1980: 81–82). Another type of object discovered at Qasile is a clay plaque or *naos*, which depicts the entrance to a temple flanked by two broken figures, which Mazar has identified on the basis of the silhouette and position of the arms as female, possibly divinities (Mazar 1980: 82–84).[21] Interestingly enough, in spite of the weight of evidence pointing to the worship of a goddess at Qasile, Mazar follows in his uncle Benjamin's footsteps

[19] According to Mazar (1980: 84–85), such masks are known from a number of sites throughout the eastern Mediterranean world during the Late Bronze Age.

[20] Mazar (1980: 80–81) is quite cautious in coming down on the side of an Aegean influence. Brug (1985: 184) mentions a possible parallel ("squirting breast vessel") from Beth Shemesh.

[21] Dothan (1982: 251) claims that "the Egyptian-style plaque from temple X, which depicts both male and female silhouettes, suggests the existence of dual worship," which is a lukewarm suggestion that a divine pair was being worshipped at Tell Qasile in the tenth century BCE. Keel and Uehlinger (1992: 113–114) suggest that the figures may represent twin goddesses. A large number of small clay shrines have been found during the recent excavations at Yavneh. Among the figures represented in or guarding the shrines, females play the major role; see Kletter et al. (2006), and Ziffer and Kletter (2007).

in positing that the god worshipped there even by the Philistines was the Canaanite Horon, who may be mentioned on an ostracon found on the surface of the site but dating to the Iron II (Mazar 1985: 129–30).

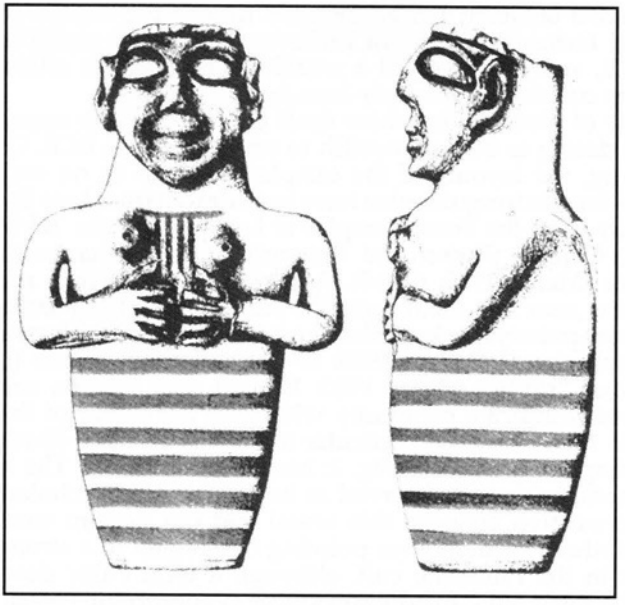

Fig. 2. Gynomorphic vessel

Ekron/Tel Miqne/Khirbet al-Muqanna

The site of Tel Miqne, ancient Ekron, has yielded arguably the greatest concentration of finds relating to the Philistine cult, both in Iron I and in Iron II. In the early Iron Age, in addition to the bathtub mentioned above, a hearth sanctuary was found at this site, a find that indicates close (cultic) connections with Cyprus and the Aegean world of the Late Bronze Age, where the hearth was at home. The finds made in Building 350, identified as a temple, include various cultic artefacts, from lion-headed libation vessels ("rhyta") to incised bovine scapulae, the closest parallels of which are to be found on Cyprus, as is the case of the iron and ivory knives found in this building. Another link to Cyprus can be identified in the wheels of a bronze (cultic) stand, which once again has close parallels on the island of Cyprus.[22]

Ekron entered a long decline beginning in the tenth century BCE, only to enjoy a second flowering at the time of the *pax assyriaca* in the late eighth and seventh centuries. An enormous temple complex

[22] For a brief survey of these finds from Ekron, including illustrations, see Dothan and Dothan (1992: 235–54, and pls. 18–32).

dating to the seventh century was uncovered there.[23] Significant in and of itself, it is one of the largest cultic buildings dating to the Iron Age discovered in ancient Canaan and gives us previously unimaginable insight into ancient sacred architecture. However, it is a find made in Building 650 during the last season of excavation of the site in 1997 that is arguably the most important discovery at Ekron. The find is a complete dedicatory inscription mentioning Ekron by name, the names of a number of Philistine rulers of the city known already from the various versions of Assyrian King Sennacherib's third campaign of 701 BCE, and the name of the deity in whose honour the temple was dedicated (Fig. 3; Gitin et al. 1997). Although the name is somewhat difficult to read, the most common reading is that this temple was dedicated to a goddess named *ptgyh* which, according to C. Schäfer-Lichtenberger (2000), is a hybrid of the name of a sanctuary at Delphi call Pytho and the name of the ancient Aegean mother goddess Gaia, and hence possibly to be read as Pythogayah.[24] This remarkable find has been taken as evidence that even at this late date, after centuries of assimilation, acculturation (Stone 1995), or creolization (Killebrew 2005: 197–245), the Philistines still retained their worship of the Great Mother Goddess.

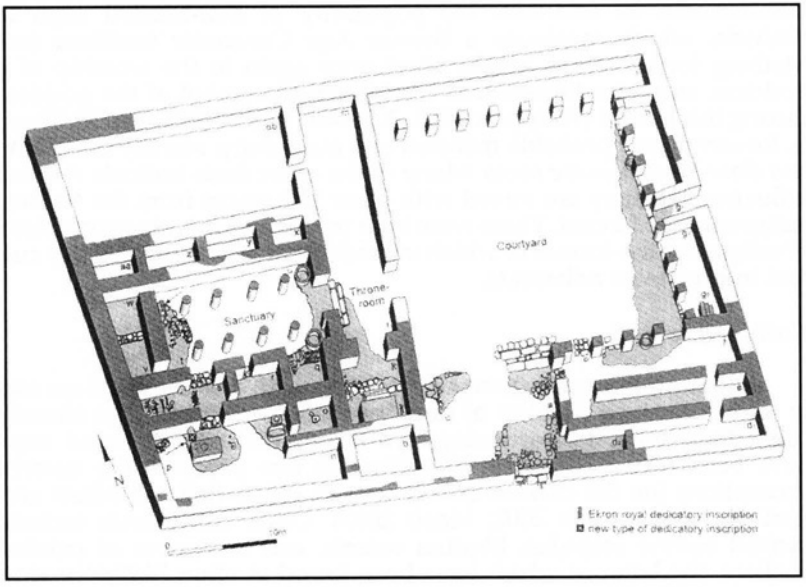

Fig. 3. Isometric reconstruction of Hearth Sanctuary at Ekron (adapted from Gitin 2003: 284, fig. I).

[23] On the Iron II cultic finds from Ekron, see Gitin (2003: 283–92).

[24] While a reading as *ptnyh* (= Greek Potnia) has been proposed by Demsky (1997), his attempt to read /*g*/ as /*n*/ in the name of the patroness of Ekron has not met with wide acceptance.

In addition to the Ekron dedicatory inscription, a number of other smaller inscriptions were found in an auxiliary room of the temple. On opposite sides of one jar the words "holy" (*qadosh*) and "to/for Asherat" (*le'asherat*) were found, a reference to a major goddess of the Canaanite pantheon, who is—perhaps—to be identified with Ptgyh, the "Lady of Ekron." Another vessel indicates that thirty units of oil were stored in it, possibly as a tithe to the temple, which itself is mentioned in another inscription dedicated "to/for the [holy] place/shrine." Another inscription is dedicated "to Baal and to Padi," which is understood by Gitin as the ancient equivalent of "for god and king" (2003: 288). If one follows this reading, this would provide evidence for the worship of Baal at Ekron, which would be in line with the witness of 1 Kings 1. And finally, mention should be made of a female figurine in the Phoenician mould found in the temple and the presence of incense altars, many of them horned, which were found in more private or commercial settings, and which indicate the presence of both official and popular cult, as well as foreign influence or presence (on the four-horned altars and the rest of these finds, see Gitin 2002).

Summing up the complex information from Ekron, I wish to emphasize the heavy tilt toward the divine feminine, as the dedicatory inscriptions to Pythogayah and Asherat as well as the female figurine demonstrate. In addition, the popularity of lion-headed cups in Philistia, which continues a Bronze Age Canaanite tradition (see Meiberg forthcoming), might attest once again to the worship of a goddess, since the lioness was a widespread symbol of the goddess during this period (Weippert 1988: 302–303; Taylor 1993: 24–37). There is, however, one probable mention of a male deity, namely Baal, who has clear West Semitic roots. Many of the cultic finds indicate Aegean influence, but they are mixed with other influences from the various cultures of the Levant. There were both public and private expressions of religiosity, the former of which implicitly necessitated a priestly cult and income from adherents.

Gath/Tell es-Safi

Although the excavations of Philistine Gath at Tell es-Safi are still in their infancy, a number of finds relating to the cult have already been discovered. In particular, two fragmentary lion-headed cups have been found (Maeir 2006), although one predates the current excavations (on the current excavations at Tell es-Safi, see Maeir and Ehrlich 2001; Ehrlich 2002; Maeir 2003). Other cultic finds include incised bovine scapulae, libation vessels, and a number of petaled chalices, the latter of which have been found at other Philistine sites and related iconographically to the worship of the Canaanite goddess Asherah, one of whose symbols, in addition to the lioness, was the tree of life (e.g., Dever 2005: 222–32). In addition, a fragmentary figurine of the El-type was found in a ninth/eighth century destruction layer, although it is unclear from what time period this figurine stems (Maeir forthcoming).

Symbolic Representations of a/the Goddess?

Following up on the mention of the Philistine lion-headed cups and of the petaled chalices, both of which have been linked to goddess worship, it may be appropriate to discuss these two artistic motifs and one additional one in greater detail as possible symbolic representations of a/the goddess.

The first symbol is the lion or lioness, which serves as the pedestal and attributive animal of the goddess, presumably Asherah, which was widespread in the Levant beginning in the Late Bronze Age (see Meiberg forthcoming), although its antecedents in Mesopotamia go back much farther than that.[25] Although such images are not characteristic of Philistine sites, a number of lion-headed cups, or "rhyta,"[26] have been found which may have been associated with the worship of a goddess. Examples of such cups have been found at Tell Zeror, Tell es-Safi,[27] Megiddo, Tell Jerishe, Tell Qasile, and Tell Miqne-Ekron. While they may have had a purely profane purpose, their relative popularity and the lion's association with the iconography of a goddess raise the possibility that these cups too were somehow related to the worship of a goddess, although one does not have to go as far afield as the Aegean world to find precedents for this type of vessel in the Levant (Maeir 2006: 340), which the Philistines adapted and reproduced in bichrome style.

The second symbol is the tree of life. This was a common symbol in the Late Bronze and Early Iron Ages, again presumably of the goddess Asherah (e.g., Dever 2005: 222–32). In its classic form the tree is depicted between two ibexes or caprids. The connection with the worship of a goddess is made clear, for example, on the thirteenth century Lachish Ewer, where this scene is juxtaposed with a dedicatory inscription mentioning *'ilat*, "the goddess" (Naveh 1982: 33–35), which, as O. Keel and C. Uehlinger (1992: 80) point out, is written right above the tree. In addition, the juxtaposition of registers two and four of the Taanach cult stand would appear to lend support to such an equation. Register two depicts the tree flanked by caprids between two lions, while register four depicts the naked goddess between two lions. The tree (with caprids) thus parallels the goddess (see Taylor 1993: 28–29). While the motif of the tree between two caprids is not a Philistine symbol per se, a number of petaled chalices have been discovered in Iron II levels, particularly at Tell es-Safi, which might symbolically be brought in conjunction with the tree motif that defines the goddess. If so, we may have here an object that was used in the veneration

[25] According to Weippert (1988: 302–5), this is an artistic motif that entered the Levant from third millennium BCE Mesopotamia.

[26] On lion-headed cups ("rhyta") from Philistia, see Dothan (1982: 229–34). In addition to the examples listed there, others have been found at Ekron and Tell es-Safi. See Dothan (2003: 208). Mazar (1980: 101–3) hesitates about assigning the Philistine lion-headed cups to direct Aegean influence, since there is an established Late Bronze Age Canaanite tradition of producing them.

[27] On the current excavations at Tell es-Safi, see Maeir and Ehrlich (2001), Ehrlich (2002), and Maeir (2003).

of a goddess in the later Iron Age, in particular at the site of ancient Gath.[28]

The third possible symbolic motif that has to be mentioned in any discussion of the Philistines and their cult is the seemingly ubiquitous bird motif that is oftentimes viewed as the Philistine symbol par excellence, at any rate during the Early Iron Age. It is most commonly found painted on both the monochrome and bichrome Philistine wares, where it echoes an artistic tradition of the Mycenaean Bronze Age.[29] In most examples the bird glances backwards over its shoulder, although examples in which the bird faces forward are also quite common (Dothan 1982: 198–203). Birds in plastic form have been found, *inter alia*, in the so-called Gezer cache (Dothan 1982: 219–27), in which the bird appears either as a libation vessel, where it forms part of a ring kernos, or as a free standing vessel, presumably meant to be hung by a string inserted through its sides. Additional examples of bird-shaped vessels, in this case bowls and a chalice, were discovered in Strata XI-X at Tell Qasile (Mazar 1980: 96–100).[30] Building 5337 at Ashdod (Stratum XII) yielded both bird bowls and a bird rattle (Dothan 2003: 201). And a "miniature bird askos" (Dothan 2003: 196, 207–8), a type of Mycenaean libation vessel, was found at Tel Miqne-Ekron (Stratum VIB). The bird motif is also found famously on both the prow and the stern of the Sea Peoples' or Philistines' seagoing vessels as depicted in the reliefs of Ramesses III at Medinet Habu. But what does this have to do with the putative issue of goddess worship among the Philistines? The answer may be found in a theory of the controversial late old world archaeologist/anthropologist Marija Gimbutas, who posited that the bird was an ancient European symbol of the Great Goddess.[31] If she was correct in this surmise, then in the prevalence of the bird imagery among the Philistines—particularly in the earlier stages of their settlement in southwestern Canaan—we may have another piece of evidence pointing to the centrality of the feminine divine within the Philistine cult, one ultimately derived from European antecedents.[32]

[28] In addition, a fragmentary figurine of the El-type has been found in the ninth/eighth century destruction layer, although it is unclear from what time period this figurine stems; see Maeir forthcoming.

[29] On the bird motif on Philistine and Mycenaean pottery, see Dothan (1982: 198–203).

[30] Parallels to the bowls were also found at Megiddo and Tell es-Safi, and fragments of bird figurines were found at Ashdod, Gezer, and Tell Jerisheh (Mazar 1980: 99). Mazar (1980: 100) traces the origin of the bird bowl to Egyptian and Canaanite prototypes, although he does admit that there are close parallels in the more or less contemporaneous bird *askoi* found on Cyprus.

[31] Gimbutas disputed the notion that she must of necessity also be a mother goddess. Her most ancient and widespread incarnation is as the Bird Goddess, who appears in a number of different guises and is closely related to—if not identical with—the Snake Goddess and whose geometrical symbol is the chevron, which is an integral part of the depiction of the wings of birds on Philistine pottery; see Gimbutas (1974: 112–51; 1989: 1–137).

[32] Mazar (1980: 100) relates the popularity of the bird as a motif in the Philistine cult to the bird's possible function in sea navigation. In a similar vein, Wa-

Conclusion

This brief survey hardly serves to do justice to the complex phenomenon that was the Philistine cult. Nonetheless, certain lines of evidence are beginning to emerge. First, while the Hebrew Bible associates the Philistines in the main with male divinities, the archaeological evidence points toward the predominance of the feminine in the Philistine cult (Maeir 2006: 340–41), particularly in the Iron I, although the strong influence of the goddess does seem to continue until almost the end of the Iron II. Second, while the Hebrew Bible paints an indistinct picture of the Philistine cult, one that has few distinctive characteristics, a wealth of material finds points to a rather idiosyncratic and in some respects multi-cultural Philistine world, a complexity not portrayed by the biblical authors, whose picture of the Philistine cult seems to depend on a later version of non-Israelite religion in Canaan. Indeed, Drews (1998) has claimed that the biblical usage of the term "Philistine" essentially refers to the non-Israelite inhabitants of Canaan in the first millennium.

This predominance of the feminine in Philistine religion may be underlined by an orthostat relief of Tiglath-pileser III depicting the defeat of a king and the Assyrian spoliation of his town's gods (Uehlinger 2002: 124, fig. 5). While most have argued that it depicts Tutammu of Unqi in 738 BCE, Uehlinger has argued that the ruler depicted is Hanunu of Gaza. If he is correct, then we have in this orthostat external evidence from Assyria for the Philistine pantheon. While the scene provides a limited snapshot of the Philistine gods, it may be significant that of the four *gods* depicted three are actually *goddesses*.

Finkelstein has argued recently that the depiction of the Philistines in the Hebrew Bible is reflective of "A Late Monarchic Perspective" (2002). It would appear that this obtains too to the Bible's depiction of Philistine religion. By the time of the Maccabees, the inhabitants of Philistia may have worshipped Dagon, but this appears unlikely during the earliest stages of their settlement,[33] when the Great Mother Goddess of the Aegean still held sway. Over the course of the centuries we can identify a gradual increase in the influence of the masculine in the Philistine cult. But this was a gradual process and not likely, in contrast to Singer's argument (1992: 439–40), to have taken place on their way to the land of Canaan. Indeed, there is evidence of mutual cultural influence throughout the eastern Mediterranean world during the Late Bronze Age, not only with elements of Aegean or Cypriot religion found in the Levant, but also with elements of

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chsmann (2000) views the bird motif as symbolic of water fowl, thus turning the Sea Peoples' ships into "bird-boats," whose origin he seeks not among the Mycenaeans but among the Urnfield culture of central Europe. Hachlili (1971: 134) has drawn attention to the association of the bird "with the worship of Astarte-Aphrodite in Cyprus and of Semiramis in Ashkelon, as well as in other Near Eastern cult centres and in Greece."

[33] The mention of Bit-Daganna in the annals of Sennacherib would indicate the worship of that deity at a later date; see Mazar (2000: 214).

Levantine culture found on Cyprus (Noort 1994: 176–78). Thus, while the Hebrew Bible preserves a reminiscence of Philistine religion, what it remembers is more appropriate to a later stage either in Philistine history or to the region of Philistia, now called more correctly coastal Palestine, long after the disappearance of the Philistines at the end of the seventh century BCE. The archaeological evidence would appear to indicate that the feminine divine was predominant in Philistia, a reality that was submerged by the patriarchal worldview of the Hebrew Bible.

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WHY RADIOCARBON DATING 1200 BCE IS DIFFICULT: A SIDELIGHT ON DATING THE END OF THE LATE BRONZE AGE AND THE CONTRARIAN CONTRIBUTION

Archaeological work employing sophisticated radiocarbon dating (and sometimes other natural science approaches) has made several significant advances in the last few years in clarifying and refining, or sometimes complicating/enriching(!), aspects or problems of east Mediterranean prehistoric chronology (e.g., Cichocki et al. 2004; Levy and Higham 2005; Cessford 2005; Manning et al. 2001a; 2006). Radiocarbon has become an essential element of modern prehistoric chronologies and our consequent historical syntheses. With appropriate samples and good methodology, radiocarbon dating has the direct potential to provide independent dates for archaeological contexts, separate from long-standing cultural assumptions, debated proto-historical information, and so on. At the same time, however, this work has been the target for much contrarian attack and discussion. Critics have sought to find fault with, modify, or dismiss the radiocarbon evidence, analyses thereof, and resultant chronologies —in most (recent) cases with the aim of achieving lower dates than those indicated by either radiocarbon or conventional archaeological-historical synthesis, or (usually) both. Although this may at first sight appear to be an unproductive dialectic with at least one side effectively ignoring the other in all but straw-man terms—and there is undoubted frustration on the radiocarbon side as work is routinely misrepresented—nonetheless, this situation can in fact be healthy for the wider field. The contrarian critique can (perhaps inadvertently) usefully lead to stronger and more robust radiocarbon work, and its tighter integration with archaeological evidence. The outcome is that instead of undermining the radiocarbon work they wish to attack or dismiss, the contrarians in fact strengthen it in a rather paradoxical and Nietzschean twist.

In this paper I look at one example: the attempt to date east Mediterranean archaeological contexts of the end of the Late Bronze Age around 1200 BCE—traditionally more or less the time of the collapse of the Hittite Empire, the end of the Late Cypriot IIC period on Cyprus, towards the end of the Late Helladic IIIB period in the Aegean, the beginning of the main attested period of the 'Sea Peoples' in the eastern Mediterranean, and the ensuing 12th century BCE so-called 'crisis years' (cf. Yakar 2006; Manning et al. 2001b; Warren and Hankey 1989; Sandars 1978; Ward and Joukowsky 1992; Oren 2000; and various papers in this volume). This study is prompted by the fine example of the contrarian approach to be found in a paper by Hagens (2006). I consider this topic in order to illustrate how important an understanding of the natural history of past radiocarbon

variations is to a sophisticated radiocarbon dating programme, and how *sequence* analysis in radiocarbon work (of temporally seriated archaeological data based on the excavated stratigraphy) offers a much more robust and powerful means to calendar age determinations than the simple calibration of a single radiocarbon age value (whether from a single date or an average of dates). Indeed, in many instances, selective citation of single dates or small groups can easily misrepresent the overall situation. In the case in point, Hagens achieves his purported criticism of existing work, and the suggestion of a lower chronology, by looking at sets of data in isolation, and not as part of sequences. This can be (and in this instance is) misleading. Radiocarbon analysis of archaeological sites is necessarily a holistic study. This paper employs as its example the impossibility of narrowly/successfully dating a context of 1200 BCE by single-case (or single set) radiocarbon dating. Such a context can only be successfully dated unambiguously and with precision via a sequence analysis. At the same time, the contrarian attack nicely forces clarification of the situation and so serves us well, since it makes the case it seeks to attack clearer and stronger in the long run.

Radiocarbon Calibration and Possibilities

Radiocarbon chronology, and its potential and limitations for a given calendar time interval, largely depends on the shape of the radiocarbon calibration curve. The current internationally accepted radiocarbon calibration dataset for the Holocene is IntCal04, derived for this time period from known age tree-rings mainly from Germany and Ireland (Reimer et al. 2004). The previous standard curve was IntCal98 (Stuiver et al. 1998), and was based largely on a similar database of underlying measurements, though some important additions of new data and improvements exist, for example in the 8th century BCE. The IntCal04 curve is an estimate at five-year resolution, employing a sophisticated random-walk model which smoothes the inherent noise in the raw calibration datasets on the basis of a moving five decade window. IntCal98 offered ten-year resolution and merely averaged the dates in that interval to achieve a data point for the calibration curve. It is thus more 'ragged' (or up and down) than the smoother IntCal04 curve. The two curves are compared for the period 1500–1000 BCE in Figure 1. While largely very similar, the slight smoothing of the prominent ups and downs—the 'wiggles'—in IntCal98 can be observed in IntCal04: the inset shows the curve data points with 1σ error bars in detail for a sub-period either side of 1200 BCE.

The shape of the calibration curve determines dating probabilities for individual radiocarbon ages in any given period. Radiocarbon ages which intersect with a steep slope in the radiocarbon calibration curve can thus yield single, relatively precise, calendar age ranges (for an example, see Fig. 2). In contrast, radiocarbon ages which intersect with periods with plateaux or multiple wiggles including similar radiocarbon ages, yield either multiple possible calendar age ranges or very wide—non-precise—age ranges (for an example of each, see Figs. 3 and 4). I note here that all calibration and calibration analysis in this paper has been

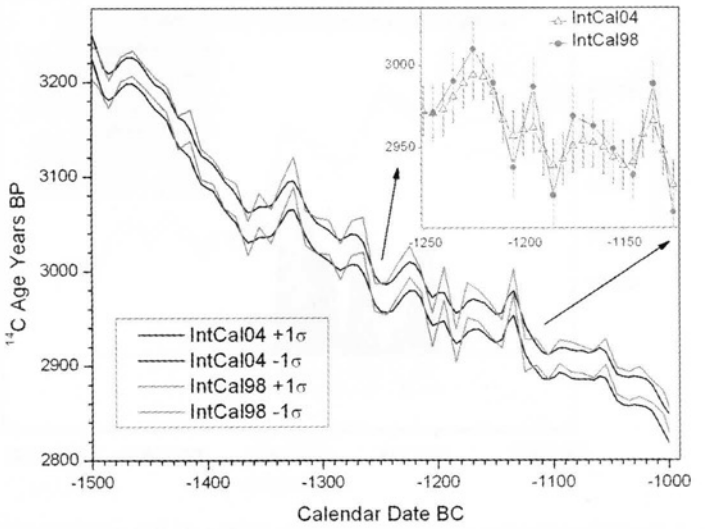

Fig 1. Comparison of the IntCal04 radiocarbon calibration curve (Reimer et al. 2004) with the IntCal98 radiocarbon calibration curve (Stuiver et al. 1998). Inset: detail of the calibration curve data points for the period either side of 1200 BCE.

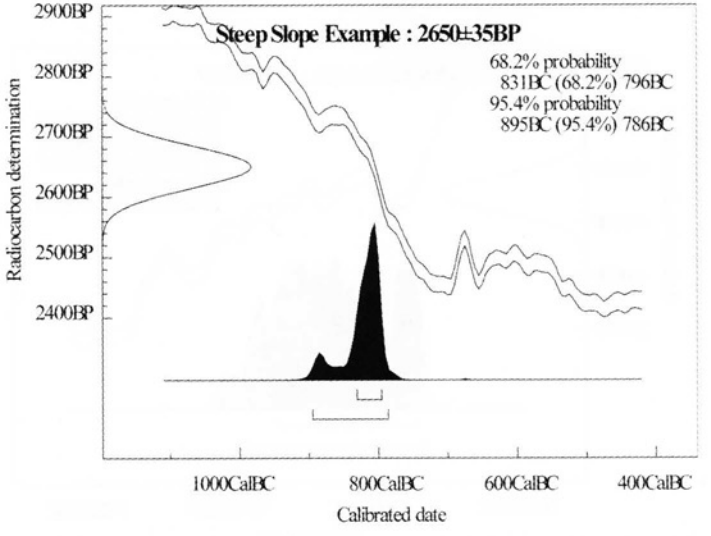

Fig. 2. Example calibration of a radiocarbon age (2650 ± 35 BP) which intersects with a steep slope (only) on the radiocarbon calibration curve, and so (with the radiocarbon timescale probability in effect condensed by the curve slope onto a narrow band on the calendar scale) yields a quite precise calendar age range: 831–796 BCE at 1σ and 895–786 BCE at 2σ. OxCal and IntCal04 with curve resolution at 5. The demarcated zones under each (overall) calibration probability distribution here and in the other figures in this paper show (upper one) the 1σ (68.2%) and (the lower one) the 2σ (95.4%) calibrated ranges.

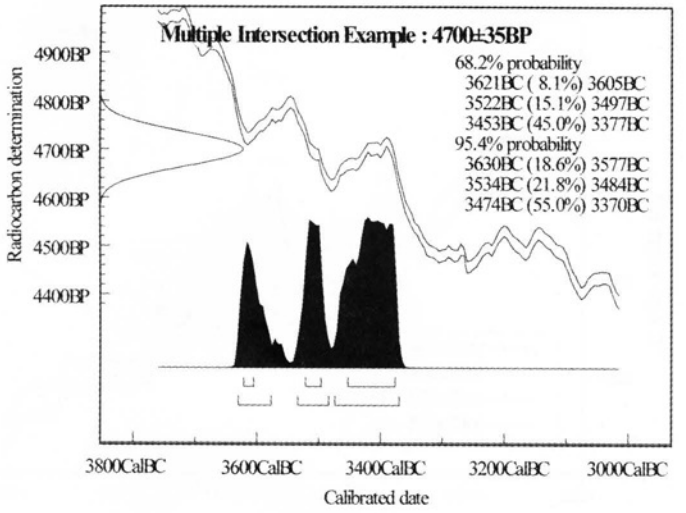

Fig. 3. Example calibration of a radiocarbon age (4700 ± 35 BP) which intersects with multiple discreet areas of the radiocarbon calibration curve because of a series of 'wiggles', and so yields three largely equally possible calendar age ranges within a wide overall 260 calendar year range (taking the 2σ limits). OxCal and IntCal04 with curve resolution at 5.

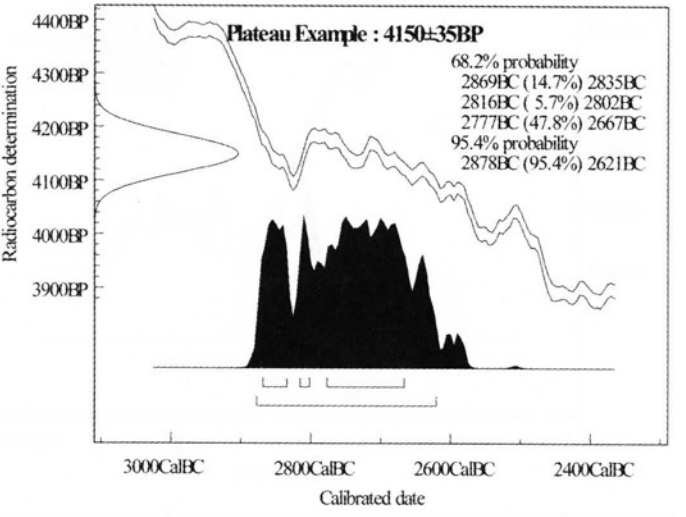

Fig. 4. Example calibration of a radiocarbon age (4150 ± 35 BP) which intersects with a plateau region of the radiocarbon calibration curve, and so yields a large spread of possible calendar age ranges. OxCal and IntCal04 with curve resolution at 5.

performed using the OxCal software (Bronk Ramsey 1995; 2001; http://c14.arch.ox.ac.uk/oxcal/), employing version 3.10 as current in 2006.[1]

Trying to Date 1200 BCE

Conventionally, the close of the Late Cypriot IIC period, or the Late Helladic IIIB period, has been placed around 1200 BCE, give or take a few decades, and the general collapse of Late Bronze Age civilizations in the region has been placed shortly thereafter in the early 12th century BCE. There is, of course, currently active debate on this point, with, on the one hand, some suggestions for earlier dates and for a more extended process with regard to Greece and Anatolia especially (e.g., Yakar 2006). On the other hand, scholars such as Hagens (2006) wish to argue for the opposite, and thus to reduce the date for the same transition from Late Helladic IIIB to IIIC, or Late Cypriot IIC to IIIA, down to around about 1125 BCE; in other words almost eight decades later. Thus, starting with the conventional view, and simplifying to the 'textbook' generalisation, a date of about 1200 BCE is a key watershed marker. Given this, and also given the recent proposals for change and/or recent criticism, it is therefore an interesting question to ask whether we can really date a horizon at 1200 BCE based on radiocarbon evidence? And, in reverse, are attempts (e.g., Hagens 2006) to claim that the radiocarbon evidence support a much later date valid?

If we consider the time range centred on a calendar date of 1200 BCE, we see that the calendar time range around it, so ca.1300–1100 BCE, given the shape and wiggles of the calibration curve, in effect acts like a plateau in the calibration curve (see Fig. 1, and inset). Thus the correct radiocarbon age for a sample dating about 1200 BCE, such as a radiocarbon measurement of 2960±35 BP, does include 1200 BCE in its calibrated range, but also offers a wide range of other possible dates: 1302–1051 BCE at 2σ confidence (see Fig. 5). In fact, we can quickly see that no radiocarbon age determination (in isolation), even at 'high precision' levels, can closely resolve a calendar date of 1200 BCE (see Figs. 6–9). It is an impossible task, if the dating is approached in isolation. And, in reverse, simulated radiocarbon ages for 1200 BCE give a wide range (Fig. 7, Table 1). Note that each run of such a simulation produces a slightly different set of values (see next section below). Even a hypothetical major focused dating programme measuring 20 good modern (as of 2006) AMS samples from a specific 'known' 1200 BCE context (let us assume short-lived seeds all from a context dated exactly to 1200 BCE), which in turn enable us to calibrate a high-precision weighted average with just a ±7 radiocarbon years standard error, nonetheless cannot narrowly resolve 1200 BCE. Instead, such a dataset finds a relatively wide date range covering quite a bit of both the 13th and 12th centuries BCE (Figs. 8–9).

[1] Since this paper was delivered and drafted, OxCal 4.0 has been made available. The new version has the advantage of making the Bayesian analyses much more fully transparent and numerically explicit.

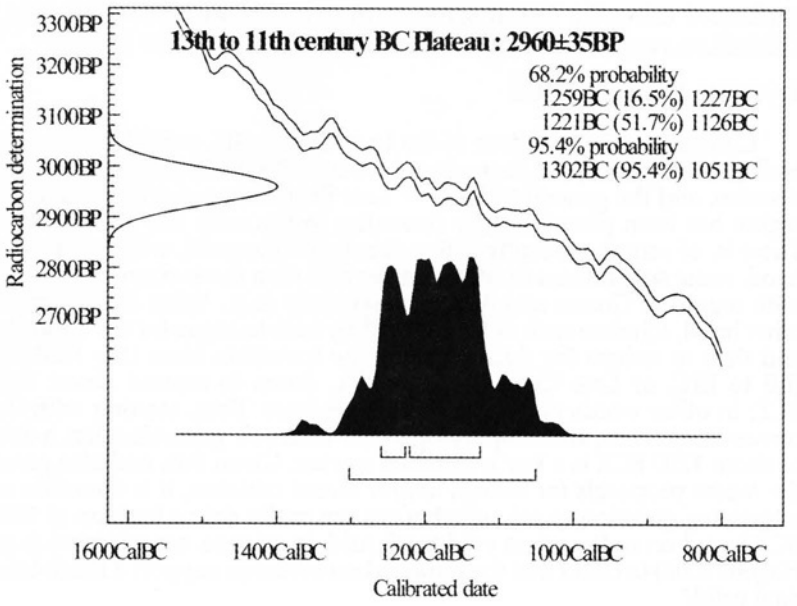

Fig. 5. Calibrated calendar age range for a radiocarbon measurement typical for a sample correctly dating around 1200 BCE. The plateau and wiggles in the calibration curve render the outcome into a wide calendar age range. OxCal and IntCal04 with curve resolution at 5.

What if the Correct Age (of the LC IIC/LC IIIA Transition) Really was 1125 BCE?

We have seen the problem of resolving 1200 BCE in isolation. Hagens (2006) discusses an 'Ultra-low chronology' (ULC), and purports to show how the radiocarbon evidence could be compatible with (and even support) this. According to the ULC, the transition from Late Helladic IIIB to IIIC is about 1145–1125 BCE, the transition for Late Cypriot IIC to IIIA is about 1125 BCE, and the transition in the Levant from Late Bronze II to the Early Iron Age is about 1100 BCE (Hagens 2006: 86, Table 2). Let us consider the case of the ULC dating for the Late Cypriot IIC to IIIA transition and a date of 1125 BCE. Can this date, if it were correct, be resolved from one of about 1200 BCE?

To explore this, we can repeat the process in Figure 7 and Table 1, but employing 1125 BCE. One example set of 20 simulated radiocarbon ages with measurement errors of ±30 for samples from 1125 BCE is shown in Table 2 (Note again that each run of such a simulation produces a slightly different set of values; see below). The weighted average of this set is 2915±7 BP. The calibrated age range for this weighted average is shown in Figure 10 as an example. When the simulation was run again and again a further 100 times the overall average age (from 120 simulations) became slightly higher at 2924 BP. Based on a sizeable sample (120 simulations), we might reasonably regard this as a representative average value. Similarly,

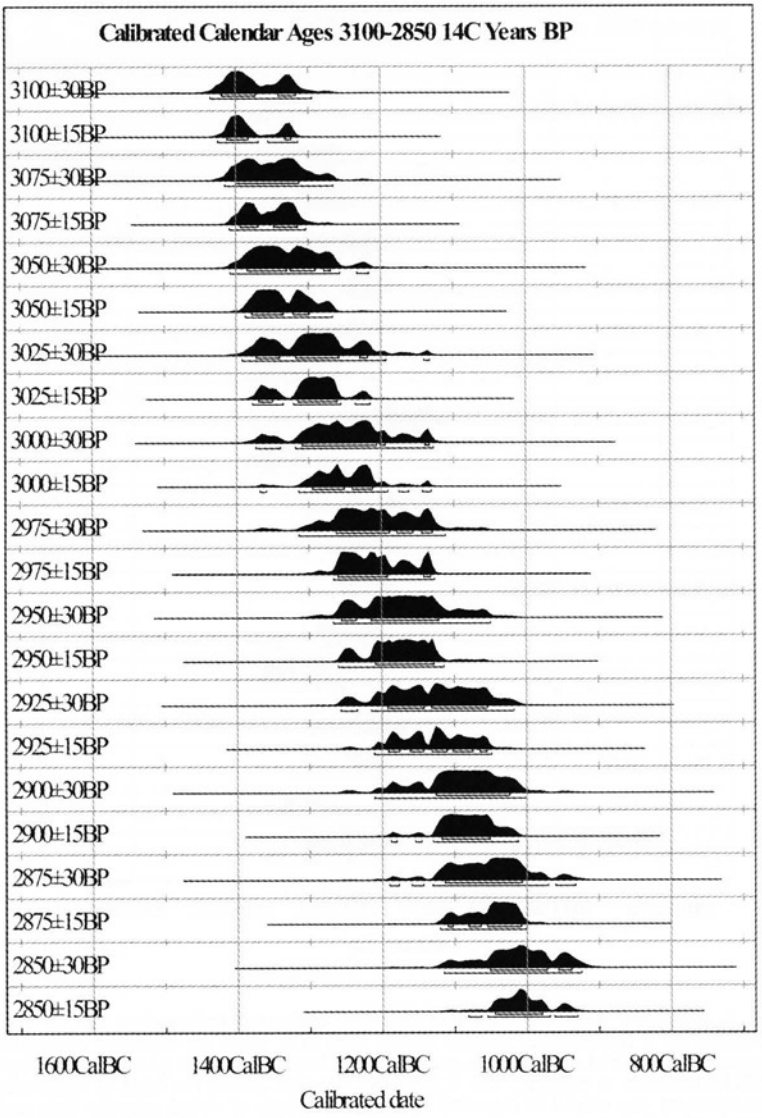

Fig. 6. Calibrated calendar age ranges which result from radiocarbon ages of 3100 BP to 2850 BP at either ±30 or ±15 radiocarbon years measurement precision by 25 radiocarbon year increments. OxCal and IntCal04 with curve resolution at 5.

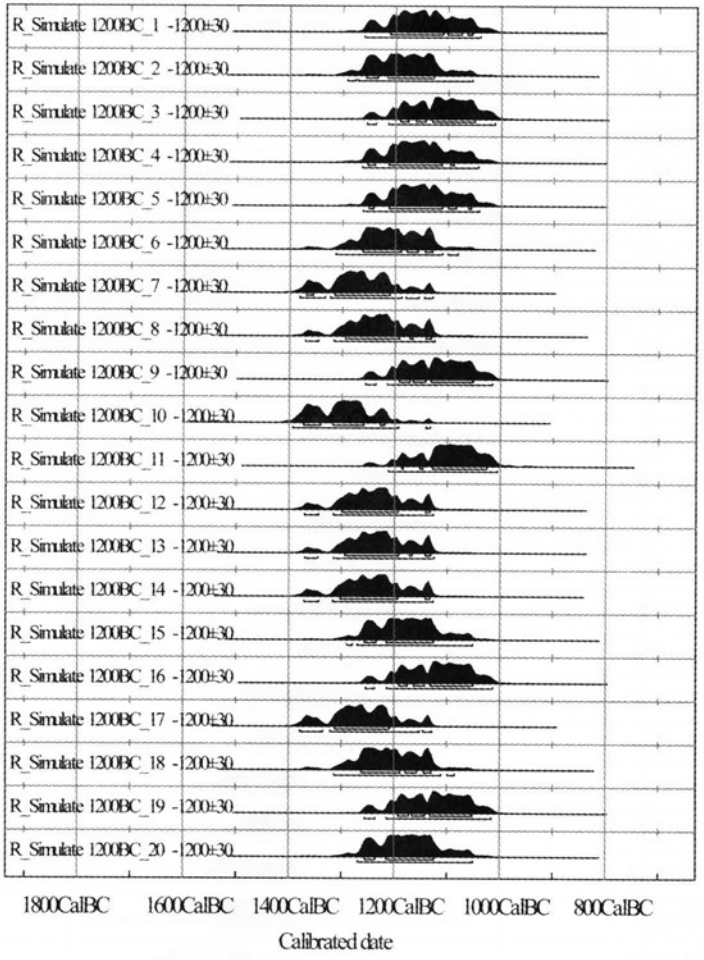

Fig. 7. Simulated (OxCal R_Simulate function) calibrated radiocarbon ranges for 20 iterations for a hypothetical sample dating 1200 BCE given an expected radiocarbon measurement error of ±30 (which is around a good level of precision possible for the better AMS laboratories at present). The R_Simulate function shows the kind of radiocarbon measurement you would be expected to get for a sample of stated calendar date and a given level of radiocarbon measurement uncertainty. In this case we see that a date of 1200 BCE can yield a very wide range of radiocarbon ages and thus calibrated calendar ages. OxCal and IntCal04 with curve resolution at 5.

Table 1. Twenty simulated radiocarbon ages (radiocarbon years BP) for a calendar date of 1200 BCE given a radiocarbon measurement uncertainty of ±30 years, as shown in Figure 7. Note the range in radiocarbon ages which could be expected in such a set even when the real age is the same year of 1200 BCE in all cases (given the measurement error of ±30 radiocarbon years, which is a good level of precision for typical measurements as of 2006). Hence we see, especially at times of marked wiggles or plateaux in the radiocarbon calibration curve (a product of the history of past natural atmospheric ^{14}C variations), the need to base analyses where possible on sets of data, which can offer representative sampling of the normal variation we can expect, and not on any single datum or selective citation of one age perhaps as preferred by a scholar as apparently supporting a particular position, since any one age (rather than a representative sample of the population of ages) could in some cases be very misleading (consider e.g., 1200BC_10 and 1200BC_11 in Figure 7 above, where the correct age of 1200 BCE only just sneaks into the edge of the 2σ calibrated range).

Calendar Date (as in Fig.7)	**Simulated Radiocarbon Measurement**
1200BC_1	2934±30BP
1200BC_2	2960±30BP
1200BC_3	2919±30BP
1200BC_4	2940±30BP
1200BC_5	2937±30BP
1200BC_6	2974±30BP
1200BC_7	3009±30BP
1200BC_8	2989±30BP
1200BC_9	2922±30BP
1200BC_10	3026±30BP
1200BC_11	2906±30BP
1200BC_12	2993±30BP
1200BC_13	2989±30BP
1200BC_14	2995±30BP
1200BC_15	2955±30BP
1200BC_16	2919±30BP
1200BC_17	3005±30BP
1200BC_18	2974±30BP
1200BC_19	2922±30BP
1200BC_20	2953±30BP
Average:	***2961±7BP***

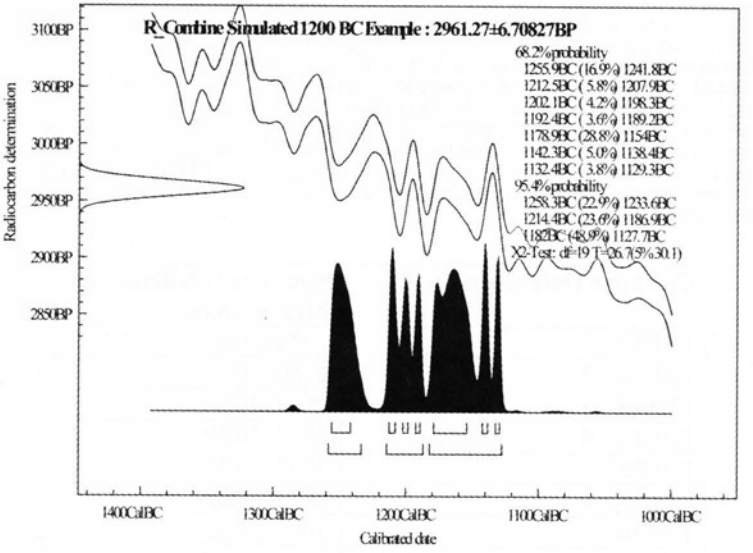

Fig. 8. Calibrated calendar age ranges for the average of the 20 simulated radiocarbon ages for 1200 BCE from Table 1 and Figure 7 (2961±7 BP). The range includes 1200 BCE (the target age), but also a large range of dates from 1258 to 1127 BCE at 2σ. The impossibility of achieving a narrow radiocarbon 'date' for 1200 BCE is thus highlighted. Even if one has, as here, 20 modern (2006 standard) high-precision AMS measurements, and can average them down to a very concise ±7 radiocarbon age BP number, one cannot avoid the plateau/wiggles in the radiocarbon calibration curve which also catch a wide range of probability in the 13th century BCE and the 12th century BCE. Even an absurdly tiny error of ±1, thus 2961±1 BP above, still leads to a similar calibration outcome: 1251–1240, or 1212–1190, or 1177–1160, or 1143–1131 BCE at 1σ, and 1258–1233, or 1215–1127 BCE at 2σ. OxCal and IntCal04 with curve resolution at 5.

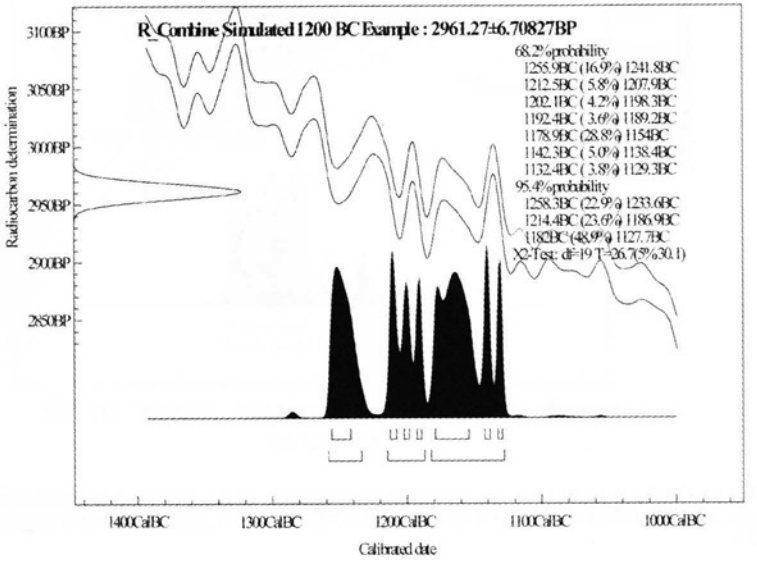

Fig. 9. As Figure 8 but using OxCal and IntCal98 and with curve resolution at 1. This use of IntCal98 and with curve resolution at 1 maximizes the ragged/wiggly record in this calibration curve, and so offers the maximum apparent difference versus the slightly smoothed IntCal04 outcome shown in Figure 8. We see that the overall 2σ range is all but identical. However, there is even more noise within the overall range. Ironically, given that 1200 BCE is the real age, and although it lies within the 1σ and 2σ ranges, it is apparently one of the less likely probabilities, because the sharp wiggles here act so as to concentrate more probability either earlier ca.1256–1242 BCE, or later ca.1179–1154 BCE! Contrast with Figure 8, where a date of 1200 BCE is in fact apparently more likely.

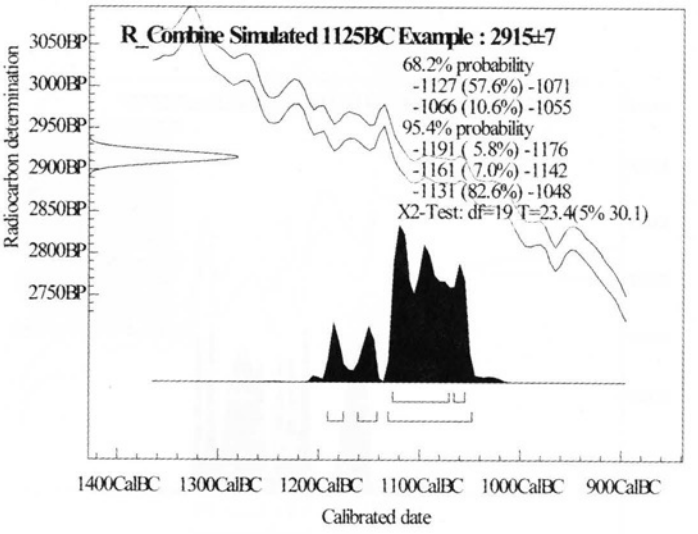

Fig. 10. Calibrated calendar age ranges for the average of the 20 simulated radiocarbon ages for 1125 BCE from Table 2 (2915±7 BP). OxCal and IntCal04 with curve resolution at 5.

returning to the 1200 BCE simulation above in Table 1, when this was run again and again another 100 times, the average over 120 simulations became 2955 BP (slightly lower than the average found in Table 1, which was based on just one set of 20 simulations); again we might treat this as a reasonable representative value. Let us use these values to investigate whether we could hope to discriminate between contexts of 1200 BCE and 1125 BCE. At first sight, the weighted averages obtained for the 120 date simulated 1200 BCE and 1125 BCE sets are not that dissimilar looking: 2955 BP versus 2924 BP (see Fig. 11). Let us assume a 'good' archaeological hypothetical scenario where 10 radiocarbon measurements on annual resolution (short-lived) samples comprise two sets dating our 1200 BCE and 1125 BCE contexts. The measurement error on the weighted average (assuming each constituent measurement at ±30) would be nine (^{14}C years). In this case, the two sets of radiocarbon data, 2955±9 BP and 2924±9 BP, could in fact be stated to be significantly different (that is they are not compatible with representing the same event at 95% confidence level), with T=5.9 > the 5% maximum level value of 3.8 (Ward and Wilson 1978). If the two contexts were dated on the basis of 20 dates each, and the weighted average error was reduced to ±7, they would be even more clearly differentiated: T=9.8 > the 5% maximum level value of 3.8. The point of differentiation in this example is with a set of seven data on each side, and so an error on each average of ≤11 (Fig. 11). Thus, in principle, given a large modern dating project, one could hope to discriminate between contexts of 1200BCE and 1125BCE, but only just, and in reasonably good, or better, circumstances.

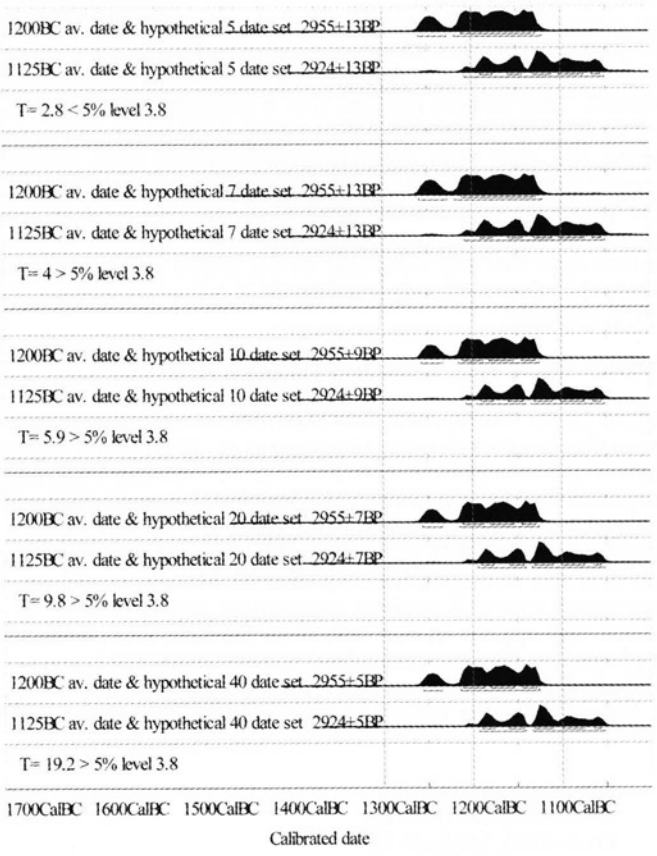

Fig. 11. Comparisons of the average radiocarbon values that might be expected, employing the average radiocarbon age from the 120 date simulations referred to in the text, for contexts of 1200 BCE and 1125 BCE for sets of 5, 7, 10, 20 and 40 dates for each context given a ±30 radiocarbon year error on each of the constituent measurements. The comparison of the two sets of 5 dates could not be distinguished at the 95% confidence level, whereas the comparisons with 7 dates, and more, all indicate a (significant) difference in ages at the 95% confidence level as represented by the two contexts (more and more clearly as the sample numbers increase). Data from OxCal and IntCal04, curve resolution set at 5.

If one compares Tables 1 and 2, one can observe (apart from the different average values) the rarity of ages greater than 2950 BP in Table 2 (2 of 20 examples, and 24 out of 120 simulations in total, or 20%), versus 12 of 20 examples in Table 1 (and 62 out of 120 simulations, or 52% overall). This reflects the fact that a radiocarbon age greater than or equal to 2952 BP does not include 1125 BCE in its calibrated range (employing IntCal04 with curve resolution set at one). Therefore, we might argue that if one were to examine a real archaeological dataset from the later Late Cypriot IIC period, if the data tend to have quite a range of radiocarbon ages, and especially include a number of radiocarbon ages that fall variously in the ≥3000 to 2950 BP range, it is more likely that they will reflect a 1200 BCE (give or take) scenario than a 1125 BCE scenario.

Late Cypriot IIC to IIIA Data and Hagens' Analysis

Hagens (2006: 90–93) considers three sets of short-lived radiocarbon dates from Cyprus (taken from Manning et al. 2001b), and suggests that these data could better be dated to the later 12th century BCE, rather later than proposed by Manning et al. (2001b). Here I merely discuss the data as employed by Hagens, and not the other dates, including a couple of additions since the 2001 paper from the Maroni site, nor subsequent refinement of the stratigraphic sequence at Maroni based on detailed post-excavation study. A revised assessment incorporating all current information will appear in due course in the final site publication. The data employed by Hagens comprise:[2]

(1) Seeds from the later to late Late Cypriot IIC final occupation of Maroni *Vournes* (Ashlar Building) and Maroni *Tsaroukkas* Buildings 1 and 2:

KN-4647, 2969±44 BP
OxA-8265, 2960±35 BP
OxA-8266, 2985±35 BP
OxA-8267, 2940±35 BP
OxA-8324, 2930±40 BP

The weighted average is 2957±17 BP (for an unexplained reason Hagens uses the non-weighted average). Calibrated ranges BCE at 1σ: 1251–1243 (6.3%), 1212–1187 (22.7%), 1182–1154 (24.7%), 1145–1129 (14.6%) (IntCal04 and OxCal, curve resolution 5).

(2) A set of short-lived (0–5 years) branch samples forming a basket found in the final occupation (destruction) horizon at Apliki *Karamallos*, which is dated to the Late Cypriot IIC/IIIA transition and/or early IIIA period. This final occupation is some time *later* than the later Late Cypriot IIC as represented at Maroni (indeed the Apliki building was only constructed during LC IIC). As Hagens tries to argue, the basket *could* have been in use for a period of time before the destruction, but suggesting an interval of 'some decades' seems to be special pleading.

[2] For further references regarding these archaeological contexts, see Manning et al. (2001b).

Table 2. Twenty simulated radiocarbon ages (radiocarbon years BP) for a calendar date of 1125 BCE given a radiocarbon measurement uncertainty of ±30 years (this table derives from the same process that led to Table 1 for 1200 BCE).

Calendar Date 1125BC	**Simulated Radiocarbon Measurement**
1125BC_1	2872±30BP
1125BC_2	2915±30BP
1125BC_3	2934±30BP
1125BC_4	2916±30BP
1125BC_5	2842±30BP
1125BC_6	2930±30BP
1125BC_7	2945±30BP
1125BC_8	2906±30BP
1125BC_9	2947±30BP
1125BC_10	2896±30BP
1125BC_11	2922±30BP
1125BC_12	2891±30BP
1125BC_13	2883±30BP
1125BC_14	2960±30BP
1125BC_15	2914±30BP
1125BC_16	2993±30BP
1125BC_17	2912±30BP
1125BC_18	2928±30BP
1125BC_19	2913±30BP
1125BC_20	2884±30BP
Average:	***2915±7BP***

AA-33440, 2990±55 BP
AA-33441, 2960±60 BP
AA-33442, 3015±55 BP
AA-33443, 3050±55 BP
AA-33444, 2955±55 BP

(3) Seeds from inside the basket (2) from the final occupation of Apliki, and thus Late Cypriot IIC/IIIA transition or early IIIA period. These seeds should date later than (1) by some margin and later than (2) (whether by a short interval, basket not in existence for very long, to 'some decades', Hagens' special pleading).

AA-33450, 2990±45 BP
AA-33451, 2960±45 BP
AA-33452, 2930±60 BP
AA-33452A, 2945±50 BP
AA-33453, 2960±50 BP
AA-33454, 2955±65 BP

The weighted average is 2960±21 BP (for an unexplained reason Hagens uses the non-weighted average). Calibrated ranges BCE at 1σ: 1255–1237 (12.7%), 1214–1152 (42.1%), 1147–1129 (13.4%) (IntCal04 and OxCal, curve resolution 5).

We can immediately observe that none of the sets by themselves particularly wants to date in the second half of the 12th century BCE (and especially ca. 1125 BCE), contrary the suggestion of Hagens. Each set offers an average age around and/or greater than the 120 date simulated average age for 1200 BCE (see above), and not an average compatible with the 120 date simulated average age for 1125 BCE (see above).

Hagens is unhappy that (2) has a higher radiocarbon age than (1), despite coming from a culturally later context, and hence he suggests the heirloom idea for the basket. But simply glancing at the record of natural radiocarbon levels from the period around the 13th–12th centuries BCE (Fig. 1; and looking especially to the less smoothed IntCal98 data), we can also see that the situation could as easily (even better) be explained in terms of these known variations while keeping the samples in the known cultural/stratigraphic order (i.e. in their sequence).

Such a sequence analysis employing the prior archaeological order information via a Bayesian analysis is shown against IntCal04 and then IntCal98 in Figures 12 and 13, and some of the findings are detailed in Table 3.

We can see from this analysis that the Late Cypriot IIC to Late Cypriot IIC/IIIA transition (or early Late Cypriot IIIA) data can happily lie in their cultural/stratigraphic order in synchronism with the radiocarbon data. No special pleading is required. Only the final occupation/destruction seeds (3) from Apliki likely date to the mid-12th century BCE (2nd or 3rd quarters), and even then most likely (taking the 1σ ranges) before 1125 BCE. This final occupation at Apliki is contemporary with early LHIIIC in the Aegean (whether termed LC IIC/IIIA transition by Kling 1989; or early LC IIIA by Taylor 1952). The late Late Cypriot IIC samples from Maroni (1) most likely date somewhere between ca.1259–1197 BCE, or 1261–1194

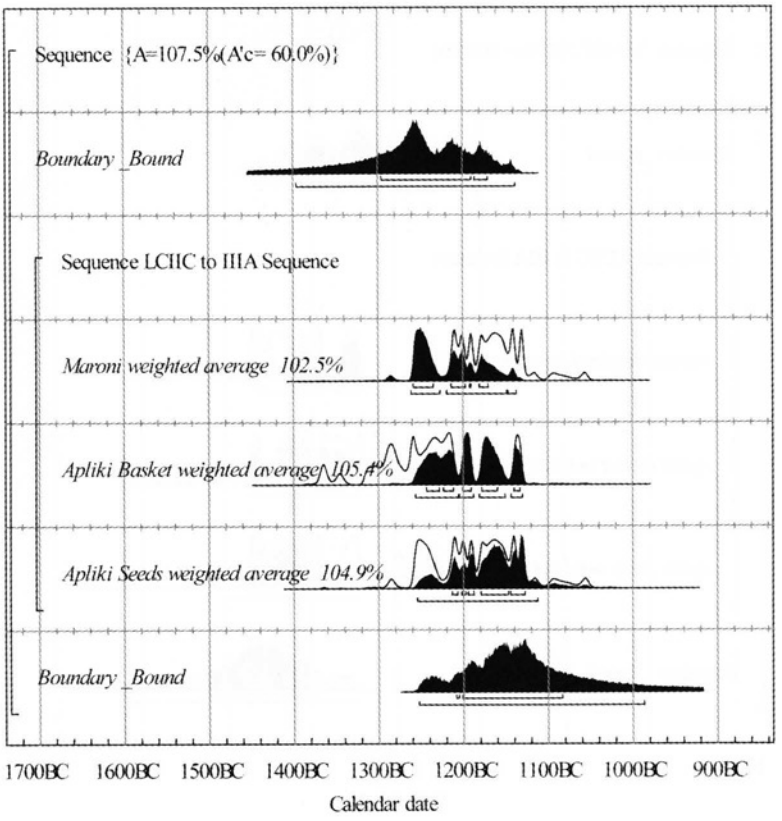

Fig. 12. Sequence analysis of the weighted average values for the three sets of short-lived samples from Maroni and Apliki discussed above in the text using OxCal and IntCal04 (curve resolution set at 5). The hollow histograms show the calibrated range for each weighted average in isolation, and the solid histograms show the modelled calendar probabilities in view of the sequence analysis. The analysis comfortably surpasses a 95% confidence threshold (overall and for each constituent element). The cultural/stratigraphic order of the samples is compatible with the radiocarbon data and the calibration curve (history of past natural radiocarbon levels). No special pleading is required.

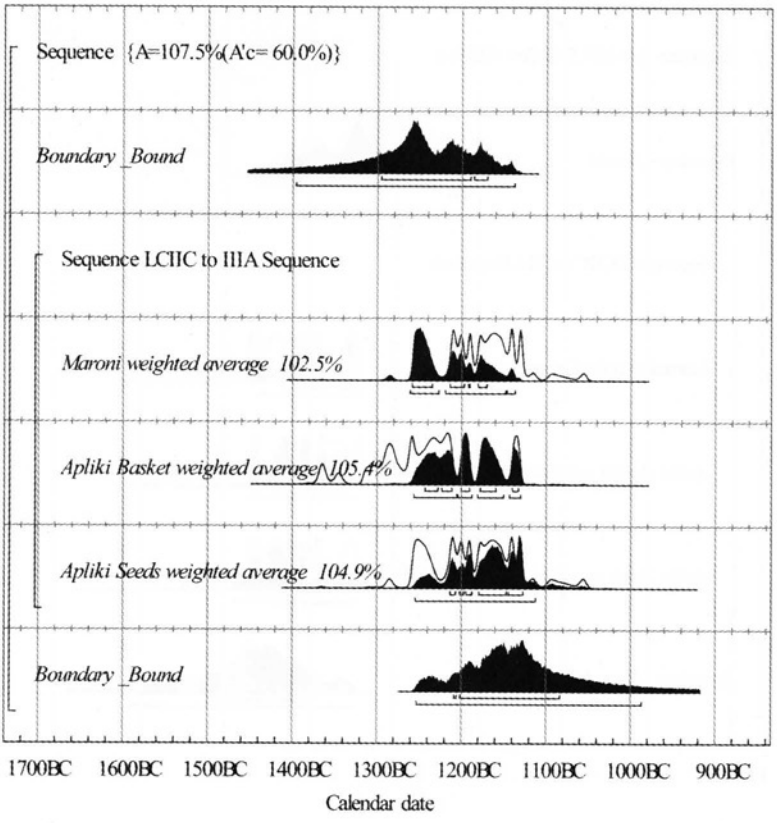

Fig. 13. Sequence analysis of the weighted average values for the three sets of short-lived samples from Maroni and Apliki discussed above in the text using OxCal and IntCal98 (curve resolution set at 1). The hollow histograms show the calibrated range for each weighted average in isolation, and the solid histograms show the modelled calendar probabilities in view of the sequence analysis. The more wiggly (un-smoothed) IntCal98 dataset offers an even better match of the observed cultural/stratigraphic ordering versus the radiocarbon record. The analysis comfortably surpasses a 95% confidence threshold (overall and for each constituent element). No special pleading is required.

BCE, and the basket from Apliki (2) likely dates somewhere in between, either 1245–1161 BCE or 1243–1160 BCE.

Table 3. The 1σ calibrated ranges found in the sequence analysis shown in Figures 12 and 13.

	IntCal98 (curve res = 1) 1σ Calibrated ranges BC	**IntCal04 (curve res = 5) 1σ Calibrated ranges BC**
1. Maroni Seeds later LCIIC	1259–1235 (40.6%), 1214–1197 (17.5%), 1192–1190 (1.2%), 1181–1170 (8.9%)	1261–1226 (47.1%), 1219–1194 (21.1%)
2. Apliki Basket LCIIC/IIIA	1243–1228 (14.0%), 1223–1211 (11.3%), 1201–1191 (13.5%), 1178–1160 (22.2%), 1140–1133 (7.1%)	1245–1191 (56.7%), 1176–1161 (11.5%)
3. Apliki Seeds LCIIC/IIIA	1213–1207 (5.2%), 1202–1197 (3.4%), 1194–1188 (6.3%), 1179–1147 (34.7%), 1144–1127 (18.7%)	1213–1187 (23.0%), 1179–1127 (45.2%)

Beyond the Single Case (or set) and Selection to Sequence Analysis

As we have seen, the problems of ambiguity are clear for trying to date single dates, or individual sets of dates, for one context in isolation in the period around 1200 BCE. This is because of the shape of the radiocarbon calibration curve (i.e. the history of past natural radiocarbon fluctuations). The only solution to such measurement constraints and ambiguity is to incorporate prior knowledge so that a sequence of data of known order can (at least partly) resolve the ambiguity by requiring partition of the otherwise wide dating ranges, as shown in Figures 12 and 13.

The perfect case for such sequence analysis is a series of data of both known order and known spacing (e.g., a tree-ring sample). This 'fixed sequence' can be directly fitted against the radiocarbon calibration curve (for discussion and further references, see Galimberti et al. 2004). A hypothetical example is shown for a set of five samples which all have a radiocarbon age of 2960±30 BP (i.e. all could seem to be 1200 BCE samples, given Table 1), but we 'know' that only the third sample is 1200 BCE, and the other ones are part of a sequence spaced apart by 20 years in each case. The raw data are shown in Figure 14: five radiocarbon determinations all with the same broad calendar age range.

The analysis incorporating the known sequence (we are assuming a tree-ring sequence situation, of samples with known spacing) is shown in Figure 15. This shows the raw calibrated age distributions (the hollow histograms; compare with Fig. 14), which are all the same and cover a wide calendar age range including 1200 BCE, and then, given the prior age model known, the calculated calendar ages applying this known information are shown as the solid histograms (employing the Bayesian

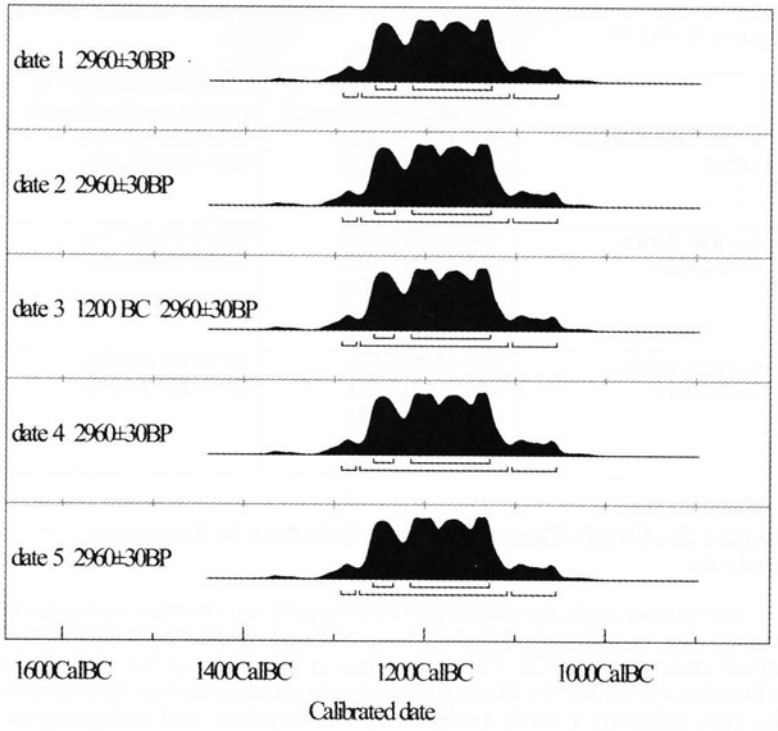

Fig. 14. Calibrated radiocarbon age ranges for 5 hypothetical radiocarbon measurements on samples of radiocarbon age 2960±30 BP. One sample in fact is 1200 BCE in calendar date (date 3 in this hypothetical example), the others are before and after, but with the same radiocarbon age found due to the effective plateau in radiocarbon ages around this time. We see the fairly large age range for each sample and the clear ambiguity problem. OxCal and IntCal04 (curve resolution set at 1).

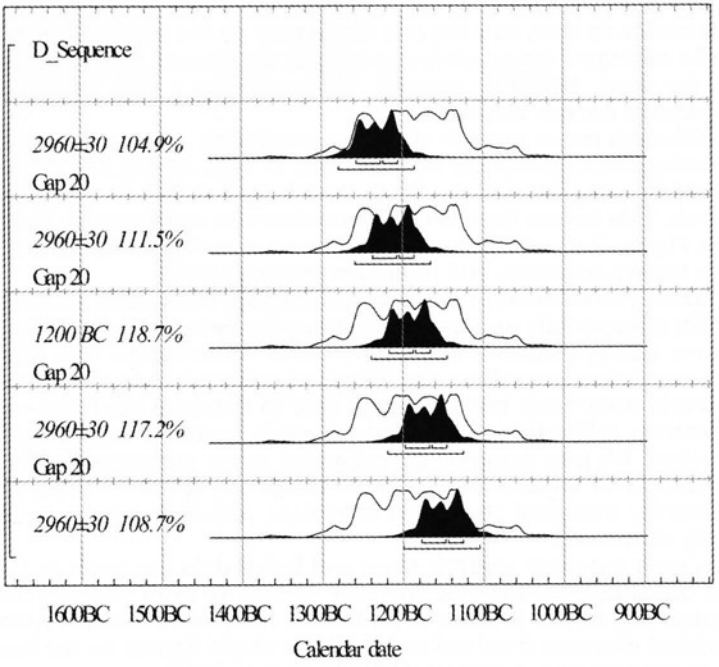

Fig. 15. Sequence analysis of the 5 data in Figure 14 applying the 'known' sequence for this hypothetical example (5 samples each 20 calendar years apart). The agreement index value is 129% versus the approximate 95% confidence threshold figure of 31.6% for the overall sequence. Each sample's individual agreement with the model also exceeds the approximate 95% confidence threshold value of 60% in OxCal. Data from OxCal and IntCal04 with 1 year calibration curve resolution. The 1σ range for the 1200 BCE sample is 1217–1187 (39.8%), or 1184–1166 BCE (28.4%) and 2σ 1239–1145 BCE.

analytical tools in OxCal). The samples in the known order and with the known spacing are accordingly spread across the possible (common) dating range, and the 1200 BCE sample is left much more clearly in this calendar time zone with the other samples more evidently tending to be either earlier, or later, as is the case (three now do not include 1200 BCE in their 1σ calibrated ranges; only one sample, the second, is still ambiguous with the third, 1200BCE, sample). Thus we have a 75% improvement compared to the raw situation.

Although not as capable of narrow resolution, we can also apply an archaeological sequence (as we have seen in Figs. 12 and 13), where the order of the samples is known, but not the length of the relevant spacings/intervals. This too can hope to clarify an otherwise ambiguously long time range. Figure 16 shows the same information as in Figure 14, but this time with a known sequence, and unknown spacing (gaps).

Where the calibration curve is challenging, such analyses may still not offer an especially precise date, but they can nevertheless substantially improve dating precision and clarify order relationships into calendar terms even when everything else (identical radiocarbon ages—an *unlikely* real-world occurrence but employed here to illustrate the point—and a radiocarbon calibration curve plateau) work against a highly resolved date range. We may compare the calibrated range outcomes for the 1200 BCE sample in Figures 14–16. These values are listed in Table 4. The significantly increased resolution is evident, although ambiguity is not entirely eliminated.

In such sequence analysis more and better data can serve to further refine the situation—however, this only applies up to an extent as there is a diminishing return in terms of additional resolution, once the numbers of seriated elements involved reaches high single figures on the basis of known-age tree-ring examples (Galimberti et al. 2004).

The successful dating, and achievement, of a fairly high-resolution chronology for the period 1300 to 1100 BCE at a multi-strata archaeological site, or across several sites (if the strata can be tightly linked via material culture analysis), could reasonably be attempted with a seriated set of data comprising around half a dozen elements. Figures 17 and 18 give a hypothetical example for a six-phase (or sub-phase) stratigraphic sequence dating between 1300 and 1100 BCE, based on simulated radiocarbon ages for 1300 BCE, 1260 BCE, 1220 BCE, 1180 BCE, 1140 BCE and 1100 BCE. The hypothetical example assumes that each phase or sub-phase is dated by at least three modern AMS radiocarbon dates on short-lived (secure, primary context) samples. Thus the weighted average for each phase/sub-phase/context is likely going to be better than ±17 radiocarbon years BP (achieved with the weighted average of three data with ±30 year reported errors).

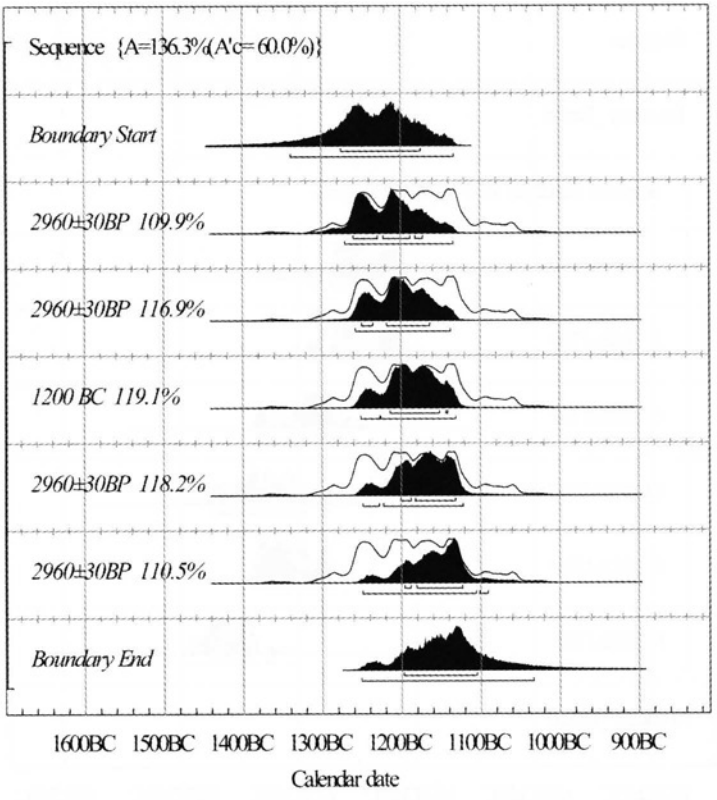

Fig. 16. Sequence analysis of the Figure 14 data with a 'known' sequence, but no information on the details of the spacings/intervals, and thus a typical archaeological stratified sequence scenario. OxCal and IntCal04 with 1 year calibration curve resolution. For the 1200 BCE sample: 1214–1151 BCE forms the main 1σ range (65.5% probability) and the 2σ range overall is 1250–1131 BCE. Note: the ranges are a little wider than for the fixed sequence analysis in Figure 15. Note also that each run of a sequence like this varies a little.

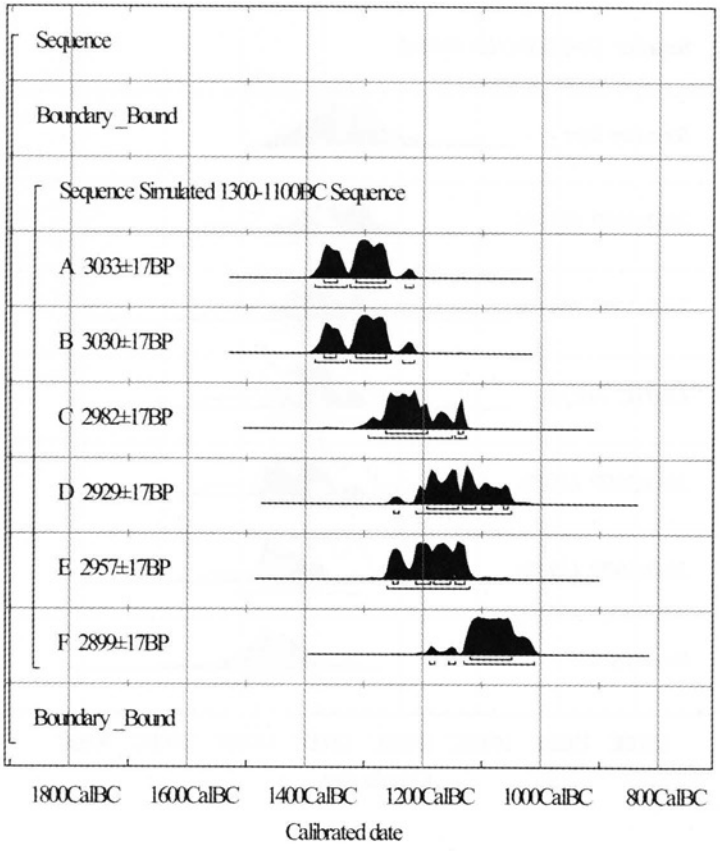

Fig. 17. The raw weighted averages for each of the six constituents of the hypothetical 1300–1100 BCE sequence in their known archaeological order. The data represent simulated data, but nicely represent the typical apparent 'problems' found by archaeologists, with some apparently overlapping data and with a radiocarbon age inversion from D to E, etc. Data from OxCal and IntCal04, curve resolution set at 5.

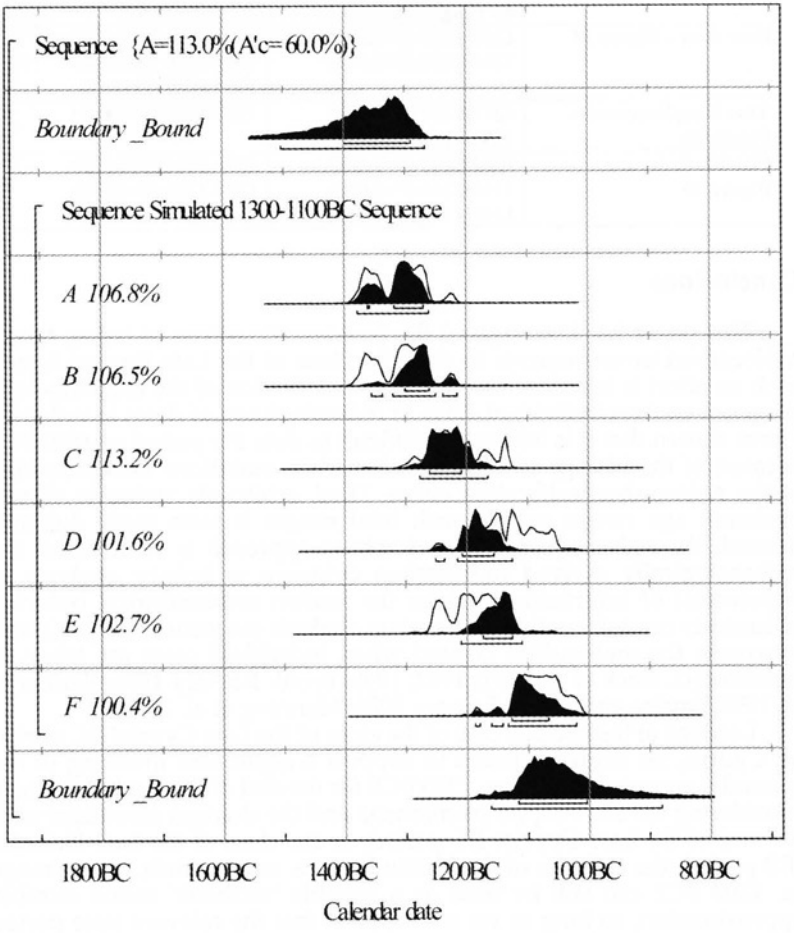

Fig. 18. Sequence analysis of the data in Figure 17 given the known archaeological sequence (but no other information). A nicely ordered and relatively well resolved chronology emerges. The minimum assumption here is six phases/sub-phases/contexts and three (modern AMS) dates per such unit on short-lived samples. Thus at least 18 radiocarbon dates are required. The hollow histograms show the calibrated probabilities for each of the constituent elements in isolation (as in Figure 17) and the solid histograms show the calculated calendar probabilities applying the sequence model incorporating the known archaeological knowledge (the order of the samples). The analysis very comfortably surpasses a 95% confidence threshold (overall and for each constituent element). Data from OxCal and IntCal04, curve resolution set at 5.

Table 4. Comparison of the calibrated ranges found from the raw data (Figure 14) and then the different analyses shown in Figures 15–16. P=Probability (out of a total of 1.0).

	1σ range(s) BC	2σ range(s) BC
Raw data – Figure 14	1257–1235 (P=0.133) 1215–1128 (P=0.549)	1292–1276 (P=0.023) 1272–1109 (P=0.861) 1104–1055 (P=0.07)
Tree Ring Sequence – Figure 15	1217–1187 (P=0.398) 1184–1166 (P=0.284)	1239–1145 (P=0.954)
Flexible Sequence – Figure 16	1214–1151 (P=0.661) 1145–1144 (P=0.012) 1141–1140 (P=0.009)	1251–1228 (P=0.103) 1226–1131 (P=0.851)

Conclusions

This paper has investigated the problematic nature of trying to use radiocarbon measurements to date the close of the Late Bronze Age, if such an effort is based on the selection and citation of the calibrated age ranges of various individual dates or individual sets of dates in isolation. I have shown that it is inherently difficult to date the period ca.1200 BCE because of the history of natural radiocarbon variations as represented in the radiocarbon calibration curve. Thus, arbitrarily trying to choose preferred age ranges within such total ranges is even more dubious. Instead, the only appropriate and robust approach is to consider the archaeologically derived radiocarbon evidence in holistic analyses of sequence(s) of information, where the known archaeological ordering of contexts can inform the radiocarbon analysis (sequence analysis), and overcome the ambiguities created when individual cases are taken in isolation (cf. Buck et al. 1991; 1992; 1999; Bronk Ramsey 1995; Zeidler et al. 1998; Bayliss and Bronk Ramsey 2004; Manning et al. 2006).

Looking at the specific case of the close of the Late Cypriot IIC period on Cyprus, no evidence exists to support a significant lowering of the generally accepted date of ca. 1200 BCE for the end of this period. In turn, considering the Sea Peoples phenomena and the changes associated with the end of the Late Cypriot IIC period, or the close of the Late Helladic IIIB period, the collapse of the Hittite Empire, and so forth, a date range ca. 1200 BCE can still be used as a suitable 'textbook' round number approximation, so long as we are mindful that the relevant time period might in fact have been a few decades earlier or later (and need not have been contemporary across the relevant cultures/areas), and that the processes involved covered periods of time rather than point events.

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Kevin D. Fisher

THE "AEGEANIZATION" OF CYPRUS AT THE END OF THE BRONZE AGE: AN ARCHITECTURAL PERSPECTIVE

Introduction

The "aegeanization" (or, alternatively, "mycenaeanization" or "hellenization") of Cyprus is one of the more contentious debates for those engaged in the study of the island's Late Bronze and early Iron Age periods. In spite of an ever-growing collection of conference proceedings and edited volumes (e.g., Gitin et al. 1998; Karageorghis ed. 1994; Karageorghis and Muhly 1984; Oren 2000), books and monographs (e.g., Burdajewicz 1990) and individual articles (e.g., Barako 2000; Iacovou 1999; Sherratt 1992) that relate to this issue, it is apparent that we have yet to achieve widespread agreement on the nature, timing and impact of this process. My own contribution to this debate arises from my study of the relationship between architecture and power on Cyprus during the Late Bronze Age (Fisher 2006, 2007). In reviewing previous studies of this architecture, it has become abundantly clear that claims of foreign influence are often an important aspect of how Late Cypriot buildings are interpreted and that the origins and nature of such influences have important implications for our understanding of Late Bronze Age (LBA) sociopolitical dynamics. The following study therefore represents an initial foray into addressing the issue of Aegean elements in LBA Cypriot architecture based on an approach that views built space as the context for social interaction.

I will begin by outlining the differing viewpoints in the ongoing debate regarding the aegeanization of Cyprus and then discuss the supposed architectural manifestations of this process. I will then introduce a method for analyzing built space that might shed light on the sociopolitical dynamics surrounding one particular innovation—large halls with central hearths. I will demonstrate that any aegeanization represented by this innovation should be viewed in the context of selective borrowing and adapting of Mycenaean cultural traits by Cypriot elites, rather than as the product of Mycenaean colonization.

Outline of Current Views

At the risk of oversimplifying matters, two broad models for the aegeanization of Cyprus can be discerned. What I would call the colonization model holds that a significant population (or populations)

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of Aegean people (also referred to as Mycenaeans or Achaeans) arrived in Cyprus in and around 1200 BCE, toward the end of the Late Cypriot (LC) IIC.[1] Proponents of this model see these people as refugees, settlers or colonists, who left their homelands in search of a "better life" or economic opportunity following the collapse of the Mycenaean palatial system (e.g., Burdajewicz 1990; Catling 1975; Coldstream 1994; Dikaios 1969–71: 509–23; Iakovou 1989, 1999; Karageorghis 1994, 1998, 2000, 2002: 71–113). While those who support this model assume the arrival of significant populations of Aegean settlers on the island, opinions vary as to their initial visibility and immediate cultural impact as reflected in the archaeological record.

Karageorghis, who historically has been the primary advocate of this model, argues that the settlers served as the catalyst for the "radical social and religious innovations that occurred in Cypriote society during the Late Cypriote IIIA period" (2000: 258). Whether they were mainland Greek Mycenaeans or "Mycenaeanized" peoples from elsewhere in the Aegean sphere (or a combination of both), the colonists are often credited with bringing to Cyprus a number of innovations in the fields of metallurgy, ceramics, art and architecture (see summaries in Karageorghis 2000; 2002: 84–113; Steel 2004a: table 7.1). They began locally to produce pottery in the Mycenaean style—the Mycenaean IIIC:1b "calling card" of Aegean settlers throughout the eastern Mediterranean. Proponents of the colonization model often cite various foundation legends relating to the arrival of Greek heroes in Cyprus (and elsewhere in the eastern Mediterranean) following the Trojan War as additional evidence for Aegean migrations to the east (e.g., Catling 1994: 137; Gjerstad 1944). In contrast with Karageorghis' view, other scholars (e.g., Catling 1994; Iacovou 1999), while accepting the idea of large-scale Aegean colonization, are less sanguine about the degree to which the settlers achieved any sort of dominance, either politically or culturally, before the LC IIIB (i.e. the beginning of the Iron Age). Iacovou (2001, 2006) argues that the Mycenaean immigrants, while introducing Greek language to the island, were initially largely invisible in archaeological terms and resettled in the LC IIIA urban centres. [2]

The Mycenaean settlers are typically equated with the Sea Peoples, or at least one of perhaps several groups that made up the Sea Peoples, who are thought to have played a key role in the disruptions and population movements that characterized the end of the LBA in the eastern Mediterranean. On Cyprus, they are usually associated with the destructions, reconstructions and population displacement that mark the LC IIC to IIIA transition. Over the course of the 11th century, these colonists, bolstered by additional waves of Aegean immigration, completed the process of hellenizing Cyprus. What the colonization model essentially describes then is a process of acculturation by which Greek culture came to dominate the island in the early Iron Age, save

[1] Recent radiocarbon evidence places the date of the LC IIC period at 1340–1315 to 1200 BCE +20/-10 (Manning et al. 2001).

[2] Iacovou further suggests that these settlers upheld the island's metal industry during the twelfth century and, "to judge from the outcome and the literary tradition" (2006: 327), took the lead in the reorganization of the island's Early Iron Age settlement pattern.

initially for localized pockets of native Cypriot (often referred to in the literature as "Eteocypriot") and Phoenician culture.

A number of scholars have taken issue with various aspects of the colonization model and have emphasized the great degree of continuity seen in most aspects of Cypriot material culture between the LC IIC and LC IIIA periods. They prefer instead to see any aegeanization at that time in terms of influences that developed out of intensifying economic interaction between Cyprus and the Aegean during the 14th and 13th centuries, as well as other interregional contacts that characterized the Late Bronze Age eastern Mediterranean more generally (e.g., Kling 1989, 1991, 2000; Sherratt 1991, 1992; Steel 2004a: 187–210; Webb 1999: 6–8). The result was the addition or, more accurately, adapting of foreign elements, both Aegean and Levantine, to Cypriot culture as reflected in many aspects of Late Cypriot material culture. In a forthcoming book, Knapp (in press) sees this process as one of "hybridization."

A frequent criticism of the colonization model is the assumption by a number of its adherents that Mycenaean IIIC:1b pottery, which came to dominate the LC IIIA repertoire, was made and used by Mycenaean/Aegean people—but one example of the much-discussed problem of equating people with pots in archaeological studies of ethnic or cultural identity. Studies by Kling (1989, 1991, 2000) and others (e.g., Sherratt 1991) have demonstrated that this pottery cannot be reliably used to mark the transition from LC IIC to IIIA, or for that matter, the appearance of an Aegean ethnic element on the island at that time.

The introduction of post-processual critiques to Cypriot archaeology has also brought about a recognition that the colonial and post-colonial political circumstances on the island have very much influenced archaeological analysis and interpretation (e.g., Given 1998; Knapp and Antoniadou 1998; Leriou 2002; various papers in Tatton-Brown 2001), and that current interpretations of the hellenization of Cyprus cannot be divorced from the present sociopolitical milieu. In a recent re-assessment of the colonization model, Leriou (2002) demonstrates that political considerations and academic trends have played a central role in constructing the hellenization narrative throughout the 19th and 20th centuries.

Even so, proponents of the *interaction model* do not entirely discount the presence of Aegean settlers on Cyprus during the LC IIIA (e.g., Sherratt 1991: 195, 1992: 325). As Sherratt argues, however, they were individuals or small groups that were relatively invisible in archaeological terms, being

> evidently quite content to live and work in Cypriot domestic and administrative buildings of the sort which had been in use during LC II, to worship in sanctuaries whose foundations went back to the same period, to bury their dead in traditional Cypriot tombs...and to make use of workshops and industrial installations which continued in most respects unchanged from the previous period (1992: 324).

This statement raises the issue of the degree to which any aegeanization might have manifested itself in the architecture of the LC IIIA period. In spite of the various problems with the colonization model outlined above, it continues to inform current interpretations of Cypriot material culture in general, and Late Cypriot architecture in particular. Sherratt's suggestion of the relative invisibility of any Aegean presence notwithstanding, several architectural features are often cited as evidence for aegeanization in Cyprus during this time.

Architectural Manifestations of Aegeanization

There is insufficient space here to fully discuss each of the architectural features typically associated with Aegean colonization. I wish only to mention the more commonly cited of these features and to briefly outline how they have been interpreted.

Monumental Ashlar Architecture

The appearance of monumental ashlar buildings, such as the Ashlar Building at Enkomi, was initially associated with the coming to Cyprus of Mycenaean colonists in the LC IIIA period (e.g., Dikaios 1969–71: 519–21). Subsequent discoveries of monumental ashlar buildings at Kalavasos-*Ayios Dhimitrios*, Maroni-*Vournes* and Alassa-*Paliotaverna* dating to the LC IIC period have made it clear, however, even to advocates of the colonization model, that ashlar construction was well established on Cyprus before the disruptions and population movements that accompanied the transition to the LC IIIA. In addition, Hult's (1983) in-depth study of ashlar masonry in the eastern Mediterranean demonstrates that ashlar architecture on Cyprus was not derived from the Aegean tradition. Although Syria is a more likely point of origin or inspiration (Hult 1983), Wright (1992: 521) concludes that the LC ashlar style seems to be its own creation using basic masonry devices common to an extended area of the eastern Mediterranean.

Cyclopean Fortifications

Cyclopean fortifications, made with a base of large boulders (sometimes hammer-trimmed) around a rubble core and topped with a mudbrick superstructure, appear on Cyprus during the LC IIIA period at sites such as Enkomi, Kition, Maa-*Palaeokastro*, and Sinda. While used at various Mycenaean sites on the mainland, this style of fortification is known from a wide range of sites in both the Aegean and Anatolia. Wright (1992: 515) argues that the Cypriot fortifications drew on knowledge of these neighbouring regions while incorporating devices of locally-derived tradition of non-urban fortresses dating back to the MC III–LC I.

Horns of Consecration

As architectural elements, stone horns of consecration are known on Cyprus from the sanctuaries at Myrtou-*Pigadhes*, Kouklia-*Palaepaphos* and Area II at Kition, dating to the LC IIIA periods (or possibly the LC IIC at Myrtou). Most scholars would agree that these horns are inspired by Minoan examples (e.g., Hägg 1991: 78–9). Arguments that they were brought by Aegean immigrants (e.g., Loulloupis 1973: 242; Karageorghis 2000: 261), however, are highly questionable, given the different formal attributes and uses of Cypriot and Aegean horns of consecration. While Aegean examples have high pointed horns, Cypriot horns have lower, flat terminals. Although both are likely linked iconically to a bull deity or bull sacrifice, Webb suggests that the horns also served as "sacred, sanctifying or apotropaic symbols" (1999: 179). However, while Cypriot examples appear to be exclusively associated with monumental altars, those in the Aegean are more often used to crown important buildings or walls.

Stepped Capitals

Stepped ashlar capitals, examples of which are known from Area II at Kition, Sanctuary I at Kouklia-*Palaepahos*, Myrtou-*Pigadhes* and from an ashlar building in Quarter 6W in Enkomi, were thought by Karageorghis (1971) to have been introduced to Cyprus by Mycenaean immigrants, despite a lack of any Aegean parallels. The "Mycenaean" appellation of these capitals has, unfortunately, stuck (e.g., Burdajewicz 1990), although Wright's (1992: 520) suggestion that they are of indigenous origins is far more plausible. The capitals appear to be typically associated with urban cult buildings dating from LC IIC–IIIA (Webb 1999: 181).

Bathrooms and Bathtubs

Terracotta or stone tubs, usually with a drain hole in the bottom, are known from a number of LC IIC–IIIA sites including Enkomi, Kalavasos-*Ayios Dhimitrios*, Maa-*Palaeokastro* and Alassa-*Paliotaverna*. In some cases, these are found in elite domestic contexts in rooms with wells and/or toilets and fine concrete floors that have been identified as bathrooms. Karageorghis (1998, 2000: 266–74, 2002: 90–1) assumes that these facilities were used for bathing and suggests that they were introduced by settlers from the Aegean, where they are known from a number of sites including palatial contexts at Pylos and Tiryns. He adds that bathrooms were previously unknown in Cyprus and that their introduction marked "a high degree of progress in hygienic installations in the houses of the elite" (Karageorghis 2002: 79). I argue elsewhere, however, for the possible existence of bathrooms in the Ashlar Building at Enkomi, even in the absence of such bathtubs (Fisher 2007). Bathtubs found in non-domestic contexts (e.g., in tombs or sanctuaries) are assumed to have been used for purification rituals (Karageorghis 1998: 281). A recent reassessment of Cypriot bathtubs and the contexts in which they are found

suggests that many of them were instead used in industrial processes associated with the textile industry (Mazow, this volume).

As even this brief outline suggests, few of these features are demonstrably or exclusively Aegean in origin, and the Aegean elements that are apparent are perhaps better explained as Cypriot adaptations of Aegean elements within a framework of long-term socio-economic interrelations, rather than the products of Aegean colonists. I will discuss this process further in terms of another architectural innovation often associated with an Aegean presence on Cyprus: the appearance of large halls with formal (or monumental) central hearths (Karageoghis 1998, 2000, 2002: 87–8; Hadjisavvas and Hadjisavva 1997). While these hearth-rooms have been identified at a number of LC IIC–IIIA sites, including Enkomi, Alassa-*Paliotaverna*, Kiton and Maa-*Palaeokastro*, Steel (2004a: 199) notes that the social transformation associated with their use remains elusive. I will argue that hearth-rooms might be one of the few actual manifestations of some form of aegeanization in Late Cypriot architecture, but that they demonstrate the adapting of a Mycenaean concept by Cypriot elites as part of their sociopolitical and ideological strategies for maintaining or enhancing power, rather than the presence of Mycenaean colonists.

An Integrative Approach to Analyzing Buildings

In order to investigate this, I take an approach based on the idea that "no matter what happens in the world of human beings, it happens in a spatial setting, and the design of that setting has a deep and persisting influence on the people in that setting" (Hall 1966: xi). I see monumental architecture, therefore, as symbolizing not only elite control over material and human resources, but also the appropriation of space that organizes and materializes social relationships and boundaries. Consequently, buildings play a vital role as the primary contexts for movement and social interaction.

But how might we characterize this interaction? Goffman (1963: 18–24) has developed a useful typology in which he uses the term *gathering* to refer to any set of two or more individuals who are mutually aware of one another's presence. Gatherings tend to have a loose and transitory form, such as fleeting exchanges as people pass in a hallway. *Social occasions*, on the other hand, are wider affairs involving a plurality of individuals. They range from routine aspects of daily life, such as the preparation and consumption of food, to events such as funerals or weddings that are more irregular, formal and delineated in terms of their spatial and temporal boundaries and the composition of their participants. As the context of these interactions, built space is more than just their backdrop or stage, but is an integral part of their occurrence and, by extension, the development of social positions, roles, and identities. This premise owes much to Foucault (1977), who has demonstrated how architecture as an institution contributes to the maintenance of power of one group over another through the control and surveillance of the movement of bodies through space. Buildings therefore play a vital role in structuring movement and interaction, and according to Giddens' theory of structuration (1984),

it is through such interactions that sociopolitical structures are created and reproduced.

While these ideas set the theoretical boundaries of my research on LBA Cypriot architecture, they do not offer the tools needed to analyze the material remains on the ground. This has led me to develop an "integrative approach" to studying the built environment—so-called because it integrates three analytical methods: access analysis, nonverbal communication, and viewshed analysis.[3]

Access Analysis

The first stage of this approach is based on space syntax, an analytical approach and conceptual framework developed for the analysis of spatial configurations in built form (Hillier and Hanson 1984). A component of space syntax known as *access analysis* can be applied to building interiors and allows us to study movement and social interaction by indicating how each room or space is integrated with the rest of the spaces in the building. The first step involves translating a building into a graph in which each space is represented as a circle, with direct access between rooms represented as lines linking the circles together. The graph can be "justified" by lining up all of the spaces that are of the same depth in horizontal rows above the starting point (usually the outside, or *carrier*; for example see fig. 5). Access analysis allows us to readily see pathways of accessibility and movement through a structure, providing insight into potential locations for interaction between occupants and visitors. Using the access graph, one can then calculate a number of variables, three of which are relevant to the current study:

> *Control value* (CV): a measure of the degree of control of access a space exercises over its immediate neighbours. It therefore measures "local" relations among spaces. Each space in the building is assigned a value of 1, which is divided among each of the neighbouring spaces to which it is connected. These are then totalled and the higher the number, the more control the space exerts over its neighbours.
>
> *Relative asymmetry* (RA): a measure of how accessible a space is from any other point in the structure. It is therefore a measure of "global" relations. To calculate it, one must first calculate the *mean depth* (MD), which measures how deep a space is relative to the other spaces in the building (MD = the cumulative depth of each space/p-1, where p is the number of points in the system). RA = 2(MD-1)/k-2 where MD is the mean depth and k is the number of spaces in the system).[4] RA values are standardized to provide a

[3] What follows is a very cursory outline of the integrative approach. See Fisher (2007: chps. 3–5) for a full discussion.

[4] In order to compare RA values of spaces from buildings with different

> value between 0 and 1 with a score approaching 1 indicating a low level of accessibility.
>
> *Depth*: the minimum number of spaces one must traverse to reach a space from another designated space (usually the carrier). It can therefore provide some measure of how accessible a space is to a person entering from the outside. [5]

These measurements can be used to isolate rooms that are particularly important in structuring space, and therefore social interaction, within a building.

Nonverbal Communication

The built environment structures interaction not only through the physical layout of buildings, but also through the nonverbal communication of meanings that influence human behaviour. A substantial body of research in the fields of environmental psychology, semiotics, and environment-behaviour studies has convincingly demonstrated that meanings are produced or encoded in elements of the built environment and are communicated to people interacting with those elements. Rapoport's (1990) nonverbal communication approach provides a useful basis for studying how the built environment conveys meaning to its users (Fig. 1). According to Rapoport (1990: chp. 4) there are three elements of the built environment that encode and communicate messages. Fixed-feature elements are relatively permanent architectural components integral to a building's structure, including walls, floors and ceilings. Semifixed-feature elements are easily changeable and include various furnishings and portable artifacts, while nonfixed-feature elements include the physical and verbal expressions of the building's occupants. With few exceptions, only the fixed and semifixed-feature elements can be directly attested in the archaeological record.

For each space in the buildings examined in my study, I record its size and convexity (that is, how "square" the room is), as well as the presence and characteristics of various features and artifacts, such as ashlar walls, doorways, hearths, wells and columns.[6] I was able to code the presence and certain characteristics of some of these features, such as door widths and the elaborateness of the masonry directly on the access map (see Fig. 5). This process allowed me to define the characteristics of spaces that would host the different types of interaction proposed by Goffman. I further refined Goffman's

numbers of spaces, they can be converted to *real relative asymmetry* scores by dividing the RA value of a space by its D-value provided by Hillier and Hanson (1984: table 3).

[5] For a full discussion of access analysis and details regarding the calculation of these variables see Hillier and Hanson (1984: chp. 4).

[6] A space's convexity is calculated by dividing its width by its length, resulting in a value between 0 and 1, with values closer to 1 being more "square" and therefore generally better suited to hosting social occasions.

typology by also distinguishing between spaces that would likely host "public" or inclusive social occasions and those that would host "private" or exclusive occasions (Fig. 2).

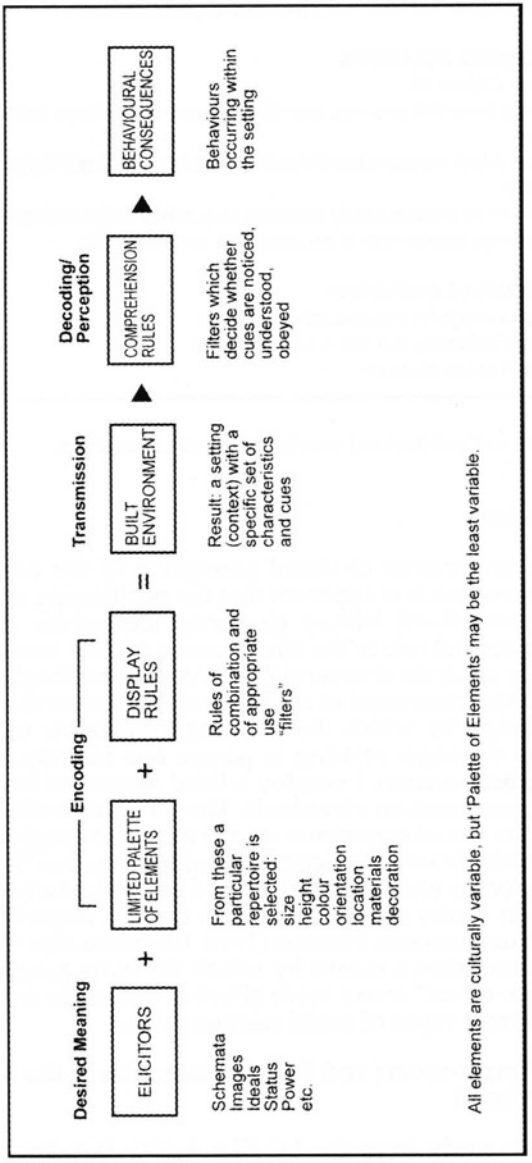

Fig. 1. Nonverbal communication approach to the built environment (modified from Rapport 1990: fig. 17).

GATHERINGS
" medium-high Control Value (CV)
" low Relative Asymmetry (RA) measure (room is readily accessible)
" low convexity (space will tend toward long and narrow shape)

"PUBLIC"-INCLUSIVE OCCASIONS
" medium-high CV; low RA
" high convexity (over 0.6) and area over 12 m2 (space will be large and tend toward square)
" generally low depth measure, but if depth measure is high it will likely be on major axial route
" room is likely to be architecturally elaborate (e.g., ashlar walls) and contain features/furnishings appropriate to occasion (e.g., formal hearth)

"PRIVATE"-EXCLUSIVE OCCASIONS
" low CV; medium-high RA (room is less accessible)
" generally high convexity, but size is not important
" may have high depth measure

Fig. 2. Syntactic and architectural correlates of social interaction.

Interior Viewsheds

Given the importance of visual perception to our negotiation of the built environment, it is apparent that the positioning and visibility of fixed and semi-fixed feature elements, like ashlar masonry or hearths, play a central role in the effectiveness of their communication of meaning. My analysis of several LBA Cypriot buildings has led me to suggest that the placement of such elements represents a deliberate program of design by which the building inhabitants encoded and communicated messages relating to power and identity. In order to examine this phenomenon, I employ a third avenue of investigation: visibility analyses based on viewsheds. The use of viewsheds captures something of the visual experience as one moves through a structure. I generate viewsheds using a Geographical Information System (GIS) from and into rooms and entries identified as particularly controlling or integrating in access analysis, or which contain important fixed or semifixed-feature elements. Hanson (1998: 106) notes that the relations with visibility are often a means by which the basic accessibility of a complex is "fine-tuned" into a more effective device for interfacing or distancing different types of social relationships.

Case Study: Hearth-rooms and Social Interaction in the Ashlar Building at Enkomi

A brief case study from the LC IIIA Ashlar Building at Enkomi will illustrate facets of the integrative approach just outlined, while examining the role of hearth-rooms as contexts for social

interaction. The LC IIIA period to which this building dates witnessed a massive reconstruction of the city on an orthogonal grid surrounded by cyclopean fortifications (Courtois et al. 1986: 2–7). The most characteristic feature of the architecture of this period is the extensive use of ashlar masonry in the construction of elite buildings. One such structure is the Ashlar Building, a 32.5 x 28.5 m monumental structure located near the centre of the city (see fig. 3) that, in its first incarnation, served elite ceremonial and residential functions.[7]

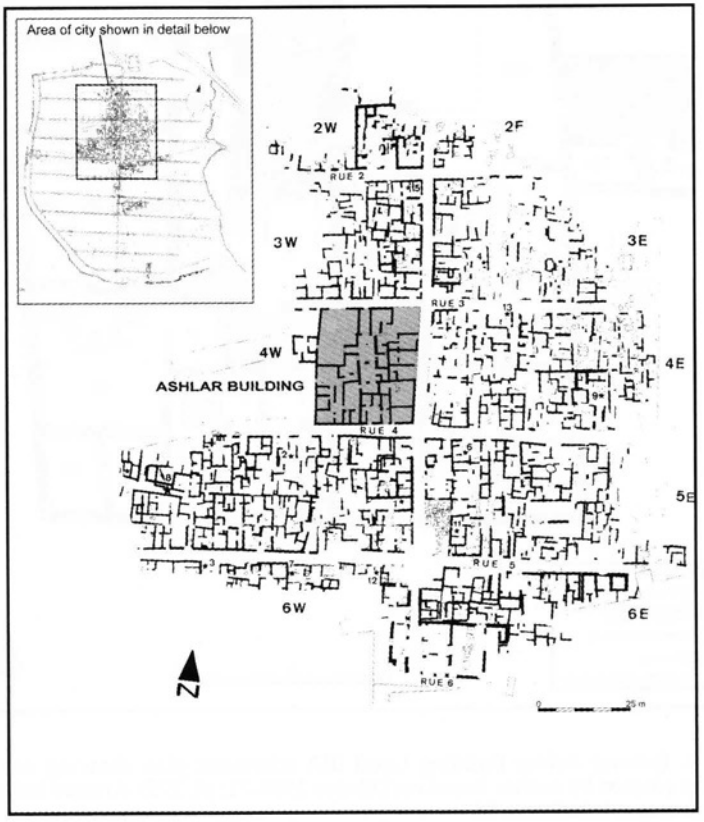

Fig. 3. Enkomi site plan and detail of excavated area in city centre showing location of the Ashlar Building (modified from Courtois et al. 1986: figs. 1 and 2).

[7] The Ashlar Building was destroyed and rebuilt twice before finally being destroyed and abandoned in the late LC IIIA or early LC IIIB. It is the first reconstruction of the Ashlar Building (Level IIIB) that housed the famous Sanctuary of the Horned God. While most scholars accept an early LC IIIA initial construction date for the building (contra Negbi 1986), there is a great deal of disagreement over the dating of its subsequent phasing, and its relationship to buildings excavated by the French elsewhere in Enkomi. See Ionas (1984) and Webb (1999: 91–2) for a summarized discussion of these chronological problems.

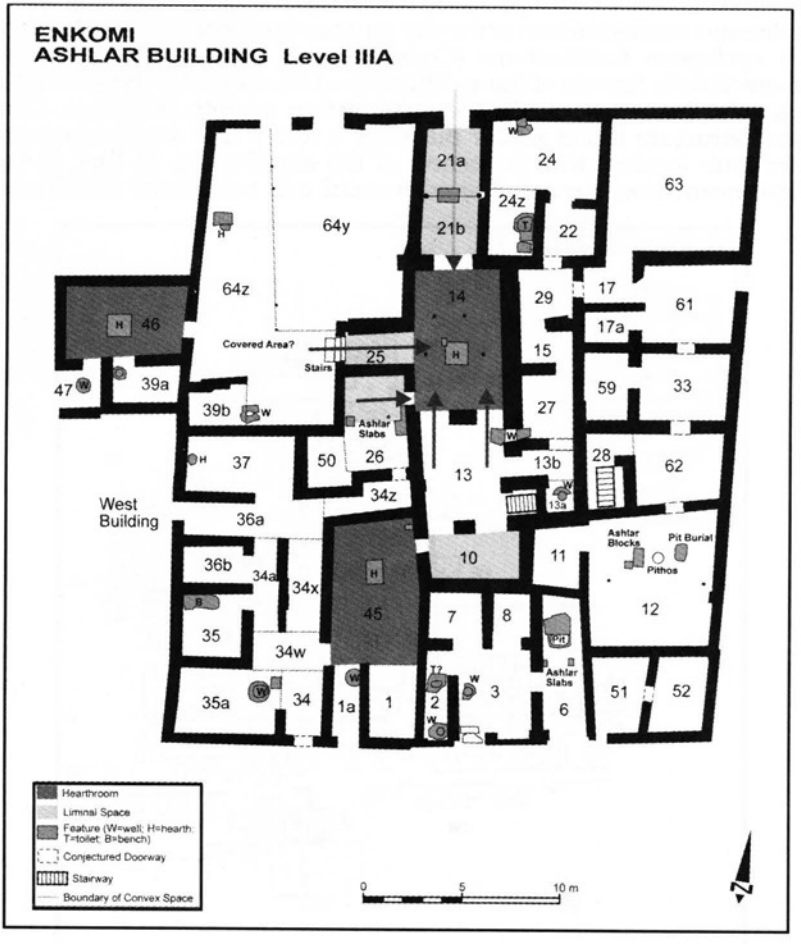

Fig. 4. Enkomi Ashlar Building Level IIIA schematic plan showing convex spaces (drawn by author based on Dikaios 1969–71: pl. 273). Arrows indicate access routes into Room 14.

Dikaios excavated the building during his work at Enkomi from 1948–58 and the high quality of the subsequent publication allows for detailed architectural and spatial analyses of this building (see Dikaios 1969–71: 171–220). Figure 4 shows a schematic plan of the building's ground floor during its initial occupation around 1200 BCE (Level IIIA), while Figure 5 shows the access graph for this plan.

Room 14, which forms the main part of a divided central hall, is of particular importance. The room exhibits a high control value and low relative asymmetry score and it is clear that it played a key role in structuring access within the building, particularly from the front

(that is, north) entrance. Combined with the room's large size and high convexity, I would suggest that it was most likely used for public or inclusive social occasions that centred on the formal reception of visitors. Room 14 is on the axial path that leads from the building's

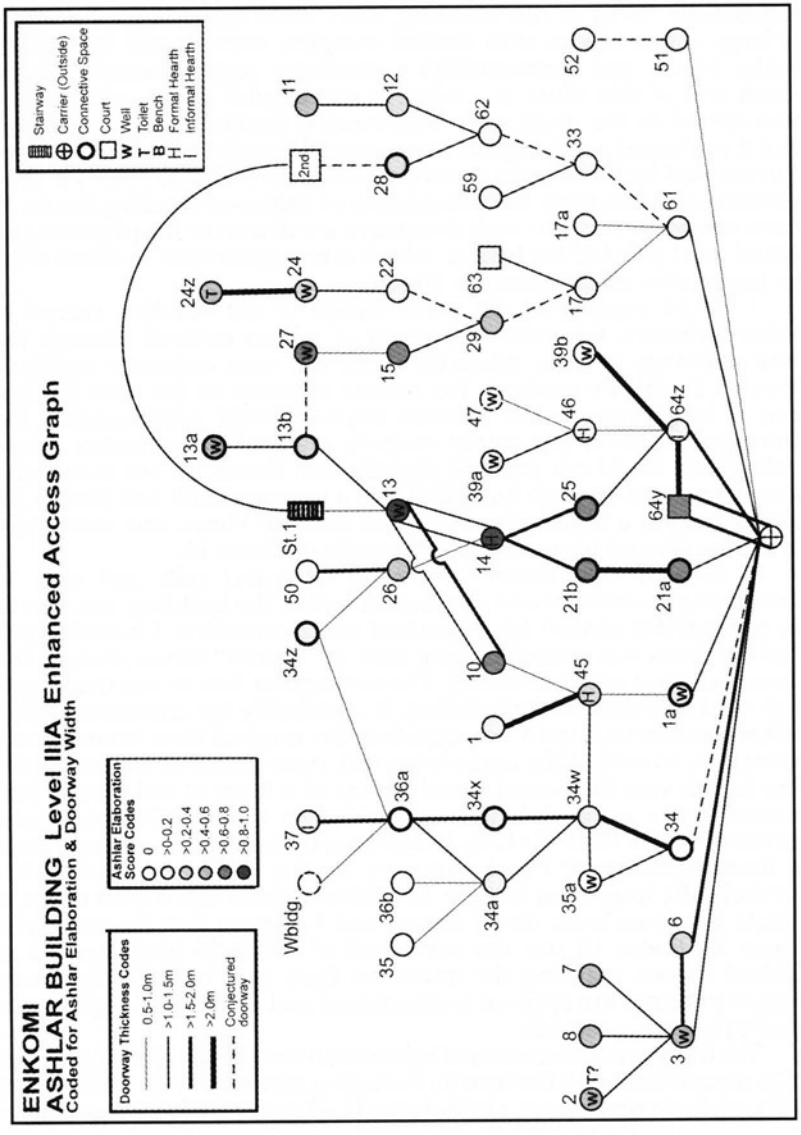

Fig. 5. Enkomi Ashlar Building Level IIIA enhanced access graph, coded for doorway width and Ashlar Elaboration score.

impressive ceremonial entrance through a two-part ashlar vestibule (Rooms 21a and 21b). Both ends of this vestibule are marked by ashlar thresholds, and its middle was distinguished by what were probably two non-structural columns and a platform that resembles a hearth (but has no evidence for burning). Room 14 had the highest Ashlar Elaboration Score in the building, with walls consisting of a plinth of large ashlar blocks with drafted margins, surmounted by smaller ashlar blocks and (presumably) a mudbrick superstructure. At the south end of this room is a massive rectangular ashlar column that also served as the south wall. This room is particularly important in that it contained a rectangular monumental hearth that may have been surrounded by three or four wooden columns (Dikaios 1969–71: 175). Viewsheds taken from the perspective of someone entering Room 14 from either the north or west doorways are drawn to the physical and visual focal point of the hearth, which is backgrounded in either view by impressive ashlar masonry (Fig. 6).

I would argue that the north façade of the building served to "filter" visitors, the more important of whom entered through the main entrance into the relatively small but very elaborate vestibule (Rooms 21a/b). By contrast, the double entrance to the west leading into a large open court (Rooms 64y&z) could accommodate far more people who, one might suspect, were of lower status. These individuals could not proceed directly into Room 14, but those who were permitted to, were funnelled into a purpose-built hall (Room 25) constructed at a higher elevation that directed views and movement to the hearth and impressive ashlar walls of Room 14.

It is clear that Room 14 played a central role, not only in structuring movement and interaction within the building, but also as an appropriate context for important social occasions. I would argue that the room was accorded some form of "sacred" status (though not necessarily in a religious sense). The rectangular hearth was the largest and most elaborate in the building. It is probably not coincidental that before the central hearth was installed, the original floor immediately beneath it, as well as the underlying soil, were removed and replaced. The hearth was then constructed on top of a layer of red mortar and a rectangular stone slab was embedded in the hearth's northwest corner (Dikaios 1969–71: 176). I would see this operation as some form of foundation rite or ritual necessary for the construction of such a symbolically important feature. In addition, there was a clear effort to isolate the room from direct access, and I suggest that the vestibule, Room 25, Room 10 and the north half of Room 26 likely served as liminal spaces, marking the transition from the "outside" (perhaps seen as profane) to a space of sociopolitical and ideological importance (perhaps seen as sacred).

The fragments of a number of Mycenaean vessels were found in Room 14 in association with the hearth, including several bowls, a dish, a jug with a side-strainer spout, a bell-shaped krater, two hydriae and a three-handled jar (Dikaios 1969–71: 314–15). I would argue that these are the remains of a social occasion(s) that involved ritual or ceremonial feasting and drinking. I contend, therefore, that this room served as the foci for

feasts that, depending on the occasion, the elite occupants could use to either build social ties with visitors or to emphasize or reinforce their distinctive social roles, status and identity. Feasts are characterized by

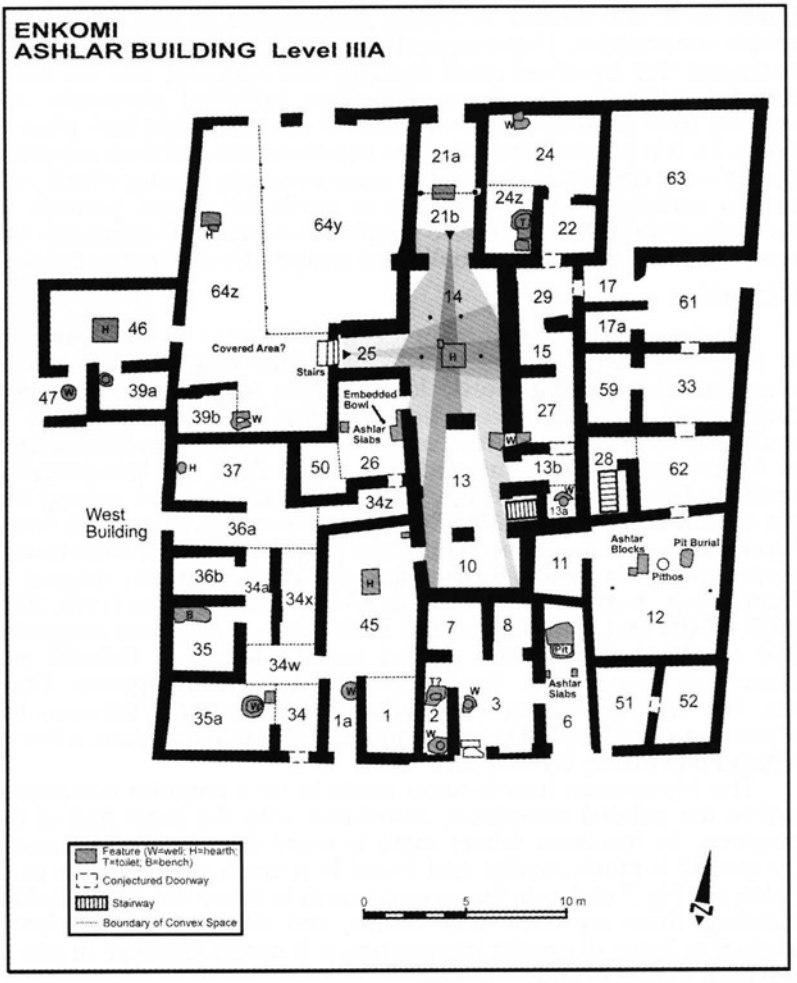

Fig. 6. Enkomi Ashlar Building Level IIIA schematic plan with viewsheds into Room 14 from Rooms 21b and 25. Note convergence of viewsheds on focal point of the hearth. Viewshed covers 200 degree range of binocular peripheral vision; darker portion of viewshed indicates 10 degree range of detailed (foveal + macular) vision.

"the communal consumption of food (including drink)—usually foods that are different from everyday practice—and the social component of display—usually of success, social status or power" (van der Veen 2003: 414–5). There is a growing recognition of the important role that

feasting played in the sociopolitical dynamics of many ancient societies (e.g., Dietler and Hayden 2001, van der Veen 2003; Wright 2004).

Rooms 45 and 46 were also hearth-rooms. Room 45 is identical in layout and size to Room 14, but is built mostly of rubble masonry. Room 46 is also similar in layout, but smaller in size and also of rubble construction. I have argued that these rooms likely also hosted occasions that involved ritual feasting and drinking, but for lower status individuals or groups who were excluded physically and visually from participating in the official occasions that took place in Room 14. It is possible that all of the hearth-rooms and their adjoining spaces were employed during the same occasion, during which only certain participants were admitted to particular rooms, perhaps on the basis of their status. It is also possible that each of these rooms was reserved for a particular spatially and temporally discrete occasion.

Discussion

We have then, evidence in LC IIIA Cyprus for the presence of large halls with central hearths, in which elite social occasions were conducted using mostly locally-made Mycenaean ceramics—phenomena typically associated with the late palatial period in mainland Greece. One might therefore be tempted to see the presence of Mycenaeans at Enkomi, and this was indeed the interpretation made by Dikaios (1969–71: 176, 180, 519–21) who further argued that the central hall in the Ashlar Building (Rooms 10, 13 and 14) was a Mycenaean-style megaron. While even proponents of the colonization model now acknowledge that there are no Mycenaean megara in Cyprus (e.g., Iacovou 1989: 53; 2001: 87–88), Karageorghis (1998, 2000, 2002: 87–88) and Hadjisavvas and Hadjisavva (1997) have suggested that the large rooms with central hearths found at Enkomi and other sites were, in fact, the products of Aegean immigrants. There are, however, a number of fundamental differences between the Mycenaean and Cypriot manifestations of this phenomenon, a few of which I will briefly outline here.

The Mycenaean hearth-room tends to be a singular occurrence within the palatial complexes, associated with the main hall of the megaron. In instances where there is more than one such hearth, the second is much smaller and found in a much smaller room (e.g., Pylos; see Fig. 7 and note the second hearth in Room 46). In the Ashlar Building, there are three such rooms, and although one is clearly marked as being of greater importance, it is nearly identical in size to one built in part of rubble masonry.

The singularity of the Mycenaean palatial hearth is related to its importance in the state-level religion. James Wright (1994) argues that it is an integral part of what he calls the "hearth-*wanax*" ideology in which the hearth symbolizes the centre of the state and the *wanax* or king was its guardian (essentially serving as the father of the state). While I would not rule out the possibility of some similar symbolism at work in the Cypriot examples, the Ashlar Building is but one of many monumental elite buildings that co-existed in the city, not a "palace" or the centre of state power. It is more likely that the monumental Cypriot hearth was symbolic of the

transformative nature of fire (raw to cooked; clay to ceramics; ore to metal), and hence elite control over these processes—particularly in terms of the latter, given the importance of metallurgy in LC society, and its frequent associations with religious ideology (Knapp 1986, 1988).

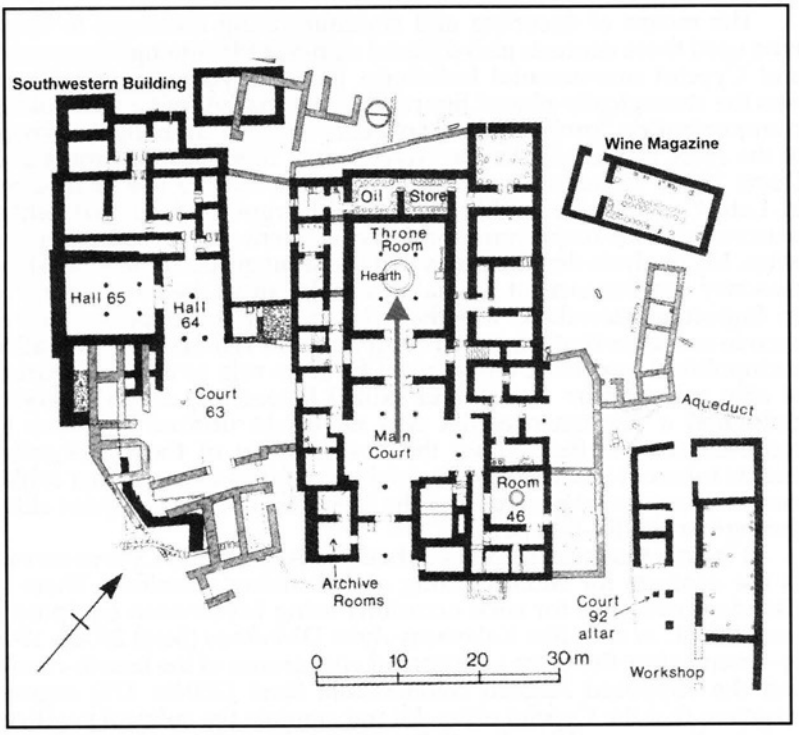

Fig. 7. Palace complex at Pylos showing access route to the hearth/throne room. Shaded area represents approximate size of the Ashlar Building at Enkomi (modified from Dickinson 1994: fig. 5.31).

Wright (1994: 58f) has also pointed out the symbolic nature of the columns surrounding the hearth as representing the palace itself in Mycenaean iconography and also as mediating between the built structure containing the hearth and the heavens. Only in Room 14 in the Ashlar Building at Enkomi is there evidence for columns surrounding the central hearth. While there may have been four, only three bases are extant, and they are not arranged symmetrically around the hearth as in the Mycenaean examples. The use of generally rectilinear shapes for the Cypriot hearths contrasts with the round hearths employed in the Mycenaean palatial examples, although this phenomenon requires further study.

In terms of physical layout and accessibility, the Mycenaean hearth-room was usually in a space at the terminus of an axial route

(Fig. 7). By contrast, Rooms 14 and 45 from the Ashlar Building are both on circulation rings (see Fig. 5) and Room 46 has two entrances. The location of Room 14 in particular allowed the elite occupant(s) the ability to appear from and disappear into a part of the building not directly accessible to visitors—an indication of their relative status (see Fig. 4).

The means of encoding and communicating messages to those who used these contexts also differed significantly among Mycenaean and Cypriot monumental buildings. In the Mycenaean megara, it was the strategically-placed figural frescoes that played a vital role in communicating "proper" modes of behaviour, legitimizing the power of the ruler, and inculcating a "Mycenaean" identity (see Bennet and Davis 1999). There is no evidence, however, for the use of frescoes in Late Cypriot elite buildings. I would argue instead that ashlar masonry was the major communicative element employed by Cypriot elites. My analysis demonstrates that the strategic placement of ashlar masonry (for instance, at liminal thresholds or as the background to an important viewshed) was the primary way for Cypriot elites to encode messages that reminded occupants and visitors of their relative sociopolitical positions. Quite apart from its role as a manifestation of elite control over wealth and skilled labour, the ashlar masonry embodied a permanence that was no doubt utilized by elites to communicate (in their view) the immutability of the social order and its inherent inequalities. I would go so far as to argue that ashlar masonry was an integral part of the identities of urban Cypriot elites during the LC IIC–IIIA periods.

It is clear that hearth-rooms in both the Aegean and Cyprus served as the contexts for ritual feasting and drinking occasions. There is abundant evidence for such occasions using Mycenaean equipment from LC IIC at sites like Kalavasos-*Ayios Dhimitrios* (Steel 2004b: 170–1)—even before the more widespread appearance of the hearth-rooms and the supposed Aegean colonization. Steel (2004b: 174) argues, however, that the Cypriot elites did not emulate the cultural practices and feasting paraphernalia of the Mycenaean elite, who preferred gold and silver equipment. Instead, they adapted Mycenaean ceramic imports to their own local practices and tastes. She suggests that they may have instead referenced Ugaritic patterns of wine consumption. Evidence from burials suggest that Mycenaean dining sets began to fall out of favour among Cypriot elites at the LC IIC–IIIA transition as bronze drinking sets became the preferred elite drinking equipment, reflecting a southern Levantine and Egyptian influence (Steel 2004b: 175).

Certainly the feasting occasions in both types of contexts provided opportunities for ritual display and for the maintenance and legitimization of sociopolitical power. While the Mycenaean occasions reflected the state-level hearth-*wanax* ideology, I would suggest that the Cypriot urban environment (at least at Enkomi) was one characterized by a more multi-focal distribution of power. The Cypriot occasions therefore provided opportunities to attract or retain followers in what was clearly a competitive environment.

Although some form of inter-group cooperation was necessary for the level of urban planning apparent in the LC IIIA reconstruction, the architecture at Enkomi, particularly when taken into account with burial evidence, points to a heterarchical power structure, with several elite buildings that likely served as foci for competing elite groups (Keswani 1989, 1996, 2004: chp. 5). The fact that hearth-rooms appear in a few elite buildings at Enkomi and beyond, beginning in the LC IIC, suggests that this architectural form and its attendant social occasions became an important part of elite strategies, particularly during the demographic, economic and sociopolitical disruptions that characterized the LC II–IIIA transition.

Conclusions

The occupants of the Ashlar Building at Enkomi were not Mycenaeans (or Aegeans/Achaeans/Sea Peoples), nor were they Mycenaean "wannabes" blindly copying Aegean architectural contexts, artifacts and rituals. Instead, these were Cypriot elites who were familiar with Mycenaean culture and adapted elements of the hearth-room/feasting phenomenon as part of a strategy aimed at consolidating and legitimizing their status and power. This is part of the same strategy by which Cypriot elites freely adapted the iconography and other aspects of Near Eastern culture, blending them with indigenous and Aegean elements. Indeed, my analysis of an admittedly limited dataset of LC IIC–IIIA elite architecture suggests that the *interaction model* of Aegean influence through interregional contact more effectively explains the appearance of the hearth-room and its associated social occasions in Late Cypriot buildings, than does the colonization model.

The identification of foreign influences in the archaeological record and the means by which they were transmitted is not necessarily a straightforward exercise, and the same can be said of attempts to identify the presence of intrusive ethnic groups. Architecture, particularly when examined as the context for social interaction, provides one avenue for investigating these thorny issues. Debate surrounding the aegeanization of Cyprus will no doubt remain controversial, not so much because of the subtleties of Mycenaean IIIC:1b ceramic classifications or due to a lack of agreement over the origins of stepped capitals, but because of the political resonance it continues to have despite the passage of over three millennia.

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Laura Gagne

THE PROBLEM OF REGIONAL VARIATION OF MYCENAEAN IIIC:1 POTTERY: THE VIEW FROM CYPRUS

Introduction

In creating typologies of the ceramics dating to the period after Late Cypriot IIC (LC IIC), scholars have long assumed that the destructions at sites such as Enkomi and Ayios Dhimitrios represented an invasion of Aegean refugees, and corresponded in time to the destructions in Greece at the end of the Late Helladic IIIB (LH IIIB) and beginning of the LH IIIC. Consequently, the pottery associated with the new settlements established after these destructions was named "Mycenaean IIIC:1" (hereafter Myc IIIC:1), due to its resemblance to Aegean wares, while its similarity to the local Late Bronze Age (LBA) White Painted Wheelmade tradition has largely been ignored; the local Base Ring and White Slip wares associated with it were considered intrusions from earlier strata.

This paper will re-examine the evidence used to classify the so-called Mycenaean IIIC:1 wares on Cyprus as either imports or local imitations. While most of the characterization studies of this distinctive pottery have attempted to establish its provenience (see for example, Dothan and Zukerman 2004), only limited compositional analyses have been conducted thus far either on Cyprus or elsewhere (for an exception, see Badre et al. 2005) to try to answer the question of whether it was imported, was a local imitation of an Aegean ceramic industry, or was made by resettled Aegean potters who sought to continue production of a long-standing ceramic tradition, perhaps with local influence, but retaining familiar paste recipes.

Although Cyprus also suffered destructions at the transition from LC IIC to LC IIIA similar to those that occurred in the other major centres of civilization around the Mediterranean at the end of the Late Bronze Age, it never suffered on the same scale (Karageorghis 1990; 1992). Some new settlements were established, such as those at Pyla Kokkinokremos and Maa Palaikastro, but these were short-lived. The material culture of the people who founded these new settlements, as well as those who seem to have been responsible for rebuilding some of the destroyed towns, has long been recognized as a blend of Levantine and local Cypriot cultures (Cadogan 1993: 82).

Early Ceramic Studies

While there has been considerable attention given to classifying Cypriot wares, it was not until the 1960s and the introduction of analytical

methods capable of characterizing the chemistry and mineralogy of pottery, that distinctive potting traditions could be identified based on their physical composition. Most of the early studies involved chemical analyses, and they generally confirmed that the finest fabrics found on Cyprus bearing Mycenaean shapes matched wares found in the Peloponnese, while the Myc IIIC:1 pottery did not match Aegean sources (Kling 1989: 92). Neutron Activation Analysis suggested that most of the Myc IIIA-B pottery found on Cyprus, especially at Enkomi, was manufactured at Tiryns where, along with Boeotian Thebes and Perati, most of the Cypriot pottery in the Aegean has been found (Asaro and Perlman 1973: 220; Cline 1994: 62). While these studies have demonstrated that most, if not all the Mycenaean LH IIIB wares were indeed products of the Greek mainland, it has remained uncertain whether the Myc IIIC:1 pottery found on Cyprus was locally made, or was imported from different parts of Greece, perhaps Crete, or from the Levant.

Petrographic and chemical analyses have been conducted on a wide variety of Cypriot wares (see for example, King et al. 1986; King 1987; Knapp and Cherry 1994; Myer et al. 1995; Bryan et al. 1997; Day 1999; Gomez et al. 1995; Gomez and Doherty 2000; Gomez et al. 2002; Vaughan 1991; 2002), but the analysis has been uneven, and there remains no complete record of the full range of local clay sources needed to provenience assemblages. For example, a petrographic study of Red Polished, Black Polished and White Painted (handmade) wares from Cyprus was able to conclude that all of these wares were made from the same "light-coloured, calcareous, sedimentary clays derived from the chalks and marls of the Lefkara formation" (Barlow 1994: 7). However, although Barlow was able to determine that the White Painted wares found at Alambra were made of clay from two different sources, not enough comparative evidence was available to determine whether one or both types were imported to the area.

The primary Cypriot potting traditions at the end of the Late Bronze Age were Base Ring, White Slip, and White Painted Wheelmade wares. According to Jones (1986), Base Ring wares occur in two distinct fabrics. Base Ring I is fine grey or light brown in colour, and has a red slip which appears metallic. Base Ring II is coarser, contains sand and mica, and tends to have a more matte-like slip. White Slip wares are made from a type of clay that fires red, and contains microlithic or vitreous basic rocks possibly derived from the Troodos mountain range. According to Jones, the only place this pottery could have been made, considering both the petrographic and chemical evidence, was in the metal-bearing zones of the Troodos (1986: 341).

At the end of the LC II period, the quantity of imported Mycenaean pottery increased substantially, concentrated "in the major urban centres and emporia along the south and east coast, such as Enkomi, Kition, Hala Sultan Tekke, Maroni, Kourion" (Steel 1998: 286), though it still only represented a small fraction of the assemblages at these sites. The Pastoral (Rude) style, which developed from the Mycenaean Pictorial style of LH IIIB, seems to have been produced at a number of sites, but was certainly made on Cyprus (Knapp and Cherry 1994: 159). The clay body is light in colour and relatively free of inclusions, which is also true of the White

Painted Wheelmade wares that make their appearance in Cyprus at this time alongside the local handmade wares. The introduction of the potter's wheel may be an indication of increased urbanization and the beginning of full-time workshop large-scale production of ceramics, likely for export (Sillar and Tite 2000: 7). Enkomi appears to have been the main centre of production, but there may also have been a workshop at Kition that imitated the Enkomi potting styles (Anson 1980). It is interesting to note that at Enkomi, the Pastoral Style continued from the LC IIC into the LC IIIA period, where it occurs together with the appearance of Myc IIIC:1 pottery.

Cypriot Mycenaean IIIC:1 Pottery

Cypriot Mycenaean IIIC:1 pottery, or Åström's White Painted Wheelmade III type, is distinguished by its light coloured clay fabric and matte-painted decoration. Morphologically, a great variety of shapes occur, as do the range of decorative motifs, which take their inspiration from Aegean, Levantine and local Cypriot traditions. There also appears to be some regional variation within Cyprus itself, presumably a reflection of multiple production centres on the island (Kling 2000: 282).

As many have argued, Myc IIIC:1 pottery appears to have taken its inspiration from contemporary Aegean styles, indicating a continuation of contacts between Cyprus and possibly Crete during the early years of the period, but "it gives the impression of selective eclecticism mixed with a healthy dose of local improvisation, rather than the transferred ceramic packages of any discrete groups of people" (Sherratt 1998: 298). Unfortunately, this material has not received the attention given to similar assemblages found in the Aegean and the Levant, and more chemical and petrographic analysis is needed on both the White Painted Wheelmade wares and the Myc IIIC:1 pottery found on Cyprus.

Discussion

Before asking why the potters of Cyprus and the eastern Mediterranean chose to imitate Late Helladic potting traditions, it might be best to ask why there was a demand for the imported Pictorial Style of the LH IIIB period. The increase in Mycenaean imported drinking sets coincided with the urbanization of LBA Cyprus. Urbanization brought with it a concentration of wealth and an emerging elite. These elite legitimized their status through lavish displays of funerary wealth, as well as drinking rituals. These forms of aristocratic display were widespread not only on Cyprus, but throughout the ancient Near Eastern world (Steel 1998: 289–90). It would appear that in the LBA eastern Mediterranean, elite identity was reinforced through use of Mycenaean drinking vessels, as evidenced by their preponderance in élite tombs (Steel 1998: 292), and structures such as Building X (and its associated brick-lined pit) at Kalavassos Ayios Dhimitros (South and Russell 1993: 304).

As the supply of Mycenaean imports dwindled, it would appear that Cypriot potters began to produce their own Pastoral Style, presumably to satisfy continuing elite demand. The Pastoral Style was used mainly to decorate kraters, while shallow bowls, already available in the Plain White

Wheelmade III tradition, were also decorated with Mycenaean-inspired motifs. The emerging White Painted Wheelmade III style was a fusion of Mycenaean shapes and decorations with local Cypriot ones (Cadogan 1993: 94). Cyprus also appears to have been the primary distributor of Aegean goods in the eastern Mediterranean during the 14th and 13th centuries, since Cypriot wares are almost always found together with Myc IIIC:1 pottery (Sherratt 1998: 296). When the demand for Mycenaean products could no longer be met, it would not have been difficult for Cypriot potters to supply this demand with their own products, or with new wares that resembled Mycenaean traditions. Unlike the palatial centres in the Aegean, control of the potting industry seems to have been in the hands of entrepreneurs operating out of major port centres such as Enkomi (Sherratt 1998: 298; 2003).

Alternatively, from the available evidence, it is also possible to argue that this distinctive potting tradition was being produced by displaced Aegean craftsmen. The potters who produced the Mycenaean style wares in the Levant deliberately chose light-coloured calcareous clays to form their vessels. In contrast, the clays used to make Cypriot wares, such as the Red Polished, Black Polished and White Painted wares found at Alambra, visually resemble the clays with which the Mycenaean Pictorial Style was made. Thus, imitation would only have required changing manufacturing techniques, in particular the shift from handmade to wheelmade production. However, Late Bronze Age clay sources appear to have been different, containing iron oxides that would have made the clay fire to a red colour unlike the Mycenaean wares. Potters on Cyprus would have known where the clay beds used to produce the handmade White Painted wares were located, thus it would not be unreasonable to assume that they could have exploited these clay beds to make a more "Mycenaean" looking ware. Clay sources can be exploited for centuries, and paste recipes can remain unchanged, even though the styles produced change (Day 2004: 110). In an analysis of wares found at Ephesus, for example, spanning a period of over one thousand years, from the Late Bronze Age until the Hellenistic period, Kerschner found that the fabric was remarkably homogeneous throughout, indicating that the same clay beds were used, and the clay processed consistently in the same way throughout that time (2005: 36).

Similarly, in a recent ethnographic study, Day found that itinerant potters from Thrapsano on Crete set up temporary workshops in areas where there was a clay source suitable to make a specific type of large storage jar, while potters from Kentri, also on Crete, but who are sedentary, followed a very specific recipe comprised of red and white clays to make their smaller vessels. The Thrapsano potters "adhered to a specific, suitable clay mix, the raw materials of which were available throughout the island in such formations as the Phyllite-Quartz Series" (Day 2004: 120), which made their wares appear very uniform, even though they were produced in many different locations. Their storage jars were well-known and highly sought after vessels on Crete. The Kentri potters, on the other hand, were tied to the area in which they worked because of the special clay sources required to make their distinctive vessels. When they did move, due to marriage or other reasons, they sought out clay

sources with the same properties needed to make their famous water jars (Day 2004: 128). In some cases, when a potter moved they would attempt to replicate local shapes, but were reluctant to change their paste recipes (Day 2004: 130–31).

Assuming LBA potters had similar habits, it is thus conceivable that Aegean potters might have traveled to Cyprus in the LC IIC period and then sought out new clay sources to produce the Pastoral Style pottery that imitated the Mycenaean Pictorial wares with which they were familiar. The shapes and decorations might have changed to accommodate local Cypriot and Levantine tastes, while the paste recipe remained unchanged. The Myc IIIC:1 wares that appear in the Levant, therefore, might just as plausibly represent the product of displaced Aegean potters, as of Cypriots trained in Aegean potting techniques.

Unfortunately, the primary obstacle to a better understanding of Mycenaean IIIC:1 pottery is that it has never been studied systematically across all of the regions where it has been found. Researchers have tended to study only the material from their region. Further complicating matters, some studies have focused only on stylistic aspects, while others have emphasized petrographic or chemical analyses. What is needed, therefore, is a broad-based, systematic characterization of assemblages from all represented areas in the eastern Mediterranean, involving both petrographic and chemical analyses. Only then will it be possible to determine more confidently whether this ceramic tradition was the product of a relatively uniform production process or, more likely, a diverse, highly regionalized enterprise encompassing numerous traditions and raw material sources.

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Aristomenes Polyzois

THE LATE BRONZE AGE PRESENCE IN CYPRUS AND THE LEVANT: MYCENAEAN COLONIES OR ACCULTURATION AND SETTLEMENT?

Introduction

The evidence for a strong Aegean influence along the Levantine coast during the final phase of the Late Bronze Age has given rise to the theory of a Mycenaean colonization of Syria-Palestine directly following the destruction of the major Helladic palatial centres at the end of the Late Helladic III (hereafter LH III) period. Over the past few decades, the question of an Aegean settled presence in Cyprus and the Levant has developed into a subject of great complexity (cf. Stubbings 1951; Hankey 1967; Sandars 1978; Dothan 1982; Schachermeyer 1982; Muhly 1984; Negbi 1986; Redford 1992; Sherratt 1992; Ward and Joukowsky 1992; Stager 1995; Bunimovitz 1998; Barako 2000; Killebrew 2000; Oren 2000; Karageorghis 2002). The substantial Aegean material remains recovered from numerous sites in Syria-Palestine and the adjacent island of Cyprus point to a definite Aegean influence in the material culture of the region, but there is no conclusive evidence in the archaeological record to indicate that the sites were systematically colonized by peoples of Aegean origin. Much of what has surfaced is open to various interpretations and makes only for a circumstantial case in support of a Mycenaean colonization of the Levantine coast.

Nevertheless, I wish to argue for an intense Aegean presence in the Levant during this period (especially from ca. 1200–1080 BCE) on the basis of the material record of the major sites. However, rather than a systematic "colonization" that conjures up images of archaic Greek *apoikiai,* I contend that the Aegean settlement of the Levant was the result of a gradual process of infiltration by Aegean elements into the region beginning as early as LH II and continuing well into the 11th century BCE.

When interpreting the Aegean material culture found in the Levant, I will make a distinction between two proposed models: colonization vs. acculturation and settlement. It is on this basis that the artefactual material will be considered in an attempt to formulate a correlation between artistic production and cultural identity. A further aim of this paper will be to assess evidence from key Levantine sites, and to draw conclusions regarding the extent and character of Aegean activity in the region within the historical context of the so-called "crisis years" in the eastern Mediterranean (ca. 1200–1150 BCE) (cf. Ward and Joukowsky 1992), often attributed to the movements and raiding operations of the great migratory host collectively known

as the Sea Peoples. Linking the various Sea Peoples identified on the walls of Ramesses III's mortuary temple at Medinet Habu with material cultural assemblages remains one of the more vexing and controversial aspects of this debate.

A related question has to do with the nature of the Aegean presence in Syria-Palestine. If we cannot, with any confidence, account for an *apoikismos* in the formal sense, what argument can be made with respect to the character, extent and chronology of an Aegean influx? When considering artistic production and distribution, if the distinction is to be made between colonization and acculturation and settled presence, on what basis is this distinction to be defined? Is there a formula that can isolate certain aspects of the material cultural record as resulting from trade contact, cultural exchange or some other form of acculturation? Similarly, can such a model assist us in isolating other characteristics of artistic production and thereby establish them as evidence for a settled presence? If there was a migration of Aegean elements into the Levant, what were the consequences of such a migration? To what degree, if any, were the settlers responsible for the eventual collapse of several important Late Bronze Age Levantine and Cypriot sites in the eastern Mediterranean? Moreover, what was the nature of the cultural interaction that occurred with the indigenous population? Was it one of imposed domination by invading aggressors over native subjects, or of peaceful and constructive cohabitation? Furthermore, are there discernable cultural distinctions indicating ethnic variation and, if so, are these differences preserved or do they become increasingly blurred with the passage of time? Were the alleged newcomers culturally assimilated and ethnically absorbed by the Late Bronze Age Semitic populations indigenous to the Levant, or did they succeed in partially "Aegeanizing" these Levantine communities? In light of these questions, I wish to examine five key material cultural indicators for evidence of a distinct settlement process: pottery, architecture, cultic/funerary customs, weapons technology and socio-administrative organization.

Ceramic Distribution

The evidence for Aegean settlement in the Levant is inextricably linked to the distribution of Aegean and Aegean-style pottery in LBA Syria-Palestine. Its distribution therefore is central to this discussion, and a distinction must be made between widespread, mass-produced utilitarian wares, such as conical cups, indicative of a settled presence, and imported luxury items, such as the highly decorative fine wares that were universally prized as prestige objects throughout the Mediterranean. Typologically, the ceramic material from the Levant and Cyprus are closely linked, and reveal a number of insights about the provenance of fabrics, trade contacts and the volume of exchange. It is unlikely that pottery analysis can ever be effectively separated from wider issues of political and economic change in both the eastern Mediterranean and the Aegean at the close of the Late Bronze Age; specifically, changes in trading patterns and the ways in which

interregional contacts operated, as well as changes in the types of relationships that existed between east and west. No assessment of the ceramic and other material culture from the Levant with Aegean associations is complete without some observations about the Aegean archaeological evidence recovered from Late Bronze Age Cyprus. The Levant and Cyprus appear to have enjoyed intimate trade relations, as well as a remarkably uniform material culture in the Late Bronze Age, especially with respect to pottery. By establishing definite Aegean settlement patterns on Late Bronze Age Cyprus it is reasonable, given the proximity and easy communication between the two regions, to make meaningful comparisons and draw similar conclusions for the Syro-Palestinian coast.

It is likely that one of the principal motives behind the initial local production of Aegean pottery on Cyprus was an economic one: the need to find a suitable substitute for the imports of LH IIIA-IIIB pottery from the Greek mainland, which the Cypriots may have valued not only for themselves, but also as an important trade item in their relations with the Levant (Sherratt 1992, 2003; see also Hankey 1967: 107–47; Stubbings 1951: 45). Nevertheless, the view that the prolific distribution of Aegean-style pottery on Cypriot sites affirms a Mycenaean settled presence has been contested (Sherratt 1992: 316–18; 2003), and the interpretation of Mycenaean pottery distribution on both Cyprus and the Levant remains a controversial subject (Kling 1989: 112–15).

As early as LC IB (ca. 1500 BCE), there is a marked transformation in the Cypriot ceramic repertoire. Mycenaean IIB and IIIA:1 vessels appear at first in modest quantities, mainly at Enkomi, Maroni and Hala Sultan Tekke (Karageorghis 1982: 77–82; Negbi 1986: 97 ff; Kling 1989: 50, 101–4, 149, 167–70; Dikaios 1971: 452). The appearance of these vessels is closely associated with similar discoveries in Egypt and the Levantine coast (Negbi 1986: 96; Karageorghis 1982: 79). Apart from the Aegean associations provided by pottery, it must be noted that at this early date all other indications of Aegean material culture are conspicuously missing. Throughout the LC II, Mycenaean monumental and funerary architecture, bronzework, jewellery, seal stones and other features of Aegean settled life are present in very limited quantities. The pre-LC II Standard Cypriot production of White Slip and Base Ring Wares, a pottery tradition in which foreign influences are not detectable, began to deteriorate at the end of LC II. The greatest influx of Aegean type pottery on Cyprus occurs at the beginning of LC IIIA (ca. 1200 BCE), which coincides with the period commonly termed "the crisis years". This will be important when we come to consider the ceramic assemblages of the Levantine sites dating to this period. The demise of a number of Cypriot sites, like the important pottery production centre of Toumba tou Skourou, excavated by Vermeule and Wolsky, date to the end of LC IIC, a period of great Aegean expansion into the eastern Mediterranean. What appears clear from the ceramic evidence at Cypriot sites, such as Enkomi, Kition, Maa-Palaeokastro, Hala Sultan Tekke, Kalavasos-Ayios Dhimitrios, and Maroni-Vournes, is that pottery production

represents the emergence of a dynamic new cultural period in Cyprus beginning in LC II. The chronology of the LH III wares suggests the beginning of a steady stream of Mycenaean traders/artisans into the region.

Enkomi

When considering Late Bronze Age Cypriot relations with the Levant, Enkomi is of paramount significance. It lies directly across from the important Levantine emporium at Ugarit, separated by only about 250 km of sea. In the LC III, Enkomi was a settlement of great prestige and affluence, even rivaling the great trading centre of Ugarit. Enkomi is extremely interesting, because its material remains suggest a coordinated Aegean settlement of the site, and the subsequent movement of these colonists eastward into the coastal areas of the Levant. The ceramic affinity and the uniformity of the material culture at Enkomi with that of Levantine sites is striking.

Enkomi was excavated systematically and published over the course of four decades (Dikaios 1969–1971). Architecturally, the site is very impressive. Its Cyclopean wall was founded on a level of large unhewn stones, which supported several observation towers, and is dated to the end of the LC IIC, essentially contemporary with the walls at Maa-Palaeokastro, Kition and Sinda (Karageorghis 1982: 69, 90), all constructed between the final phase of LC IIC and the early years of LC IIIA:1. Several houses excavated on the southern section of the site were built with ashlar masonry. The Level IIB settlement features rich tomb deposits, which provide sound evidence of the town's close trade relations with the Aegean. The most common pottery types found in Level IIIA include Myc IIIC:1 and LH IIIC:1b (Dikaios 1971: 574). Opinions vary as to the origin of the so-called "Rude Style" pottery produced in Cyprus in LC IIC and found in profusion at Enkomi, but the excavator concludes that this type was contemporary to Myc IIIB and originated as a pictorial style (Dikaios 1971: 78, 102, 107, 266, 319). In addition to these types, Base Ring II and White Slip II wares were unearthed at Enkomi along with imported Grey or Trojan wares from western Anatolia (Karageorghis 1982: 86; Dikaios 1971: 513–514; Sandars 1978: chps. 5–7).

The buildings at Enkomi attest to both domestic and administrative/religious functions (Karageorghis 2002: 95-104). Building 18 is of particular interest. It is considered to have been a palatial centre (Dikaios 1971: 149; Karageorghis 1982: 92). The south side of the building featured a large door and windows, and measured approximately 40 m in width. Tomb 18, most probably the burial site of an early Mycenaean settler, was found under the courtyard of the complex (Dikaios 1971: 168–71; Karageorghis 1982: 85). The tomb contained a number of bronze swords and a pair of bronze greaves, all of distinctly Mycenaean workmanship. It is quite possible that the tomb's occupant, likely a high-born warrior, was the leader of an expeditionary force or the chief of an early group of Achaean migrants. The tomb's artefacts and Building 18 are contemporary,

dating to LH IIIA:1 (ca. 1400–1300 BCE), as we have seen, a period of considerable Aegean expansion in the eastern Mediterranean. Even more interesting is the fact that Building 18 was constructed shortly after Enkomi suffered widespread destruction in the early phase of the LC IIA.

The Level IIIA settlement was destroyed at the end of the LC IIC/beginning of LC IIIA:1. The subsequent Level IIIB settlement witnessed the introduction of significant changes, including a change in the "palatial" function of Building 18 (Dikaios 1971: 149). These changes signify a period of unrest and, in my opinion, were the direct result of the raids affecting the whole eastern Mediterranean at this time.

One ceramic artefact found at Enkomi has caused great excitement, and is a fascinating link to Aegean iconographic composition. This is the Myc IIIA:1 amphoroid vessel commonly called the "Zeus Krater". The scene on the vessel depicts a stately male figure wearing a long robe and holding what appears to be a set of scales, standing before two warriors who are mounted on a chariot, presumably on their way to battle. It has been suggested that the scene depicts an early Mycenaean mythological theme that is also represented in the *Iliad* XXII: 209–12 (Karageorghis 1982: 78–79). This type of Helladic ware, with Mycenaean motifs, is known as the "Pictorial Style". It first appears on Cyprus in the middle of the 15th century BCE, the date associated with the "fall" of Knossos, an event attributed to a large-scale military expedition launched by Achaeans from the Peloponnesus. Another artefact that has surfaced at Enkomi affords a remarkable iconographic link to the Sea Peoples. This is an imprint of a black ophite sealstone, now at the Nicosia Museum, that represents a warrior crouching behind his large Mycenaean-style shield and wearing a distinctive plume-crested headdress. There is a striking resemblance between this type of headgear and the helmets worn by the Peleset warriors depicted on the reliefs covering the northern wall of Ramses III's mortuary temple at Medinet Habu (see Karageorghis 2002: 100, pl. 206).

The Aegean Presence in the Levant

Recent excavations in the southern Levant have produced significant new evidence of Aegean activity, especially material culture associated with the Philistines, the most discussed group of Sea Peoples (for a general summary, see Dothan 1982; Stager 1995). In particular, excavations have been undertaken at Tell Qasile, and at the Philistine Pentapolis cities of Ashdod, Tel Miqne/Ekron, Ashkelon, Tell es-Safi/Gath and, most recently, Gaza. These excavations afford a detailed assessment of the material cultural record, and can be compared to similar discoveries elsewhere along the Levantine coast and on Cyprus.

The most important discovery is perhaps the great profusion of Myc IIIC:1b pottery that has been found in excellent stratigraphic context, and in considerable volume, at all of these sites (for a summary, see

Dothan 1982; Dothan and Zukerman 2004; Killebrew 2000). Analyses of the Myc IIIC:1b pottery from Ekron and Ashdod indicate that it was locally produced, yet typologically it closely resembles assemblages found on Cyprus, and even on the Helladic mainland (Asaro et al. 1971; Dothan and Zukerman 2004). These discoveries represent an articulate argument for the settled presence of Aegeans along the southern Levantine coast during the 12th century BCE. However, important interpretive problems still remain. One issue is the precise chronological framework for the appearance of Myc IIIC:1 pottery in the Levant. A second question concerns the ethnic identity of the people who produced this pottery.

As has now been shown conclusively, the introduction of Myc IIIC:1 pottery in the southern Levant was initially confined to the area of the so called Philistine Pentapolis, that is, the towns of Ashdod, Ekron, Gaza, Ashkelon and Gath (probably Tell es-Safi), and its introduction is generally attributed to the arrival of the Sea Peoples, following the repulsion of their attempted invasion of Egypt in the eighth year of Ramesses III (ca. 1175 BCE) (cf. Dothan 1979: 128–30; Stager 1995). The pottery of this initial phase, often referred to as Philistine Monochrome Ware, was eventually supplanted by a bichrome tradition that blended the earlier Aegean tradition with local Canaanite practices, and clearly represents an assimilation of both over time (Dothan 1982: 94). The development of this "mature" Bichrome Philistine tradition must have occurred sometime later, probably a generation or two after the arrival of the displaced Sea Peoples.

Early Iron Age Urbanization

Apart from the ceramic record, the most significant shared characteristic linking the two regions during LC IIIA/Iron IA is the extensive urban development that occurs over a relatively short period of time. At Enkomi, Maa, Hala Sultan Tekke and Kition, all Cypriot coastal towns facing east, there is intense urbanization, evidenced by ambitious public building projects, which occurs between ca. 1190 and 1140 BCE (Karageorghis 2002: 71). Similarly, in the Levant, at such sites as Ashdod, Ashkelon and Ekron, a complex pattern of urban settlement began to develop (cf. Stager 1995). The excavations undertaken in the 1980s and 1990s at Tel Miqne/Ekron (see Meehl et al. 2006), for example, have revealed a particularly systematic urban development, evidenced by the extensive area covered by the site and its impressive fortifications, which feature massive Cyclopean construction. Comparable developments occured on Cyprus, including the construction of Cyclopean fortification walls, particularly at Enkomi, Kition and Maa-Palaeokastro (Karageorghis 2002: 71-86).

Ashlar masonry also becomes more widespread in both regions, appearing regularly in both public and domestic construction. An innovative feature in domestic architecture is the use of large Mycenaean-style central hearths, which appear with great regularity on Cyprus and at Philistine sites along the southern Levantine coast in the early 12th century BCE. Examples include the large hearth in

Bâtiment 18 at Enkomi, and the "Hearth Building" excavated by A. Mazar at Tell Qasile (1986).

Significant changes to funerary architecture also occur in both regions, with the introduction of tholos chamber tombs equipped with long dromoi. Though limited in number, they represent a clear Mycenaean presence, reflecting the burial practices associated with resident elite groups. Not unrelated, is the extensive distribution of cult symbols with clear Aegean connections, such as Mycenaean-style figurines, shrines and "horns of consecration" (Dothan 1982: 234–37).

Conclusion

Whatever the precise historical events that led to the penetration of Aegean elements into Syria-Palestine in the early 12th century BCE, the process of immigration appears to have been a complex one, and probably included many different groups of settlers who originated from various parts of the Aegean world and beyond. The problem of identifying the Sea Peoples depicted on the scenes of Ramesses III's mortuary temple at Medinet Habu is a thorny one, and cannot be addressed adequately here. Muhly has observed that the new settlers were culturally linked with the west Aegean, but rejects the idea that they themselves were of Aegean stock (1984: 39–55), while Redford sees them as Aegeans (1992: 241–56); Schachermeyr (1982) concludes that the Sea Peoples originated from the Helladic palatial centres themselves, following their destruction in LH IIIC:1a. The intermixing of Canaanite, Cypriot and Aegean cultural traditions was apparently common both on Cyprus and in the Levant (cf. Sandars 1978: 151–55), and it is possible that there was also ethnic intermixing between these different groups. Based on these considerations, therefore, I would argue that migrant populations came to Cyprus and the Levant from the west, bringing with them a highly organized social structure, innovative technologies and a developed maritime tradition that were to have a profound affect on the history of the eastern Mediterranean world.

In conclusion, an Aegean presence in the Levant during the early Iron I (or LC IIIA) ought not to be seen as a systematic colonization organized at some Helladic port, and with a definite destination in mind. Rather, as I have attempted to show in this paper, the Aegean presence along the Levantine coast was the result of a long, gradual process of infiltration and settlement, beginning with trade exchanges during the initial phase of the LH II period, and culminating with the LH IIIC settlement of displaced Aegeans at various Levantine sites, following the destruction of the Mycenaean palatial centres and the subsequent "crisis" in the eastern Mediterranean world.

In the beginning, this settlement process followed a pattern of uneasy, cautious symbiosis and cultural exchange with the indigenous Syro-Canaanites (cf. Dothan 1998). Periodically, the newcomers gained momentum by joining with other displaced Aegeans moving eastward. The Mycenaean invasion of the coastal areas of eastern Cyprus proved crucial in the process: the island was used as a springboard

for gaining a foothold in the Levant. Eventually, these Aegean settlers consolidated their hold on the coastal plain, particularly in the region of the Philistine Pentapolis, becoming populous and powerful enough to displace the local inhabitants, controlling trade and dominating them culturally and politically. By the end of the 11th century BCE, the region of the southern Levant had come under the full control of the Philistines, with the exception of isolated highland areas, which remained in the hands of local indigenous groups (cf. Finkelstein 1996; Bunimovitz 1998; Barako 2000).

The arrival of the Aegeans introduced a new cultural awareness and a greater social complexity to the region. The LH IIIA/B raids may have temporarily undermined Levantine economic stability, but only a few generations later a vibrant new culture had emerged. The Levant remains a contested region to this day, but the diverse cultural heritage that began to manifest itself in the 11th century BCE is still also deeply imprinted on the region's cultural character and outlook.

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THE NATURE AND EXTENT OF AEGEAN CONTACT AT TELL TA'YINAT AND VICINITY IN THE EARLY IRON AGE: EVIDENCE OF THE SEA PEOPLES?

Introduction

Our knowledge of the transition from the Late Bronze to the Iron Age in the northern Levant is much less advanced than in the southern Levant, where decades of intensive excavations have greatly facilitated attempts at a synthesis. Nevertheless, where scholars were once content to explain the transition in terms of wide-sweeping conquest and migration theories (Drews 1993: 48), they are more reluctant to do so today, owing to the growing complexity of the material cultural evidence increasingly becoming available (Bryce 1998: 368). Ancient documentary sources do exist, but they are of a more fragmentary and cryptic nature and are only now receiving the increased scrutiny they deserve. Moreover, new epigraphic data are coming to light that add to our knowledge of the erstwhile 'Dark Age' in the northern Levant (Stager 1991: 41; Schachermeyr 1984: 181–90; Ipek and Tosun 2000: 970–72).

In 1995, the Amuq Valley Regional Project (AVRP) was initiated in part to focus on cultural links with the Aegean. Both survey work and site excavations were planned in order to investigate the relations between the Aegean (including Cyprus) and the indigenous population during the Late Bronze and Early Iron Ages (Verstraete and Wilkinson 2001: 179). Integral to these investigations have been the renewed excavations at Tell Ta'yinat begun in 2004.

W.-D. Niemeier has neatly summarized the key indicators of intrusive Aegean culture that occur in the eastern Mediterranean during the Early Iron Age. These include terracotta figurines of ritual Mycenaean derivation, hearths typically found in Mycenaean palaces and shrines, Mycenaean-type kitchen ware, a change in diet attested by an increase in cattle and hog husbandry (see also Hesse 1986), and the use of loomweights (Stager's spoolweights; 1998: 346–47) peculiar to Aegean sites from Cyprus to the Greek mainland (Niemeier 2001: 11–12).

What follows is a preliminary attempt to assess the nature and extent of Aegean contact with the Amuq Valley and at Tell Ta'yinat, later known as Kunulua, capital of the Kingdom of Patina/Unqi (Batiuk et al. 2005: 173). Though the Ta'yinat Archaeological Project (TAP) has only just begun to expose occupational deposits from this period, the evidence for relations with the Aegean has been extensive. This paper will focus on the ceramic assemblage and the evidence

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of textile production uncovered thus far by the excavations. These preliminary results anticipate further related discoveries in future field seasons, and therefore permit us to hypothesize and speculate about the settlement history of the site and the surrounding region.

Defining Mycenaean Pottery

The question of how to define Mycenaean style pottery and how to distinguish local ware from imported pottery is integral. At Ashdod and Ekron, a ceramic repertoire comprised of vessels that are Aegean in form and decoration has been identified as being of Mycenaean derivation, and labeled Mycenaean IIIC:1 pottery (Killebrew 2000: 234; 2005: 206, 219–30; Dothan and Zukerman 2004: 3). Instrumental Neutron Activation Analysis (INAA) and petrographic analyses of the pottery fabric, however, have confirmed that this ceramic material was locally made. At Ekron, the excavators also had the good fortune to discover several kilns that contained this distinctive pottery (Dothan and Zukerman 2004: 3, 31; Dothan et al. 1986: 15).

The most systematic and comprehensive classification of Mycenaean pottery thus far has been developed by P. Mountjoy (1986; 1993; 1999). According to her analysis, Early Iron Age vessels which retain Aegean elements of form and surface decoration, but were fashioned from local clays, should be classified as Mycenaean IIIC:1 (hereafter Myc IIIC:1) pottery. This productive tradition invariably incorporated local stylistic components over time, giving rise to distinctive regional patterns. The Mycenaean material of the Iron I period is marked by a lack of standardization, and less specialized craftsmanship than earlier phases of Mycenaean Ware, when centralized production centers manufactured and distributed high quality vessels with a lustrous painted finish. Because the period is characterized by localized regional development, attempts to develop interregional criteria for dating Myc IIIC:1 assemblages have usually floundered.

Since the differences between Myc IIIC:1a and b have not been satisfactorily demonstrated in Levantine contexts (see Dothan and Zukerman 2004: 2), the more general designation will be used in this paper. Dothan herself only recently adopted this revised terminology. In an article entitled "Reflections on the Initial Phase of Philistine Settlement" (2000), she used the term Mycenaean IIIC:1b throughout. By the time of her 2004 study, she had abandoned it in favor of Mycenaean IIIC:1. Future research could change that equation, but at present no adequate standard exists for subdividing the Mycenaean IIIC:1 period in any broadly applicable way.

Previous Research in the Amuq Plain Region

The Amuq Plain, situated at the junction where the eastern Mediterranean seaboard merges with the Anatolian Highlands, holds a prominent position in Near Eastern archaeological research (Fig. 1). It has been the scene of important excavations (e.g., Tell Atchana, Tell Ta'yinat, Tell Judaidah and Chatal Höyük), and has provided one of

the foundational cultural sequences for the Levant and western Syria. The Amuq Plain strategically straddles one of the principal transit corridors that ran from the Syro-Mesopotamian interior west to the Mediterranean and north to Anatolia (Fig. 2). As a result, it preserves some of the richest and most extensive archaeological remains in the entire Near East (the Braidwood survey [1937] recorded no less than 178 mounded settlement sites within the narrow confines of the plain). Blessed with a wealth of natural resources, the Amuq Basin provided a fertile environment for intensive agricultural production, while the mineral and timber-rich Amanus Mountains that border the plain presented a particularly valuable asset, very likely attracting settlement and accelerating the early development of complex social and economic institutions in the region.

Today, Tell Ta'yinat consists of a large, low-lying mound 1.5 km east of Demirköprü on the northern bend of the Orontes River, at the point where it turns west and winds around the southern edge of the Amuq Plain. The site consists of an upper and lower mound, with the lower mound now hidden by a thick alluvial accumulation deposited by the Orontes River. The site lies just north of the modern Antakya-Reyhanlı road, and measures approximately 500m (E-W) by 700m (N-S) for a total area of 35 ha, of which roughly 20 ha comprise the upper citadel mound.

Large-scale excavations were conducted by the University of Chicago at Tell Ta'yinat over four field seasons between 1935 and 1938 as part of the Syro-Hittite Expedition. The excavations focused primarily on the West Central Area of the upper mound, although excavation areas were also opened on the eastern and southern edges of the upper mound and in the lower settlement (for a more thorough description of the topography and archaeology of the site, see Batiuk et al. 2005). In all, the Chicago excavations achieved large horizontal exposures of five distinct architectural phases, or Building Periods, dating to the Iron II and III periods (Amuq Phase O, ca. 950–550 B.C.E) (Haines 1971: 64–66). A series of isolated soundings below the earliest Phase O floors encountered remains that dated primarily to the late third millennium BCE (Phases I and J; earlier Phase H levels were also uncovered) (Braidwood and Braidwood 1960: 13–14), indicating that a lengthy period of abandonment occurred between the Early Bronze and Iron Age settlements at the site.

Settlement Trends in the North Orontes Valley Region

Survey data for the North Orontes Valley region indicate a relative decline in settlement during the Late Bronze Age (LBA) that parallels a general decline throughout the ancient Near East during this period (see McClellan 1992; Yener et al. 2000: 187–89; Casana and Wilkinson 2005). This trend was reversed during the Iron Age, when the number of sites in the region almost doubled. Several patterns emerge from a closer analysis of this survey data (for a more thorough treatment, see Harrison 2001: 122–24). First, of the 30 LBA (Amuq Phase M) sites that have been identified by surface survey, 17 also preserved evidence of

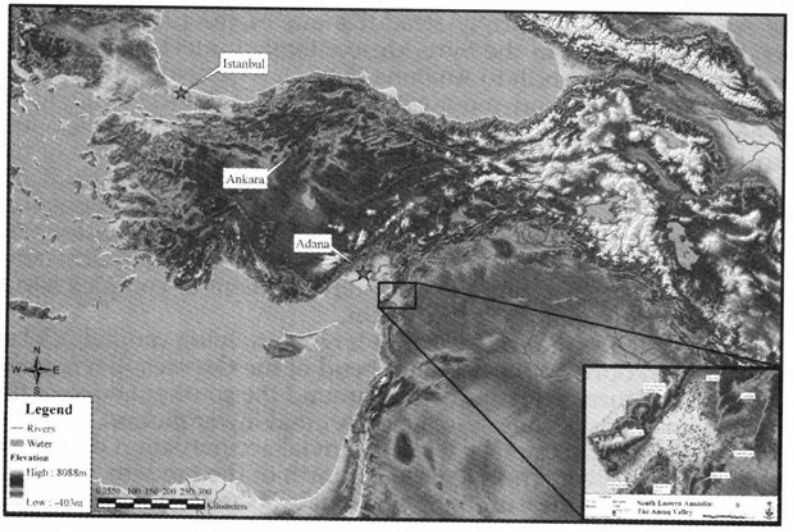

Fig. 1. Map of Anatolia and North Syria featuring the Amuq Plain (inset) (created by S. Batiuk).

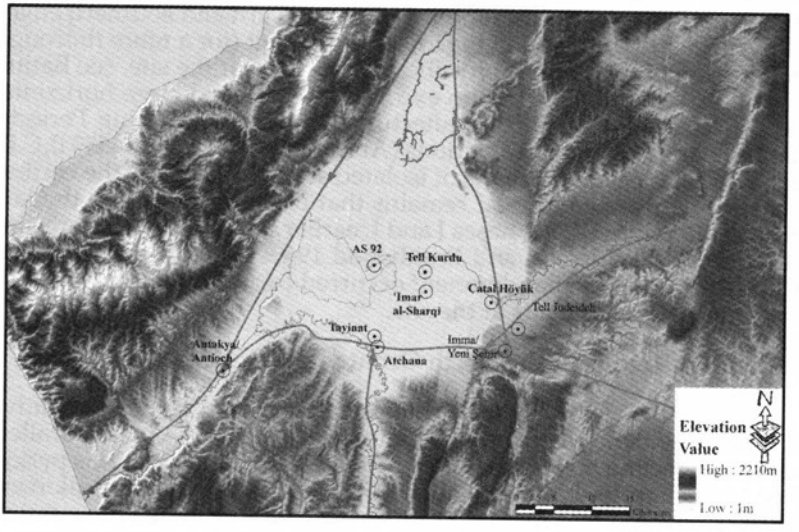

Fig. 2. Transit routes through the Amuq Plain (adapted from Yener et al. 2000: fig. 13).

Early Iron Age (Amuq Phase N) occupation, or almost two-thirds of the LBA sites, suggesting significant settlement continuity between the two periods. However, these 17 sites also account for only about one third of the total number of recorded Amuq N sites. Fully 74%, or 30 of the 47 known Amuq N sites, were new settlements. Moreover, of these 17 sites, 14 were occupied during all three periods, the LBA through the later Iron II period (Amuq Phase O), and represented multiple-period mounds with long occupational sequences. In contrast, the evidence for settlement continuity between the Iron I (Amuq N) and the later Iron II is very strong. 35 of the 47 known Amuq N sites, or a remarkable 75%, were also occupied in Phase O (Harrison, in press).

What these survey data fail to reveal, however, is the emergence of Tell Ta'yinat as the dominant settlement in the region. By the Iron II period (Phase O), at 35 ha, Tell Ta'yinat had grown to account for fully 30% of the known settled area, and was more than three times larger than Chatal Höyük (AS 167), the next largest settlement in the regional site-size hierarchy. The dominance of Tell Ta'yinat is also reflected in the spatial distribution of Phase O sites, which shows a heavy concentration of settlements in its vicinity along the southern edge of the plain. Thus, while the survey data indicate significant settlement continuity during the transition from the LBA to the Early Iron Age, equally revealing is the evidence that this Early Iron Age settlement network subsequently developed into an integrated, urbanized regional entity, with Tell Ta'yinat at its center.

The Ceramic Sequence in the Amuq Plain

Until recently, our knowledge of the ceramic sequence for the Amuq Plain and Tell Ta'yinat during the Early Iron Age derived almost exclusively from the dissertation research of Gustavus Swift (1958). His analysis defined Amuq Phases K to O, covering the second and first millennia BCE. The relevant period for this study is Phase N, which Swift dated to 1150–950 BCE. Phase N levels were uncovered at three sites: Chatal Höyük, Tell Judaidah, and Tell Ta'yinat. Chatal Höyük produced the richest assemblage of Phase N pottery, while Tell Judaidah provided the most complete sequence of Phase N levels, at four. At Tell Ta'yinat, however, only traces of Phase N were found, having been largely obscured by the monumental remains of the Phase O settlement (Swift 1958: 64).

Site distribution during Phase M tended to cluster in the southern part of the valley at nodal points, suggesting a preference for locations best suited to take advantage of trade routes (Fig. 2), particularly the east-west corridor connecting the Mediterranean coast to Aleppo and points beyond (Harrison 2000: 192). The distribution of Aegean imports mirrored settlement patterns. During the LB II (ca. 1400–1200 BCE), imports were found at five sites, including Tell Atchana, Chatal Höyük, and Tell Judaidah (Verstraete and Wilkinson 2000: 188).

Phase N witnessed the appearance of Myc IIIC:1 pottery. Significantly, it has been found at a much larger number of sites (18, according to the AVRP Survey; Verstraete and Wilkinson 2000: 188–89)

than the imported ware of Phase M, reflecting a much wider pattern of distribution and consumption.

The Phase N assemblage differed sharply from the preceding and succeeding phases in terms of its high percentage of painted ware, as much as 90–95% of the overall assemblage, according to Swift.[1] Swift also noted that both the fabric and painted decorations took on new qualities, combining new motifs with painted patterns and shapes from the Late Bronze Age (Swift 1958: 64). To his thinking, the assemblage's uniformity of technique and style "did not seem to admit the possibility that any part of it was imported from another region" (Swift 1958: 72). In Swift's view, this uniformity prevented any sub-phasing of the ceramic corpus into less than a 200-year time span, and he therefore failed to discern any developmental pattern.

The Renewed Excavations at Tell Ta'yinat

It is important to note that the following description represents a preliminary synthesis of the ongoing TAP excavations. Thus it should be viewed as neither systematic nor conclusive. The first season of excavations, though limited in area to a 3 x 20 m trench spanning two 10 x 10 m squares (G4.55 and G4.56), produced exciting confirmation of remote sensing data, revealing part of the Iron II *megaron*-style temple (Building II) originally discovered during the Chicago excavations (Fig. 3). Building II, in turn, sealed a remarkably well-preserved sequence of Early Bronze and Early Iron Age remains, including substantial amounts of material culture with strong Aegean connections. During the 2005 season, therefore, the 2004 probe was extended laterally to the south, expanding the area of excavation to four 10x10 m squares (G4.55, G4.56, G4.65 and G4.66), for a total area of 400 sq m. In all, the 2004–2006 excavations in Field I succeeded in delineating seven superimposed architectural Field Phases (FP), with the primary sequence (FPs 3–6) dating to the Early Iron Age.

The four field phases delineated at Tell Ta'yinat thus far accords well with the Iron I sequences at other sites in the region. Phase N at Chatal Höyük also preserved four architectural phases, levels 7–10. Tell Judaidah, where the largest number of reliable Phase N levels was found, also consisted of a sequence of four phases (Swift 1958: 64).

Elsewhere in the region, at Tell Afis in northwest Syria, Levels 9c, 9b, 9a, and 8 comprise the Early Iron Age horizon (Cecchini and Mazzoni 1998: 4). Several sites in coastal Syria have also produced Myc IIIC:1 pottery, including Ras al Bassit (Courbin 1986; 1993) and Ras Ibn Hani (Bounni et al. 1978; 1979), while Tell Kazel, located in coastal Lebanon, has revealed a well stratified sequence of Late Bronze and Iron I period deposits (Levels 6–3; Badre 2006: 69). Here the appearance of Myc IIIC:1 ceramics coincided with the introduction of two other new pottery traditions, Handmade Burnished Ware and Grey Ware, all of which were present in a destruction level the excavator has associated with the Sea Peoples (Badre et al. 2005: 33–36; Badre 2006: 92–93).

[1] This is an accurate calculation, however, only if the published whole vessels are counted.

In the southern Levant, the excavations at Tel Miqne/Ekron have delineated four phases, 9D–C, 9B–A (=Str. VII, VI, V; Dothan and Zukerman: 2004), while Ashdod has produced five levels, 6, 5, 4b, and 4a (=Str. XIIIb–XIa) (Dothan and Ben-Shlomo 2005, 9). In Grid 38 at Ashkelon, excavations have revealed four phases, levels 20–17 (Master 2005: fig. 20.3).

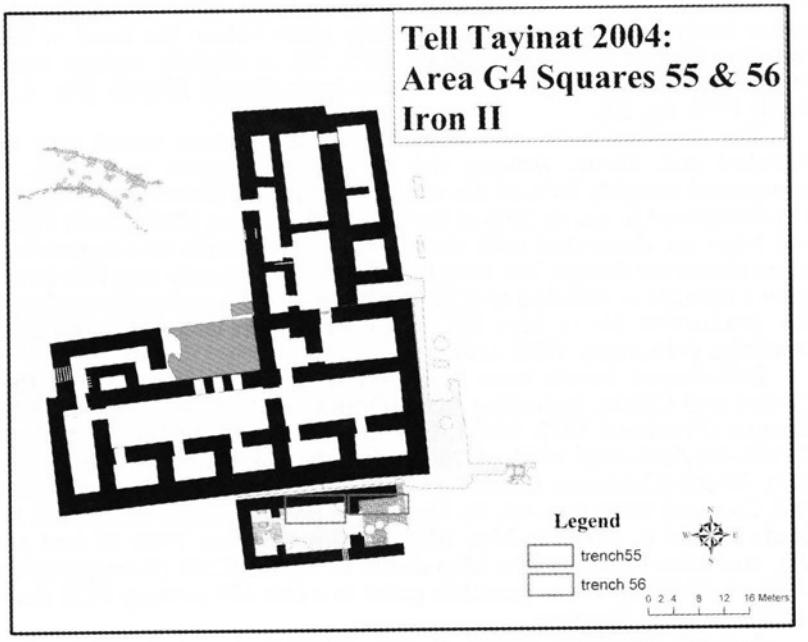

Fig. 3. Tell Ta'yinat Field 1, Squares 55 and 56, overlaid on Buildings I and II (Harrison et al. 2006: fig. 4).

Aegean Contacts With Tell Ta'yinat and the Amuq

Mycenaean IIIC:1 Pottery

The excavations at Tell Ta'yinat thus far have yielded several restorable Phase N vessels and a large number of painted sherds, several of which display salient Myc IIIC:1 motifs. Figure 4 illustrates the skyphos, or bell-shaped bowl, with one or two horizontal handles. Thirty-five examples, thirty-three of which were painted, were recovered by the Syro-Hittite Expedition, each bearing one of three varieties of decoration as described by Swift (1958: 66). All of the bell-shaped bowls have a ring base, a slightly everted rim, close-set horizontal handles and are decorated with a painted band that runs along each handle and terminates at the attachment point. The Ta'yinat skyphos (Fig. 4.1; Ta'yinat FP 5; FS 284, Furumark 1972: fig.

14) most closely resembles Z192 from Judaidah (Fig. 4.4; Swift 1958: fig. 21), and corresponds to Furumark's type 285 (1941: 634).

Skyphos A2542 from Chatal Höyük (Fig. 4.2; Swift 1958: fig. 19) features a painted scheme that marks the advent of the LH IIIC Early period (1190–1130 BCE). Given the fluid nature of development inherent in the relative chronology of Myc IIIC:1 pottery, this motif constitutes a rare diagnostic fossil. This bowl type almost always has a solidly coated interior, and on the exterior, either bands on the lower body and base, or is completely plain below the level of the handles (Rutter 2003: 197; French 1975: 53). A slightly variant form is represented by Skyphos B2361, also from Chatal Höyük (Fig. 4.3; Swift 1958: fig. 20).

The skyphos is far and away the most common vessel type at Ashdod and Ekron. Among the Mycenaean vessels recovered, it comprised roughly 50% of the total (Dothan and Zukerman 2004: 8–12), compared to nearly 30% of the total in the Amuq Plain (Swift 1958: 66). Most are decorated with simple horizontal bands or a somewhat more elaborate design, but very few are plain. Not only was this bowl type a favorite at Ashdod and Ekron, it remained popular throughout the productive life of Myc IIIC:1 pottery, which lasted nearly three centuries (Mountjoy 1986: 219).

Bell-shaped bowls have been found at coastal sites across the Levant and Cilicia, including Acco (Dothan and Zukerman 2004: 12), Sarepta (Pritchard 1975: 90–91, figs. 26:4–5; Koehl 1985: 119–21, figs. 20:193–96; Anderson 1988: pl. 28:19), Ras Ibn Hani (Bounni et al. 1979: 249), Tarsus (Goldman 1956b: figs. 330f), and Kazanli Höyük (Sherratt and Crouwel 1987: figs. 4:6, 8). Moreover, parallels exist on Cyprus at Sinda Period II, dated to Myc IIIC:1b (Karageorghis 1990: 12 and pl. VI), and Maa-Palaeokastro, also dated to Myc IIIC:1b (Karageorghis 1990: pl. XVIII:4). These parallels point to a late 12th century BCE date for the Ta'yinat skyphos.

A more complete vessel at Tell Ta'yinat was restored in the form of a two-handled jar or amphora (Fig. 4:5; Ta'yinat FP 5; FS 69, Furumark 1972: fig. 7), which closely parallels a vessel from Chatal Höyük (Fig. 4:6; Swift 1958: fig. 24), although with a different paint scheme. A second parallel is found at Tell Afis (Venturi 1998: 129; fig. 4:5). The first two amphorae contain three horizontal bands on the body, one on the lower section, one at the shoulder, and one on the lower neck. All three are painted around the rim and have tassels that descend down each handle and flourish at mid-body. The zigzag vertical triglyph on the Ta'yinat amphora is analogous to Furumark's motif of paneled patterns (FM 75, Furumark 1972: 416–20), dated to ca. 1200 BCE. The Afis vessel is from Level 8, or the middle of the 11th century BCE. Venturi notes further parallels from Period I in the Hama cemetery, which has been dated to ca. 1200–1075 BCE (Venturi 1998: 129; Riis 1948: 56, fig. 48). Based on Swift's periodization and initial stratigraphic assessment at Tell Ta'yinat, this vessel likely dates to the mid 12th century BCE.

A number of other diagnostic Myc IIIC:1 sherds have been collected that further testify to an Aegeanizing influence at Tell

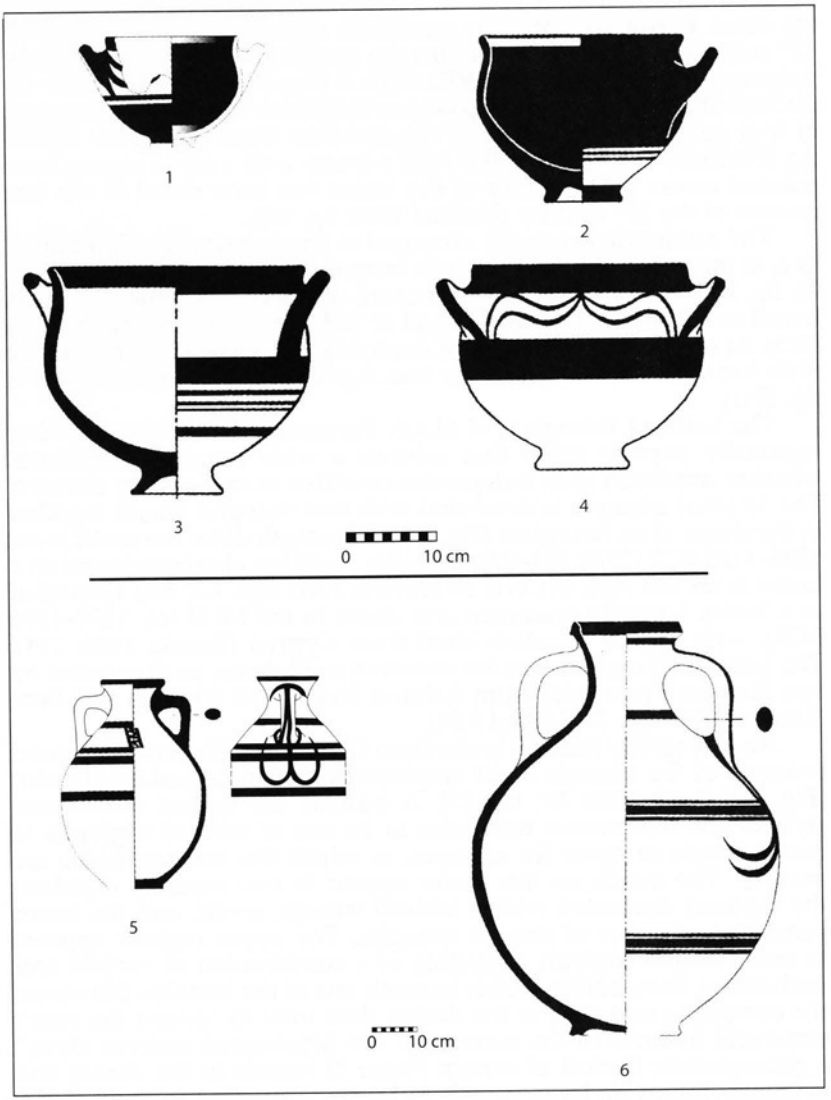

Fig. 4. Skyphoi from Ta'yinat, Chatal Höyük (A2542 and B2361) and Judaidah (Z192) (see Swift 1958: figs. 19-21), and Amphorae from Ta'yinat and Chatal Höyük (Swift 1958: fig. 24).

Ta'yinat. A large restored krater (Fig. 5.3) combines two motifs: Isolated Semicircles (FM 43: j; Furumark 1972: 345) and a Zigzag pattern (FM 61: 1; Furumark 1972: 391) on two horizontal registers, one on top of the other. Furumark dates the semicircle motif to the first half of the 12th century (1972: 348), and dates the consecutive zigzags to widely varying periods (Furumark 1972: 391). A mended krater from the LB IIb Transitional Phase at Tarsus bears a single row of zigzags consisting of four parallel lines instead of the standard three (Goldman 1956b: fig. 336:1352) In level 9a at Tell Afis, a krater with a set of zigzag lines painted across the shoulder of the vessel has been dated to the last quarter of the 12th century (Venturi 1998: fig. 4:2).

The semicircle is usually arranged in single rows on a horizontal line, as the only published example from the Amuq attests (Swift 1958: 76, fig. 27:D). An analogous krater sherd with a row of semicircles was found in an unspecified Iron I level at Tell Qarqar (Dornemann 1999: 89:5). At Ain Dara, a krater sherd depicting semicircles in the Granary Style has been dated to the Early Iron Age (Stone and Zimansky 1999: fig. 27:1).

The Latticed Triangle (FM 61A:5, Furumark 1972: 391) is another regionally popular motif that exhibits a wide range of variations, whether employed as an independent motif or as an auxiliary element. The Ta'yinat example is decorated with two triangles joined together in the shape of an hourglass (Fig. 5.1). Furumark dates the motif to ca. 1200–1125 BCE (1972: 391–92). A similar motif has also been found on a krater from Tell Afis, in Level 10 (Bonatz 1998: figs. 1:2; 5:2), identified as a lattice butterfly ornament and dated to the LB II (ca. 1250–1200 BCE), with further parallels cited from Cyprus (Bonatz 1998: 218). The latticed triangle was quite common in Philistia, as illustrated by two Bichrome examples from Ashdod Stratum XI (Dothan and Ben-Shlomo 2005: figs. 3.47:9 and 3.54).

An elaborately painted krater from Chatal Höyük provides a good example of the triangle motif employed as an independent element (Fig. 5.2; Swift 1958: 67; fig. 23). It exhibits the typical ornamental style of the Mycenaean repertoire in its use of vertical triglyphs to create panels or space for metopes, in which the various motifs are arrayed. The motifs on this krater appear in two separate registers, the topmost decorated with a latticed triangle motif, and the lower consisting of a row of smaller triangles. The upper register appears to use a simple triglyph consisting of a combination of vertical and undulating lines, barely visible beneath one of the handles. However, the composite structure of the design does little to "accent the vase's structural features in the manner of the Mycenaean tectonic style," a characteristic typical of certain Phase N vessels in the Amuq and evidently found on large vessels in Hama, according to Swift (1958: 71).

Only two bird motifs (FM 7, Furumark 1972: 253) have thus far been found at sites in the Amuq Plain. The first was recovered by the Syro-Hittite Expedition in the 1930s (unprovenanced; Swift 1958: 75, fig. 27:A), and the TAP excavations have produced the second (Fig. 5.4). Swift suggested a Late Minoan bird motif as a parallel to the former

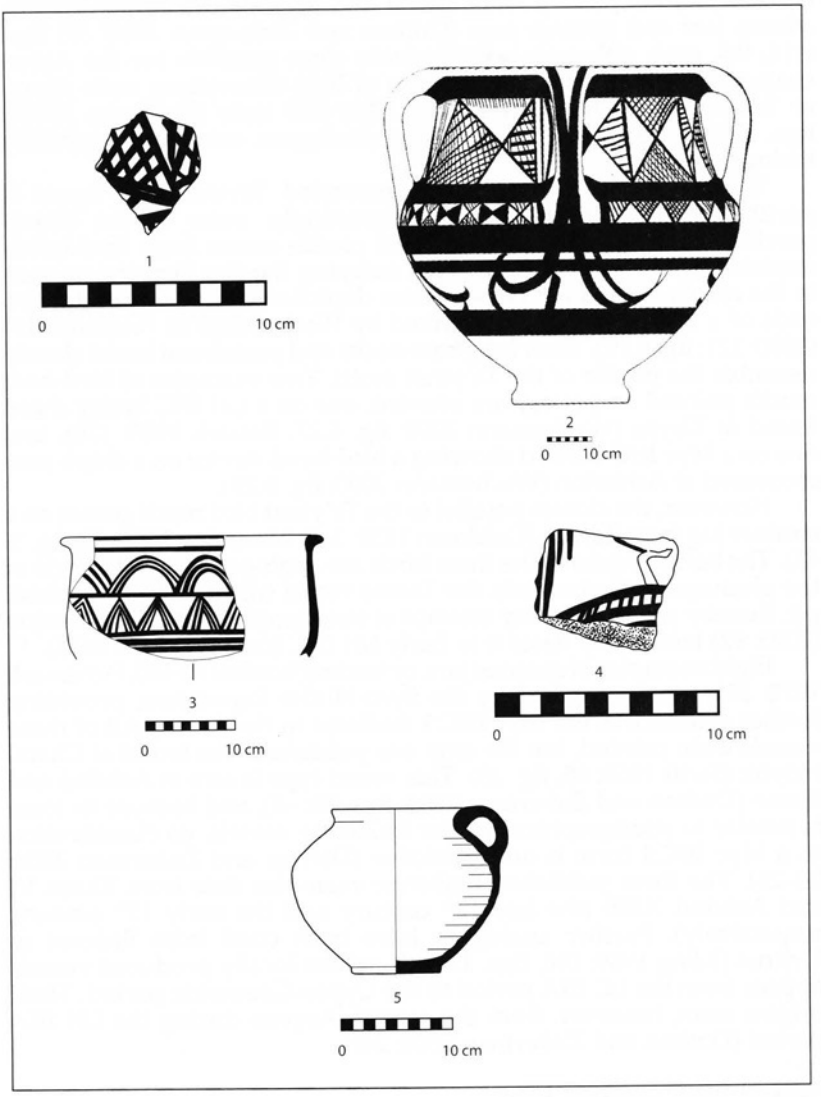

Fig. 5. Kraters from Ta'yinat and Chatal Höyük (Swift 1958: fig. 23), a bird motif from Ta'yinat, and an Aegean-style cooking jug from Ta'yinat.

that is less than convincing, though none of Furumark's catalogue of bird figures (1972: figs. 30–31) comes any closer. The bird motif occurs occasionally on pottery from Ekron and Ashdod, including kraters, stirrup jars and strainer jugs (Dothan and Zukerman 2004: 39; figs. 8:14; 9:9, etc.), although none provide close parallels for the Amuq examples. Several unique examples of bird decorations were found at Tarsus, but in the Late Bronze Myc IIIB style (Goldman 1956b: figs. 1323–1325). Again, no obvious analogues occur in Furumark's listings.

The long beak of the newly excavated Tayinat bird figure is particularly difficult to match. Interestingly, some of the closest parallels to the bird's neck and head profile comes from bird-heads depicted on the bows of the ships carrying the Sea Peoples, as seen in the reliefs at Medinet Habu. These depictions, which form the two ends of a boat, have been described by Wachsmann as "waterbirds" (2000: 121; fig. 6.19). Their long bare necks and prominent beaks closely resemble the profile of the Ta'yinat motif. Two examples of bird-boat motifs painted on pottery are attested, one on a LH IIIC krater sherd found at Tiryns (Wachsmann 2000: fig. 6.27; Bouzek 1985: 178), and one on a Myc IIIC:1 sherd showing a bird-head device on a ship's post recovered at Ashkelon (Wachsmann 2000: fig. 6.29).

However, the closest parallel to the Ta'yinat bird motif occurs on a strainer jug from Tarsus (Goldman 1939: 2–5; Mountjoy 2005: 92, fig. 3: 42). The barred necks of the three birds are analogous, as is the style of the plumage. Unfortunately, the Tarsus vessel was found in a rubbish pit, thereby preventing any attempt at stratigraphic dating. Mountjoy (2005: 92) tentatively dates it to Early LH IIIC (ca. 1190–1130 BCE).

Eight examples of spouted jars, or feeding bottles (FS 160, Furumark 1972: 31), were recovered by the Syro-Hittite Expedition, providing further evidence of the Myc IIIC:1 tradition in the Amuq. All of these vessels were painted, but the only one published was found at Chatal Höyük (Swift 1958: 68; fig. 25). This vessel type is rare at Ashdod and Ekron (Dothan and Zukerman 2004: figs. 30: –8), and because its form is similar to stratigraphically later Philistine vessels, its classification as a Myc IIIC:1 form is not restrictive (Dothan and Zukerman 2004: 24–28). The three published Philistine examples date from Ekron VI and Ashdod XIIIb (the late 12th century and the early 12th century, respectively). Further analogues have been cited from Enkomi in Cyprus (Kling 1989: 160, figs. 17:c–d), where locally produced vessels appear from the LC IIIA period to the Cypro-Geometric period. Their origins stem, however, from the eastern Aegean during the LH IIIA period (Dothan and Zukerman 2004: 24f).

Aegean-Style Cooking Ware

A distinctive cooking pot type provides compelling evidence for the presence of an intrusive Aegean culture at Ashdod, Ekron and Ashkelon. It is morphologically and technologically distinguishable from both its Bronze Age predecessors and Iron Age contemporaries (Killebrew 1999: 94; 2005: 222–23). It has an ovoid body, a disc base,

sloping shoulders with an everted rim, which can be rounded, thickened, or less frequently triangular in section. Most pots from Ekron and Ashdod have a single loop handle, but sometimes they have two, each of which attaches at the rim (Dothan and Zukerman 2004: 28). The form is commonly found on both the Greek mainland and islands, including Mycenae, Tiryns and Lefkandi (Popham and Sacket 1968: fig. 31; Popham and Milburn 1971: 337: 6), as well as on Cyprus (Yasur-Landau 2003a: 589; 2003b: 46–47; Killebrew 2005: 222–23, see n. 98 for further bibliography), and originated as early as LH IIIA (ca. 1400 BCE; Dothan and Zukerman 2004: 28).

The Syro-Hittite Expedition was able to recover only one example of a cooking pot they considered complete enough to register. It is described as having a flat base, a rounded lower body, and a straight shoulder that slopes inward. The rim is thickened and two vertical handles attach at the rim and shoulder (Swift 1959: 69). Though Swift provided no illustration, the description is precisely that of the Aegean-inspired cooking pot, or jug. In the Amuq, these cooking pots were manufactured from dark gray-brown clay heavily tempered with crushed shell, which made them easy to distinguish from Phase O cooking pots (Swift 1958: 65).

During the 2006 season, the TAP excavations produced the first intact examples of this cooking pot type found at Tell Ta'yinat. They have the characteristic features of the Aegean tradition: ovoid bodies, sloping shoulders, a short curving neck, everted and rounded rims, and disc or ring bases (Fig. 5.5). One of the Ta'yinat exemplars is virtually identical to a cooking pot from Ekron Stratum VIA (early 11th century BCE; Dothan and Zukerman 2004: fig 36.2). Other closely analogous vessels have been found at Tarsus (Goldman 1956b: figs. 389:1220–21) and on Cyprus (Dothan and Ben-Tor 1983: figs. 50: 7–8).

In Dothan's view, the ultimate origin of the Philistine cooking pot is to be found in the Aegean zone. Cypriot cooking pots differ from Aegean cooking pots in that they were handmade and have a round base (Dothan and Zukerman 2004: 30).[2] Killebrew, however, while acknowledging the Aegean inspiration of this cooking ware, argues that the closest links, both in terms of greater numbers of parallels and closer typological correspondence, exist on Cyprus and in Cilicia, particularly at Tarsus (Killebrew 2005: 223). Moreover, the typical Late Helladic cooking pot is normally placed on top of a tripod, a vessel type that does not occur in Philistia (Killebrew 2000: 242; 1998: 401). Alternatively, it has also been suggested that both forms usually occur side by side and can be found at almost any LH IIIC site, undermining the possibility of using this vessel type as a marker of ethnic identity (Yasur-Landau 2003a: 589).

Stratigraphically, the Aegean-style cooking pot first appears in Ekron Stratum VII and Ashdod Stratum XIIIb (Killebrew 2005: 244, n. 97), and over the course of the following century was gradually replaced by the traditional Canaanite-style alternative, a trend interpreted as

[2] Another site with cooking pots analogous to those on Cyprus is Megiddo Stratum VI, where the vessels have rounded bases instead of the standard Philistine flat base (Harrison 2004: 30, pls. 9:5–16).

evidence of cultural assimilation (Dothan and Zukerman 2004: 28, 30). Two Aegean-style cooking pots that date to the LB II have been published from Tarsus (Goldman 1956b: figs. 389:1220–21). These also have a flat ring base, ovoid shape, everted rim, and handles (either one or two) that attach at the rim. However, the Tarsus pots have a less everted neck and rim profile and are somewhat smaller overall, measuring only 8–10 cm in diameter, versus the 15–25 cm reported for the published examples from Ashdod and Ekron. The Tarsus cooking pots also appear to be less well crafted and are probably handmade. There is little doubt, however, that they exhibit an Aegean style.

The cooking pot provides an intriguing measure of cultural contact and food production technology. Killebrew, for example, has shown that the Philistine potting tradition differed from that of the indigenous inhabitants of the southern coastal plain at every stage of the production process, from the choice of clay source, to formation techniques and firing temperatures (Killebrew 1998: 400–01; 1999: 108; 2005: 227). Since both petrographic analysis and INAA have demonstrated that the pottery was locally made, the sudden appearance of a unique cooking ware tradition becomes a persuasive argument for the introduction of an Aegean element (Kanta 2003: 178), particularly if we accept that culinary practices tend to remain conservative, as ethnographic studies have shown (Hesse 1986: 17).

Summary Observations

The preliminary findings at Tell Ta'yinat find no fault with the view, pending the results of chemical and petrographic analyses, that the Myc IIIC:1 pottery from the Amuq was the product of local industry, a pattern that has become increasingly evident throughout the eastern Mediterranean basin. The idiosyncratic character of these assemblages, which variously retain the distinctive stylistic features of their Aegean precursors, has resulted in the regional development emblematic of the Myc IIIC:1 tradition (Mountjoy 1993: 164).

Another aspect of the regionalism that prevailed in the Amuq during Phase N was the disruption of trade patterns that were the hallmark of the previous Late Bronze Age. The Syro-Hittite Expedition registered only four imported vessels or vessel fragments, all of which were Cypro-Geometric pieces (dated ca. 1050–950 BCE). These, Swift postulated, were instrumental in establishing the terminal date for the Amuq Phase N assemblage (1958: 121–22).

However, Swift's view that the character of the Phase N assemblage was not subject to sub-phasing is open to challenge. Our initial indications are that at least two ceramic horizons can be discerned within the Phase N sequence. The Syro-Hittite Expedition noted the dramatic increase in painted ware from Phase M. This observation can now be confirmed, though we are not yet able to provide statistical support for the assertion. Nevertheless, the latter portion of Phase N clearly witnessed a significant decrease in the percentage of painted wares as they gave way to the Red Slipped Burnished Ware (RSBW) of Phase O.

The decline of the painted ware tradition over the course of Phase N is paralleled at other Levantine sites. At Tarsus, in Cilicia, where the Transitional Ware included a rich collection of Myc IIIC:1 pottery, "evidence for the lingering influence of the Bronze Age of Tarsus, and more specifically of the Mycenaean style, which ceased to exist" at the end of the 12th century (Goldman 1956a: 63, 350).[3] Similarly, the excavations at Tell Afis produced a significant percentage of painted wares in Level 9a, dated ca. 1150–1100 BCE, but very little before or after that phase (Venturi 1998: 129).

Several attempts have been made to delineate criteria for the chronological development of painted wares, for example, Dothan's early Simple to later Elaborate Style at Ashdod and Ekron (Dothan 1989: 4–6; Dothan and Zukerman 2004: 36, 44). But Dothan's scheme, which assumes a transition from simple to more complex styles, has been questioned. At Ashkelon, both simple motifs, consisting of bands, and more complex spiral motifs were present together in the earliest level, as they also appear to be at Ashdod and Ekron (Master 2005: 342–43), although the more elaborate decorations, which (as defined by Dothan) include pictorial motifs such as birds and fish, do indeed occur only in later Myc IIIC: 1 contexts at Ekron (specifically Levels VIIA and VI; Dothan and Zukermann 2004: 6, 36). An analogous pattern is attested on Cyprus at Sinda (Levels II and III), Kition (floors IIIA and IV in Area I) and Enkomi (IIIA; Kling 1985). The widely cited development of Philistine Monochrome into Bichrome may be paralleled at Tell Ta'yinat, as it apparently is at Ugarit and Ras Ibn Hani (cf. Singer 1985: 112; Bounni et al. 1978: 280–82; 1979: 245–57), but this remains to be proven.

To summarize the Syro-Hittite Expedition's understanding of the Phase N pottery sequence in the Amuq, they conceived of the phase as beginning in the middle of the 12th century, following a stratigraphic gap, and lasting for approximately 200 years (ca. 1150–950 BCE). Swift postulated his start date for the phase based on parallels with the Transitional Ware of Tarsus, which he believed to be earlier than Amuq Phase N material. The decorative elements consisted of simple geometric designs such as hatched and cross-hatched triangles, groups of diagonal strokes leaning in alternate directions, and wavy lines set between straight bands, all of which were usually rendered within horizontal registers (1958: 71).

Swift identified the stylistic repertoire found in the Early Iron Age Amuq with the Granary Style, a somewhat restricted tradition named after pottery found in the remains of a granary excavated at Mycenae, and dated to the 12th century. The Close Style, considered a contemporary of the Granary Style, and consisting of decorative elements that extend over the entire surface of the vessel, often with motifs added to accessory portions of the body, such as handles and

[3] The lack of stratified deposits at Tarsus remains a problem (see Ünlü 2005: 145). According to the excavator, "there was no stratification within Tarsus Mycenaean pottery" (Goldman 1956a: 206). Instead, the excavator relied on the typological system developed by Furumark to subdivide the Early Iron Age stylistically on the basis of shapes and motifs.

spouts (cf. Furumark 1941: 570–73), however, was not represented in the Amuq sequence. Swift thus judged the Transitional Ware found at Tarsus, and the LC III Decorated Ware of Cyprus, particularly the Granary Ware from Enkomi, to provide the closest parallels for the Phase N assemblage (1958: 120).

Aegean-Type Loomweights

Niemeier's other key indicator of an intrusive Aegean presence that is relevant to this discussion is the peculiar clay cylinders identified as loomweights (2001: 11–12). These curious objects were first discovered by H. Schliemann on the upper citadel at Tiryns and at Mycenae. He correctly identified them as loomweights (Schliemann 1885: 136–37, fig. 70; Stager 1991: 37). Excavations have since established that these cylindrical loomweights became common at sites throughout the Aegean during the LH IIIC period (Rahmstorf 2003: 397, 404), or roughly the same time they appeared in the Levant.

Several pieces of evidence suggest their original purpose. First, clusters of the clay objects have often been found arranged in single, double or triple rows, evidently preserving the position in which they were being used when the loom was destroyed (Stager 1991: 36–37; Haines 1971: pl. 16B; Cecchini 2000: 211). Elsewhere, they have been found in small heaps, apparently gathered in anticipation of future use. The ashy remains of burned wood have also provided evidence of loom activity (Cecchini 2000: 211), as has the discovery of microscopic concentrations of fibers (Lass 1994: 31–32).

These spoolweights, as Stager has called them, are notably different from both preceding Bronze Age and succeeding Iron Age exemplars. In contrast to typical Levantine loomweights, which are pyramidal and perforated, these objects are cylindrical, unperforated and made of unfired clay. They have also been found at sites across the eastern Mediterranean basin from Enkomi and Kition in Cyprus to the Aegean at Mycenae, Tiryns, Pylos and Lefkandi (Stager 1998: 346, pl. 6).

Thus far, the TAP excavations have produced more than 80 of these spoolweights. They can be divided into two distinct types, an unfired and non-perforated cylindrical form, and a fired, perforated, and more spherical type. They have been recovered almost exclusively from the Early Iron Age levels in Field I, and exhibit at least two distinct shapes: (1) a cylindrical form with convex, rounded ends (Fig. 6.1), and an hourglass shape with a tapered mid-section and frequently flattened distal ends (Fig. 6.2). Two examples of the hourglass spool weight type also have a dimple on one end.

The Syro-Hittite Expedition excavations at Chatal Höyük also uncovered a cache of these distinctive loomweights, but in a level corresponding to their early Phase O (Haines 1971: pl. 16B). The area was characterized by domestic architecture and was reached only in a test pit (T8, Level 5b). Unfortunately, the only documentation available is a photograph that shows what appears to be approximately 25 loomweights of the cylindrical, unfired variety, some of which are

whitened. It is difficult to establish a reliable date for the level, since it was assigned only broadly to Phase O (ca. 1000–500 BCE).

The appearance of the warp-weighted loom in Syria during the Early Iron Age is now well-established (Barber 1997: 192). Both unfired and fired reels have also been found in the Late Bronze Age levels at Alisar Höyük, Tarsus and Tille Höyük, though the use of the warp-weighted loom is less certain for this period. The possibility thus exists that the warp-weighted loom arrived in Syria by way of Anatolia or Cyprus (Cecchini 2000: 217).

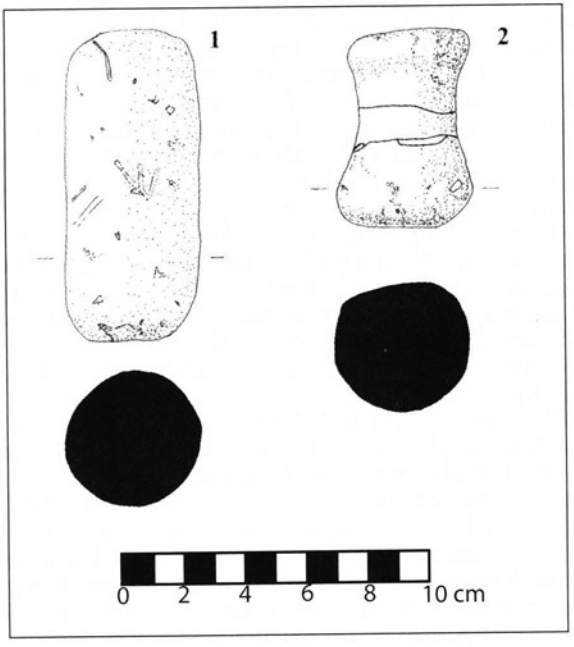

Fig. 6. Cylindrical loomweights found at Tell Ta'yinat (drawn by F. Haughey).

The pottery evidence at Tell Afis suggests that the local inhabitants came into contact with Aegean culture at the same time that the spoolweights appeared, as they were found in all levels of the Iron I, beginning with Level 9b (ca. 1150 BCE). By the end of the Iron I period, the reel-type weights were used less frequently, and the unfired variety slowly gave way to the fired type (Cecchini 2000: 217). This trend has also been noted at Ashkelon (Stager 1991: 37), where the use of these distinctive loomweights coincided with the manufacture of monochrome and bichrome pottery.

The Nature and Extent of Aegean Contact in the Amuq

To summarize, the AVRP survey documented several important developments at the outset of the Early Iron Age in the Amuq Valley. The region experienced a progressive decline in settlement over the course of the Late Bronze Age, mirroring a wider pattern of decline in sedentary settlement that prevailed across the Levant. During this period, settlements tended to concentrate toward the southern edge of the plain, taking advantage of access to trade routes. Imported Mycenaean pottery has been found at only three sites of the 21 surveyed from the LB II period (Verstraete and Wilkinson 2000: 188).

The Early Iron Age witnessed a rebound in the number of settled sites, returning almost to the levels reached during the Middle Bronze Age. At the same time, the presence of imported Aegean products ceases altogether. Instead, the period is characterized by the widespread local manufacture of Mycenaean IIIC:1 pottery, which has been reported from at least 18 Early Iron Age sites in the Amuq Plain (Verstraete and Wilkinson 2000: 188).

The Early Iron Age, or Phase N, ceramic repertoire is marked by a steep increase in painted wares. Decorations consist primarily of simple geometric designs such as hatching, diagonal strokes, and wavy bands arranged within horizontal registers, along with an occasional anthropomorphic or zoomorphic depiction. According to Swift, the closest parallels elsewhere to the Amuq assemblage are the Transitional Wares found at Tarsus, as well as the LC IIIC Decorated Wares from Cyprus (1958: 120).

The TAP excavations at Tell Ta'yinat thus far have not uncovered extensive architectural remains, but they have succeeded in revealing a well-stratified Early Iron Age sequence, something the Chicago excavations were not able to accomplish. Unlike the southern Levant, and its evidence of urban transformation, there is no indication that large numbers of immigrants arrived in the Amuq Plain and imposed themselves and their material culture wholesale on the pre-existing cultural substratum. Indeed, the structural remains uncovered thus far suggest a more rudimentary existence.

The complete list of Aegean cultural traits noted by Niemeier (2001: 11–12) is admittedly not all in evidence yet at Tell Ta'yinat and its immediate vicinity. At the same time, however, the widespread existence of extensive Mycenaean IIIC:1 assemblages is undeniable, and surely culturally and historically significant. If dietary habits are a relatively conservative indicator of group identity, then the propensity for Aegean-style tablewares and cooking wares must be seen as inescapable evidence of a foreign presence.

Consequently, it does not seem unreasonable to infer the influx of small groups of Aegean or Aegeanized peoples into the region during this period. Whether they arrived from Cilicia, Cyprus, western Anatolia, or elsewhere is beyond the current scope of our knowledge. But they appear to have taken up residence across from a ruined Alalakh on the old hill of Ta'yinat, which had been abandoned for nearly a millennium. Not unlike the Philistines, we can postulate their

cultural assimilation as reflected by the eventual disappearance of the painted ware tradition, and coincided with the formation of the Neo-Hittite Kingdom of Patina.

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David R. Lipovitch

MODELING A MYCENAEAN MENU: CAN AEGEAN POPULATIONS BE DEFINED IN NEAR EASTERN CONTEXTS BASED ON THEIR DIET?

One of the key questions asked by archaeologists working in the Near East, and for that matter elsewhere, is whether ethnicity can be identified in the archaeological record. As a field, we have looked primarily at such criteria as pottery decoration to try and identify ethnic groups. In some cases, where dietary taboos have been assumed, we have looked to the presence or absence of forbidden species, such as pig in potentially Israelite contexts in the Levant (Hesse 1986; 1990). Surprisingly overlooked, however, is the more positive approach that seeks to reconstruct the actual cuisine consumed by a population group. Most faunal analysts examine the faunal record from an economic point of view rather than a culinary one. Yet, as is widely recognized, ethnic groups will often maintain their native cuisine, even as they assimilate otherwise with the indigenous culture.

This study examines cooking and food consumption as preserved in the archaeological record in the form of faunal remains to determine whether a Mycenaean cuisine can be reconstructed, and used as a comparative model for identifying a Mycenaean presence in the eastern Mediterranean. Given the assumption by many that the Sea Peoples were ultimately of Mycenaean origin (cf. Stager 1998), sites on the coast of Israel that are rich in Aegean-like material culture should show a similar pattern in their cuisine to that of Late Helladic (LH) III settlements in the Aegean (even if modified by exposure to local populations). Similarly, if there was a Mycenaean presence at Tell Ta'yinat, located in the North Orontes Valley, during the Early Iron Age, there should be a noticeable difference in the cuisine of the site's inhabitants from that seen during earlier and later phases in its settlement history. This paper therefore will focus on the faunal osteological evidence with the aim of identifying culinary patterns that might reflect the arrival of this intrusive culture. In future, it is hoped that studies of the ceramic and documentary evidence will further enlighten our understanding of Mycenaean and Sea Peoples cuisines.

To determine whether culinary patterns can be clearly identified in the archaeological record, a number of factors must be examined. By examining the faunal remains from a number of Mycenaean sites, it should be possible to reconstruct a Mycenaean culinary pattern. In this study, I have examined the faunal data from three Mycenaean sites—Nichoria, Lerna, and Tiryns—to determine whether a clear

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Mycenaean culinary pattern can be identified. I then compare the culinary pattern from these three sites with the faunal evidence from Tel Miqne/Ekron, a known Philistine (or Sea Peoples) site located on the southern coastal plain of Israel, and Tell Ta'yinat in the North Orontes Valley.

Methodological Considerations

Before interpreting the faunal data from these five sites, a number of methodological issues should be addressed, particularly as they concern the question of inter-site comparability. First, there is the issue of sampling strategy. The Ta'yinat Project sieves all excavated material, and therefore has an essentially 100% recovery rate for faunal remains. Such is not the case elsewhere. Secondly, there is the issue of the functional difference between and within the sites themselves and the excavation areas involved. Is it reasonable, for example, to compare the domestic areas of Iron I Tayinat (Field I) to the Iron I/II public space of Field II at the site? Is it appropriate to compare the Ta'yinat data to the collection from Miqne? Are the sites of Nichoria, Tiryns and Lerna comparable to each other, or to Ekron and Ta'yinat? Third, can data based on calculations of the minimum number of individuals (MNI), as used at Lerna and Nichoria, be compared to data constructed from the number of individual specimens present (NISP), as used at Tiryns, Tel Miqne and Tell Ta'yinat? Fourth, how do the varying identification methods used by the zooarchaeologists involved affect the data sets they produce? In the case of Ta'yinat, for example, large amounts of the bone were identifiable only to broad size classes. It is likely that much of this material represents *Ovis aries* and *Capra hircus* remains, which might unduly skew the data towards a culinary pattern dominated by sheep and goat meat. These issues therefore render it very difficult to determine how representative the data sets are from these five sites, and achieve meaningful insight into their dietary practices.

All of these issues notwithstanding, the large samples and extensive exposures achieved from all but Lerna nevertheless argue strongly that they are at least broadly representative, and therefore capable of revealing meaningful culinary patterns.

Mycenaean Culinary Practices

Nichoria

Excavations at the site of Nichoria, located on the Peloponnesus, have produced a substantial LH III faunal collection. Using the estimates provided for meat yields, during the LH III, beef accounted for 26.6% to 42.8% of the animal protein, sheep and goat 13.6% to 28.8%, pork 23.7% to 36.6%, and game animals provided between 10.4% and 17.8%, while dog may have provided between 0.2% and 0.5% of the animal protein (Sloan and Duncan 1978: 62–63; see Tables 1–2).[1] This

[1] The estimates for meat yields are based on the MNI values given in the re-

suggests that the Mycenaean diet was dominated by pork and beef, which made up more than half of the dietary source of animal protein. In the last phase of the LH III (B2), pork and beef (26.6% each) were consumed in essentially equal proportions to sheep/goat meat (28.8%). Game animals made up approximately 17.8% of the diet, and dog, if it played a role, was minimal (0.2%) (Sloan and Duncan 1978: 62–63). Age at death for both cattle and sheep/goat suggests that the animals were raised during the LH III for meat, whereas in other periods they were primarily raised for their secondary products (Sloan and Duncan 1978: 66). The key trends to note here are the prevalent use of beef and pork, the likelihood that dog meat played some minor role in the cuisine, and the emphasis on meat production rather than secondary products.

Lerna

The LH III faunal assemblage from Lerna, located on the east coast of the Peloponnesus, is very small and, as noted by Gejvall (1969: 6), is probably too small to yield meaningful interpretations. Nevertheless, during Lerna VII, the diet was dominated by pork, which comprised some 41.2% of the diet. This was followed in importance by beef at 27.6%. Sheep and goat made up 17.4% of the diet, while game animals made up 13.8% of the animal protein intake. Thus at Lerna, as at Nichoria, beef and pork dominated the menu (Gejvall 1969: 6; see Tables 3–4).

Tiryns

The faunal remains from the important Mycenaean site of Tiryns were analyzed by Angela von den Driesch and Joachim Boessneck (1990) based on NISP calculations. Consequently, it is difficult to compare the data from Tiryns directly with the evidence from Lerna and Nichoria, where MNI calculations were used. In addition, several game species present at Tiryns were apparently not identified at these other sites. Nevertheless, meat yield estimates were made for these species and applied to the data, permitting approximations of the meat represented for each species in the assemblage that could be loosely compared with the evidence from the other two Mycenaean sites.[2]

During the LH III at Tiryns, beef accounted for between 58.6% and 75.8% of the diet, pork between 14.3% and 18.3%, and sheep and goat between 9.0% and 21.7%. Game animals made up 0.2% to 6.2% of the meat. Dogs, if they contributed to the diet in any way, did so minimally, representing between 0.02% and 0.1% of the potential meat yield. When combined, beef and pork clearly dominated sheep and goat in the diet at Tiryns. In the final LHIII phase at the site, sheep

port. The yield per animal value used in this analysis for all of the sites also stems from the Lerna report.

[2] *Dama dama* was assumed to produce roughly the same amount of meat as sheep/goat. Wild pig was treated as if it yielded the same amount of meat as domestic pig. *Lepus* was assumed to produce about 1.2 kg of meat per animal.

and goat provided almost equal amounts of meat as pork, but both were outweighed by the importance of beef. Game meat comprised approximately 6.2% of the diet. Fish appears to have played a fairly minimal role, with a total of only 65 fragments recovered for the entire LH III (von den Driesch and Boessneck 1990: 118; see Tables 5–6). While the pattern is not entirely consistent, as with the previous sites, pork and beef appear to have dominated the diet of the inhabitants at Tiryns during the LH III.

Although it might appear from this brief review that the dietary patterns at these three sites differed significantly, broadly speaking, they are remarkable when compared to a traditional Mediterranean diet. At all three sites, beef and pork played very significant roles in the diet, as did wild game. According to von den Driesch and Boessneck, these species were being raised primarily for meat rather than for any of their secondary products, at least in the latest phases (1990). The sheep and goat consumption typical of an eastern Mediterranean dietary pattern does not appear to have been a significant part of Mycenaean culinary practices. The culling patterns reconstructed from age at death data of the various *Ovis/Capra* remains, meanwhile, suggest that sheep were raised primarily for their wool, while goats were raised for their meat (von den Driesch and Boessneck 1990: 97).

Mycenaeans in the Southern Levant

If, as is widely believed, the origins of the Philistines should be traced back to the Mycenaean world, it would seem reasonable to assume that their diet should reflect a LH III Aegean culinary pattern. By examining the faunal record from a known Philistine site with both earlier and later occupations, therefore, it should be possible to determine whether changes in dietary patterns might be linked to the introduction of a non-indigenous cuisine. Brian Hesse and Paula Wapnish have examined the faunal remains from the Late Bronze and Iron Age levels at Tel Miqne, located in the Shephelah of Israel, and identified with the Philistine city of Ekron (Hesse 1986). The Iron I faunal assemblage, therefore, should reflect the diet of early Philistine arrivals.

In their analysis of the faunal remains, Hesse and Wapnish noted an increase in the amount of cattle with the onset of the Iron Age, as well as a significant increase in the amount of pig (Hesse 1986: 21). During the subsequent Iron II, the proportional amounts of both these species decreased, returning to levels similar to those seen in pre-Iron I levels. When these estimates are adjusted to account for meat yields, beef accounts for approximately 64.6% of the meat consumed at Tel Miqne during the Iron I, with pork accounting for a further 15.6%, and sheep and goat only 19.8% (Hesse 1986: 23; see Table 7). The Philistine diet thus appears to have been dominated by beef, with pork also playing a significant dietary role, a pattern not seen in the preceding LBA levels. Conversely, the importance of sheep and goats diminished dramatically in the Iron I, and only regained its second place standing in the subsequent Iron II, when Philistine material culture also became assimilated.

A preference also appears to have been given to sheep herding over goat rearing. The culling patterns reflected in the cattle fauna suggests that they were raised primarily for meat during the Iron I, as opposed to their more traditional role as a source of secondary products. Based on their age at slaughter, sheep and goats appear to have been raised primarily for wool, with goats possibly being raised for both meat and hair. There is little evidence that they were being raised for milk production in the Iron I (Hesse 1986: 22).

While these patterns do not match completely with the Mycenaean culinary evidence, they do share some similarities and, perhaps more importantly, differ significantly from both the preceding Late Bronze Age and succeeding Iron Age culinary patterns. The early Iron Age faunal record very likely reflects a combination of two dynamics. First, it is clear that the Philistine presence at the site did not replace the local population, but rather augmented it. Thus, the faunal evidence very likely reflects a mixing of Aegean and local dietary practices. Secondly, environmental factors may account for some of the differences.

The Faunal Evidence from Tell Ta'yinat

The recently renewed excavations initiated by the University of Toronto at Tell Ta'yinat, located in the Amuq Valley of southeastern Turkey, have uncovered a series of areas that preserve Iron I, transitional Iron I/II, and Iron II occupations at the site (Harrison et al. 2006 and 2007). Although the excavations are still ongoing, the faunal remains recovered from these levels have produced a number of interesting patterns.

In contrast to the Aegean sites and Tel Miqne, the Iron I faunal assemblage at Tell Ta'yinat was dominated by the remains of sheep and goat. Factoring in meat yields, they provided more than 72.1% of the meat consumed at Iron I Tayinat. Cattle remains, meanwhile, made up 25.9% of the meat supply, and pork accounted for only 1.8% of the meat consumed, while wild game made up a minute 0.1% of the diet. In the transitional Iron I/II phase, beef played a dramatically more important role, at 78.8%, dominating sheep and goat, which comprised 16.3% of the diet. Pork made up some 3% of the diet, while game animals (*Cervus elaphus* and *Gazella*) accounted for only a minor portion (less than 2%) of the meat eaten (see Tables 8–9). During the Iron II, beef continued to dominate, comprising approximately 81.4% of the diet, followed by sheep and goat meat at 16.3%. Pork continued to play a minor but noticeable role in the diet.

While the Ta'yinat assemblage does not appear to reflect the dietary patterns witnessed at the Aegean sites, and at Tel Miqne in the southern Levant, similar patterns have been observed in the faunal remains recovered from the contemporary levels at Kinet Höyük, located on the Cilician Plain to the northwest of Ta'yinat. In addition to high percentages of *Ovis/Capra* remains, the faunal evidence from the Early Iron Age levels at Kinet Höyük indicate that a significant change in dietary practices occurred at the site during this period (Ikram 2003:

Table 1. Percentage of the Faunal Assemblage (Based on MNI) at Nichoria.

	LHIIIA1	LHIIIA2	LHIIIA2-B2	LHIIIB2
Bos taurus	17.1%	18.1%	20.9%	10.9%
Ovis aries	1.3%	0.7%	0%	1.6%
Capra hircus	1.3%	3.2%	0.5%	6.2%
Ovis/Capra	26.3%	32.3%	42.3%	39.1%
Cervus elaphus	1.3%	4.5%	5.1%	6.2%
Capreolus capreolus	7.9%	5.2%	3.7%	10.9%
Sus Scrofa	39.5%	32.9%	23.3%	21.9%
Equus caballus	1.3%	0.7%	1.4%	1.6%
Equus asinus	0%	0.7%	0%	0%
Canis familiaris	4.0%	1.9%	2.8%	1.6%

Table 2. Percentage of Different Meat Sources in the Diet at Nichoria (Based on MNI).

	LHIIIA1	LHIIIA2	LHIIIA2-B2	LHIIIB2
Bos taurus	32.0%	37.1%	42.8%	26.6%
Ovis/Capra	13.6%	18.7%	22.0%	28.8%
Cervus elaphus	2.4%	9.3%	10.3%	15.1%
Capreolus capreolus	15.0%	1.1%	0.8%	2.7%
Sus scrofa	36.6%	33.6%	23.7%	26.6%
Canis familiaris	0.5%	0.2%	0.3%	0.2%

Table 3. Percentage of the Faunal Assemblage (Based on MNI) at Lerna.

	Sus scrofa	*Ovis/Capra*	*Bos taurus*	*Cervus elaphus*
Lerna VII	42.9%	35.7%	14.3%	0.7%

Table 4. Percentage of Different Meat Sources in the Diet at Lerna (Based on MNI).

	Sus scrofa	*Ovis/Capra*	*Bos taurus*	*Cervus elaphus*
Lerna VII	41.2%	17.4%	27.6%	13.8%

Table 5. Percentage of the Faunal Assemblage (Based on NISP) at Tiryns.

	LHIIIB1	LHIIIB2	LHIIIC (early)	LHIIIC (mid)	LHIIIC (late)
Bos taurus	26.31%	34.92%	31.62%	38.39%	40.35%
Ovis/Capra	55.33%	40.74%	46.62%	36.84%	35.43%
Sus scrofa	31.84%	20.95%	19.86%	21.33%	18.97%
Canis familiaris	0.46%	1.28%	0.87%	1.17%	0.82%
Cervus elaphus	0.58%	1.55%	0.54%	1.83%	3.75%
Dama dama	0.12%	0.05%	0.09%	0.06%	0.05%
Capreolus capreolus	0%	0.03%	0.02%	0.06%	0.17%
Lepus capensis	0.35%	0.18%	0.16%	0.11%	0.12%
Sus scrofa ferus	0.58%	0.3%	0.22%	0.21%	0.32%

Table 6. Percentage of Different Meat Sources in the Diet at Tiryns (Based on NISP).

	Bos taurus	*Ovis/Capra*	*Sus scrofa*	*Game animals*	*Canis familiaris*
LHIIIB1	75.8%	9.0%	14.3%	0.8%	<0.1%
LHIIIB2	60.9%	17.9%	18.1%	0.2%	0.1%
LHIIIC - early	58.6%	21.7%	18.3%	1.3%	0.1%
LHIIIC- mid	63.7%	15.4%	17.5%	3.3%	0.1%
LHIIIC - late	64.4%	14.2%	15.0%	6.2%	0.1%

Table 7. Percentage of Different Meat Sources in the Diet at Tel Miqne/Ekron.

	LBA	**IA 1**	**IA 2**
Bos taurus	49.0%	64.6%	58.8%
Ovis/Capra	41.7%	19.8%	31.1%
Sus scrofa	9.3%	15.6%	10.0%

Table 8. NISP for Iron Age Faunal Remains from Tell Ta'yinat.

	Bos taurus	*Sus scrofa*	*Cervus elaphus*	*Ovis/Capra*
Field I (Iron I)	163 (15.8%)	75 (7.3%)	3 (0.3%)	792 (76.7%)
Field II (Iron I/II)	63 (19.8%)	16 (5.2%)	5 (1.6%)	235 (73.7%)
Field III (Iron II)	82 (22.2%)	16 (4.9%)	5 (1.4%)	264 (71.5%)

Table 9. Percentage of Different Meat Sources from Tell Ta'yinat.

	Bos taurus	*Sus scrofa*	*Cervus elaphus*	*Ovis/Capra*
Field I (Iron I)	25.9%	1.9%	0.1%	72.1%
Field II (Iron I/II)	78.8%	3.2%	1.7%	16.3%
Field III (Iron II)	81.4%	2.8%	1.3%	14.5%

292).[3] Much of the regional difference may also be attributed to local environmental conditions. Relatively high amounts of pig remains, for example, may reflect the ability of pig to thrive in those environments that were less arid and more humid.

Conclusions

While an examination of the faunal evidence from three Late Helladic III sites in the Mycenaean heartland does not identify a clear culinary pattern for the Mycenaean world, it does indicate that there was a preference for beef and pork over sheep and goat as source of meat. The Iron I evidence from Tel Miqne-Ekron in Israel, while suggesting some similarity with Aegean culinary practices, perhaps more revealingly, differs significantly from its Late Bronze Age predecessors in a manner that supports the possibility of Aegean influence. The faunal evidence from Iron Age Ta'yinat, meanwhile, though different, likely reflects a local adaptation to the marshy environment, at least more so than the potential presence of an intrusive Aegean element in the population, even though some of the noted peculiarities may reflect Aegean influence. In any event, more definitive conclusions must await the continuing excavations at Tell Ta'yinat, and the ongoing analyses of the remains being produced by these excavations.

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[3] For slightly different faunal profiles representing the Anatolian highlands, see the data presented by Hongo (2003) for Kaman-Kalehöyük, and von den Driesch and Pöllath (2003) for Büyükkaya/Boğazköy.

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Lione du Piêd

THE EARLY IRON AGE IN THE NORTHERN LEVANT: CONTINUITY AND CHANGE IN THE POTTERY ASSEMBLAGES FROM RAS EL-BASSIT AND RAS IBN HANI

Introduction

Recent excavations have revealed that most northern Levantine sites[1] were reoccupied directly after the destruction of their Late Bronze Age (hereafter LBA) levels (Fig.1). In general, the succeeding Early Iron Age (hereafter EIA) settlements were more modest in character and often less densely occupied. Although imports are rare during this period, there is some evidence for continuing contact between Cyprus and the Levant (see for example, Bounni et al. 1981; Badre 1983; Dothan and Zukerman 2004; Gilboa 2005; Bell 2005; and Sherratt 1998).

In the northern Levant, at present, the preserved material evidence consists almost exclusively of pottery. At first glance, the situation at such sites as Ras Ibn Hani, Tarsus and now also Tell Ta'yinat,[2] seems more or less comparable with the picture that has emerged elsewhere in the Levant and Cyprus: large amounts of Aegean-style pottery[3] appear directly after the destructions at the end of the LBA. However, although there are some general resemblances, there are also distinct local or regional differences.

To illustrate these regional differences, aspects of the EIA pottery assemblages from Ras el-Bassit[4] and Ras Ibn Hani[5] will be presented in this paper. I will stress the importance of looking more closely at the local or regional level for continuities and changes, as well as for the possible meaning of differences and similarities in these pottery repertoires.[6] Using this approach, I hope to shed more light on the

[1] Prominent exceptions include Ugarit, Alalakh, Emar and Tell Arqa.

[2] See Swift (1958) for the Aegean-style pottery found thus far in the Amuq. The pottery from the recently launched excavations at Tell Ta'yinat has not yet been published (see Janeway in this issue).

[3] This pottery is often labelled Mycenaean IIIC or Wheelmade III. For a discussion of the terminology, see Kling (1991).

[4] I would like to thank J.Y. Perreault for his permission to study the pottery from Ras el-Bassit and to present some of the results in this article.

[5] I would like to thank A. Bounni and J. and E. Lagarce for the possibility of studying the material from Ras Ibn Hani within the context of the Syrian-French Expedition, and for their permission to present some of these results in this article.

[6] The local pottery from Ras el-Bassit, Ras Ibn Hani and Tell Kazel (Area I) are

possible nature of these two sites during the EIA, and their broader regional, inter-regional, and overseas interactions.

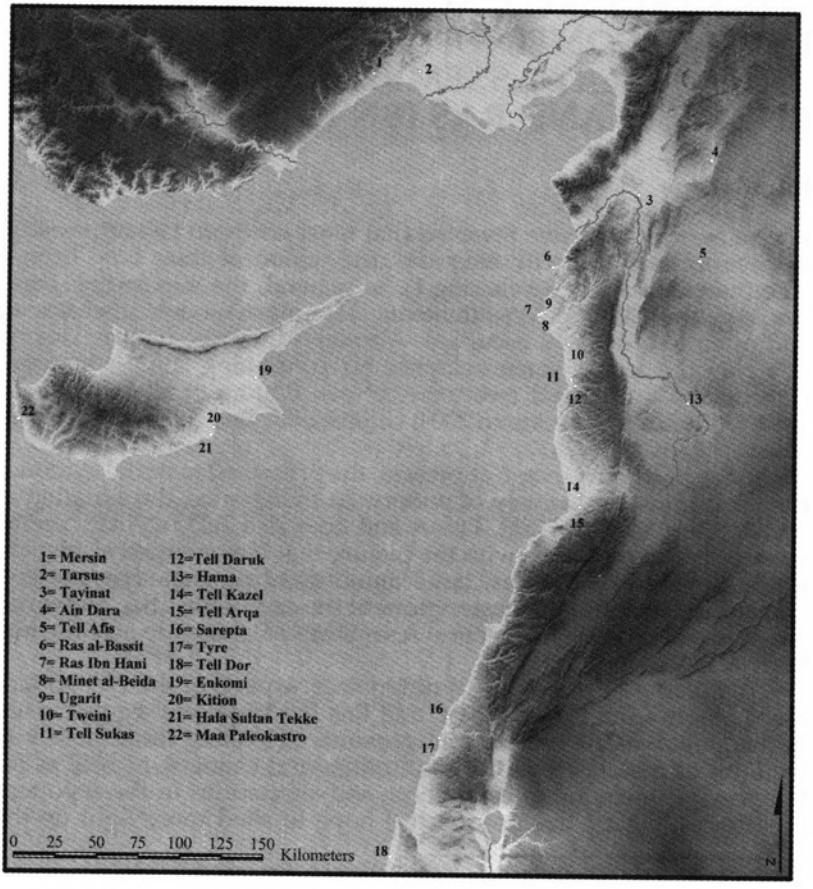

Fig. 1. Map of LBA and EIA sites.

Early Iron Age Ras el-Bassit and Ras Ibn Hani

Both Ras el-Bassit and Ras Ibn Hani exhibit continuous habitation between the Late Bronze and Iron Ages. At Ras el-Bassit, modest architectural remains show a quick reoccupation of the site after the destruction of its LBA buildings: a few small rooms, a hearth and silos provide evidence of the earliest Iron I settlement. The stratigraphy of the first Iron I levels has been obscured because of large-scale rebuilding activities in later periods, and the fact that most of the

the subject of my PhD thesis, and therefore the results presented here are preliminary.

associated pottery was found in later deposits (Courbin 1986 and 1990). Often, it was difficult to separate the LBA levels from the Early Iron I levels.[7] Consequently, in this paper, these levels will be referred to as Transitional LBA/Iron I levels.

The architecture and associated finds at Ras Ibn Hani are more intact and comprehensible. They consist of small houses separated by streets built directly over the remains of the Southern Palace (Bounni et al. 1979; 1981). Three distinct architectural phases were distinguished. The first phase was dated by the excavators to ca. 1200–1150 BCE, the second phase to 1150–1050 BCE, and the third phase to 1050–950 BCE (Bounni et al. 1981: 260–70). In the Northern Palace, evidence for the EIA is less well preserved, but traces of blocked doors and small walls on top of the LBA walls, as well as concentrations of EIA pottery (personal communication J. Lagarce), also suggest a quick reoccupation.

The Early Iron Age Pottery: Evidence of Continuity and Change[8]

In the Transitional LBA/Iron I levels at Ras el-Bassit, the locally made pottery appears to remain largely the same as in the preceding LBA levels. In the Iron I period, distinct changes in the local pottery fabrics and technology can be noted (Courbin 1993a: 48).[9] In particular, a new wheel-thrown local ware emerges that exhibits a hard-fired fabric generally with a thick blue-grey core, suggesting that the pottery was fired in a reducing atmosphere. There are also indications that the pottery attained its hard-fired state under relatively low temperatures. In contrast to the gritty LBA pottery, the EIA pottery is dense in appearance, and contains smaller concentrations of inclusions. A very small amount occurs in the earliest Iron I levels, suggesting that its introduction was a gradual process, appearing first along side LBA wares, and then gradually replacing them during the early phases of the Iron I period. This distinctive potting tradition continues, albeit with some change, until the end of the Iron Age. Two kraters of 11th/ early 10th century BCE date provide examples of vessels produced with this fabric (Figs. 2a–b).

The Early Iron Age Cooking Wares at Ras el-Bassit and Ras Ibn Hani

However, this new EIA fabric was not used in the production of cooking pots. A portion of the LBA cooking pots were handmade, with

[7] Personal communication from F. Braemer, who is responsible for final publication of the stratigraphy, and to whom I am grateful for permission to cite these preliminary results.

[8] Petrographic analysis and geological interpretation are currently being conducted by P. de Paepe (University of Ghent). Consequently, the fabric descriptions presented here are based primarily on more general macro- and microscopic analyses.

[9] The preliminary results of XRD and microscopic analyses, undertaken respectively by B. de Leeuw (University of Amsterdam) and L. Jacobs (University of Leyden), appear to support this view.

a burnished surface. They range in colour from dark brown to black, probably the result of production in a reducing atmosphere. Some of the LBA cooking pots exhibit the more typical Levantine shape, were not fired in a reducing atmosphere, and appear to have been wheel-made or wheel-finished. It is uncertain at present if these were produced locally as well.

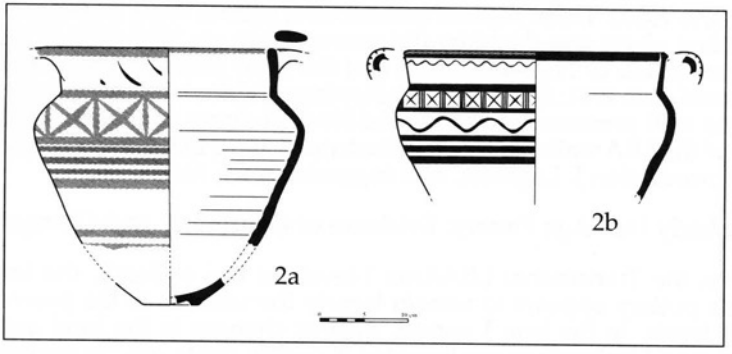

Fig. 2. 11th/early 10th Century BCE Kraters from Ras el-Bassit.

In the Transitional LBA/Iron I and Early Iron I levels, the LBA burnished cooking pot tradition continues, but it occurs sometimes in combination with another cooking pot fabric that contains talc, which creates a soft 'soapy' material highly resistant to thermal shock. Like the burnished vessels of the LBA, these talc cooking pots are often handmade, although some show traces of wheel-finish or manufacture as well. However, the use of talc as a tempering agent was not new to EIA Ras el-Bassit. Some of the black burnished vessels of the Transitional LBA/Iron I phase also contained small amounts of talc. The *in situ* discovery of two cooking-pots in a fireplace in one of the earliest Iron I phases (see Courbin 1986: 190 and fig. 13), one made of talc (Fig. 3a) and the other of the burnished type (Fig. 3b), confirms that both vessel types were in use together at the very beginning of the EIA. Interestingly, both vessels show traces of combined handmade and wheel-finish manufacture.

At Ras Ibn Hani, there is no clear break in the local fabric from the LBA to the EIA, but there are significant changes in some vessel shapes in Phase I (see further below), and there is a complete break from the LBA cooking pot tradition. As at Ras el-Bassit, the EIA cooking pots are characterized by the dominant presence of talc, and they have been called cooking pots 'à la stéatite' (Bounni et al. 1979: 253–56). Two large cauldrons from LBA Ugarit provide evidence that at least the potters of Ugarit were familiar with the suitability of using talc as a tempering agent (Bounni et al. 1979: 254–55; Caubet 1992: 127). At Ras Ibn Hani, the new cooking pots replace the LBA types completely. They are introduced in the earliest occupation level after the destruction of the LBA settlement, and are restricted to the Iron I period. As in the LBA,

they were handmade (Bounni and Lagarce 1998: 79) and accounted for all of the cooking wares from this period, with the exception of one possible import, whose shape can be compared to an Early Iron I example from Tell Kazel (see Capet 2003: 104 and fig. 38b).

The range of cooking pot shapes at Ras Ibn Hani is very narrow, especially when compared to Ras el-Bassit. The rim stances are more or less vertical, with an unthickened or slightly thickened lip, a straight body and a rounded base (Figs. 4a–c). Over time the rim becomes more inverted in stance and eventually develops into the holemouth form that is the hallmark of the Iron II period (Bounni et al. 1979: 255). Some of the cooking pots at Ras Ibn Hani have multiple-ridged, flattened handles, and there are examples of bases and/or lids with mat impressions. As at Ras el-Bassit, some of the Iron II cooking pots contain a small amount of talc temper as well.

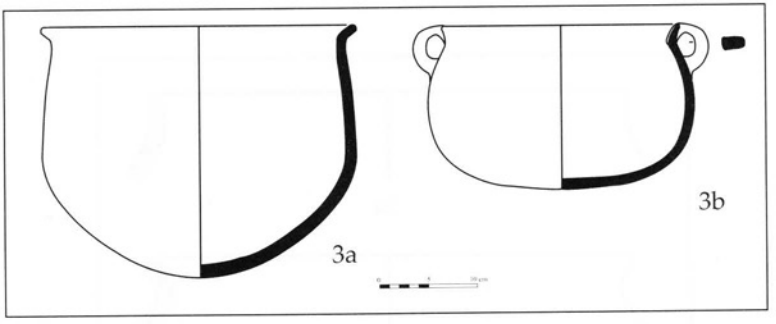

Fig. 3. Early Iron I Cooking Pots from Ras el-Bassit.

Few of the cooking pots at Ras el-Bassit exhibit similar shapes to those found at Ras Ibn Hani (Fig. 4d), but there are also a wider variety of forms represented, both of the burnished and talc-tempered vessel types. The Iron I burnished cooking pots generally have relatively high-necked simple rims, although slightly flared or inverted rims also occur (Figs. 5a–b). Some of the vessels show traces of handles attached at the rim, and they may have been equipped with lids. A few examples of a LBA bowl-shaped cooking pot type appear in the Transitional LBA/Iron I phase as well. The talc-tempered vessels at Ras el-Bassit range in form from flared simple rims (Fig. 3a) to thickened incurved rims, or simple, folded rims (Figs. 5c–d). At both Ras el-Bassit and Ras Ibn Hani, the talc-tempered vessels generally are not decorated; one of the exceptions is a vessel from Ras el-Bassit, which has an inverted rim and fingernail impressions under the rim (Fig. 5e), a possible forerunner to the holemouth cooking pots of the Iron II period, when bands of fingernail impressions were popular.

Talc-tempered cooking pots have a very limited distribution. In addition to Ras el-Bassit and Ras Ibn Hani, a few examples have been found at Tell Sukas and Tell Daruk (Buhl 1983: 26–29, fig. IX and pl. VII, nos. 96–101). This limited distribution might be linked to the so-called 'Greenstone Mountains' in the vicinity of Ras el-Bassit and Ras

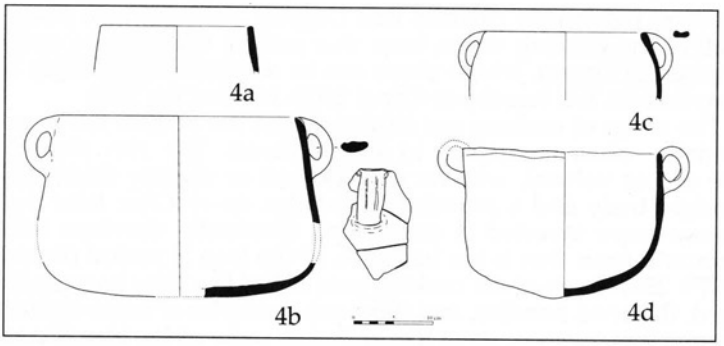

Fig. 4. Early Iron Age Cooking Pots from Ras Ibn Hani (4a–4c) and Ras el-Bassit (4d).

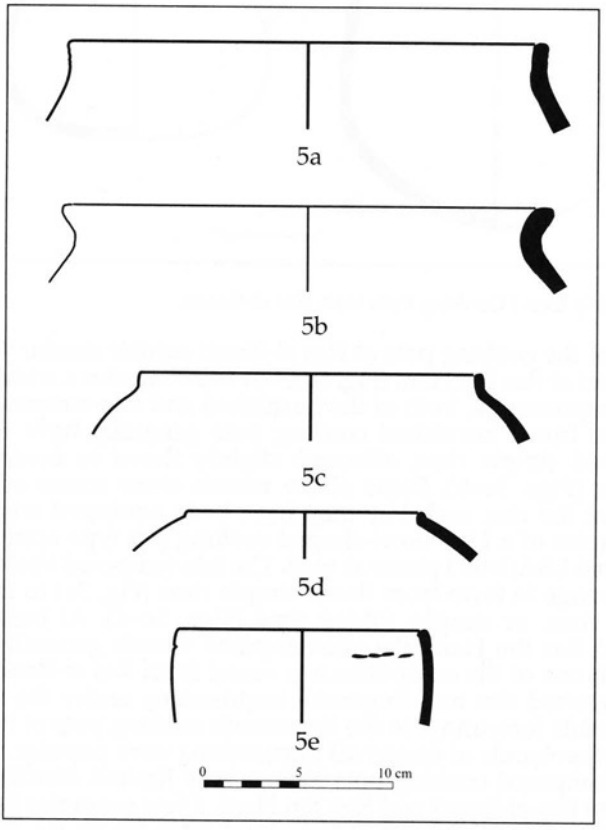

Fig. 5. LBA/EIA burnished (5a–5b) and talc Cooking Pots (5c–5e) from Ras el-Bassit.

Ibn Hani, where talc can be found (personal communication, P. de Paepe). The examples found at Sukas and Daruk are probably the product of exchange. Some vessels found in the LBA levels at Porsuk (specifically Level V; Dupré 1983: 169–72, pls. 32–35) and in the later Iron I at Tell Afis (Mazzoni 1998: 168, fig. 20, nos. 7 and 8), though of different fabric and date, are reminiscent of shapes from Ras el-Bassit and Ras Ibn Hani.

A number of large, bowl-shaped, vertical-rimmed, burnished cooking pots from Ras el-Bassit closely resemble wheel-made burnished cooking pots found at LBA Ugarit (Monchambert 2004: figs. 86–87, nos. 1220–1225; for bowl-shaped types, see figs. 87–89). Good parallels of the straight-rimmed type (see Fig. 5a) can be found in the Handmade Burnished Ware repertoire from Cyprus, for example at Kition, Hala Sultan Tekke, and Enkomi (Pilides 1994: fig. 46 and 48). Interestingly, some of the Ras el-Bassit examples fit well with the so-called Cypriot Monochrome Ware, as distinguished by Pilides. This is especially true of the examples he describes as "possible cooking pots" (1994: figs. 46 and 48; see also Karageorghis 1985: 434, and his remark that "some of them belonged to shapes not unlike the ordinary cooking pots..."). Most of the Cypriot material can be dated to just before or directly after the LBA destructions around 1200 BCE, although some examples still occur at Kition in the 11th century. The burnished cooking pot (Fig. 3b) and some of the talc-tempered vessels are also similar in shape to examples from Ugarit (Monchambert 2004: fig. 90, nos. 1243–1245). Finally, it is interesting to note that most of the EIA pottery from highland central Anatolia is handmade and burnished as well (Genz 2005: 76; for comparison, see also the evidence from Gordion in Henrickson 1994).

In summary, the talc-tempered cooking pots at Ras Ibn Hani and Ras el-Bassit clearly represent a local phenomenon. At Ras el-Bassit, the shapes, surface finish and fabric can possibly be traced back to the LBA. Although it is possible that some of the burnished vessels in the LBA levels belong to the so-called Handmade Burnished Ware tradition, the burnished cooking vessels from the LBA and Transitional LBA/Iron I levels at Ras el-Bassit appear to be related to broader regional LBA traditions and the Monochrome Ware tradition of Cyprus. It remains unclear, however, whether this burnished tradition continued as an Iron Age potting tradition, although, as we have seen, there are indications that burnished cooking vessels continued to be used in the Early Iron I period. The more or less contemporary appearance of talc-tempered fabrics at both Ras el-Bassit and Ras Ibn Hani indicates close contact between these two EIA settlements. The slightly earlier appearance of talc-tempered vessels at Ras el-Bassit might suggest that potters at this site were the first to introduce this new cooking pot fabric to the region, although as we have seen, potters at Ugarit were apparently already aware of its suitability for the production of pottery in the LBA.

The Non-Cooking Iron I Assemblage at Ras el-Bassit

The Iron I assemblages from Ras Ibn Hani and Ras el-Bassit indicate differences in the function and development of these sites. The amount of pottery that can be dated with certainty to the Iron I period at Ras el-Bassit is much smaller than at Ras Ibn Hani. Some contact with Cyprus can be inferred from the possible Monochrome Ware cooking pots at Ras el-Bassit (see above), and the few fragments possibly identifiable as Proto White Painted or White Painted I or II ware found largely in later Iron Age contexts, including a possible White Painted I kalathos fragment (Fig. 6a).[10] At present, no Aegean-style imitations or imports have been found in the Iron I levels at Ras el-Bassit, except for a possible Levantine import with bichrome semi-circle decoration.[11]

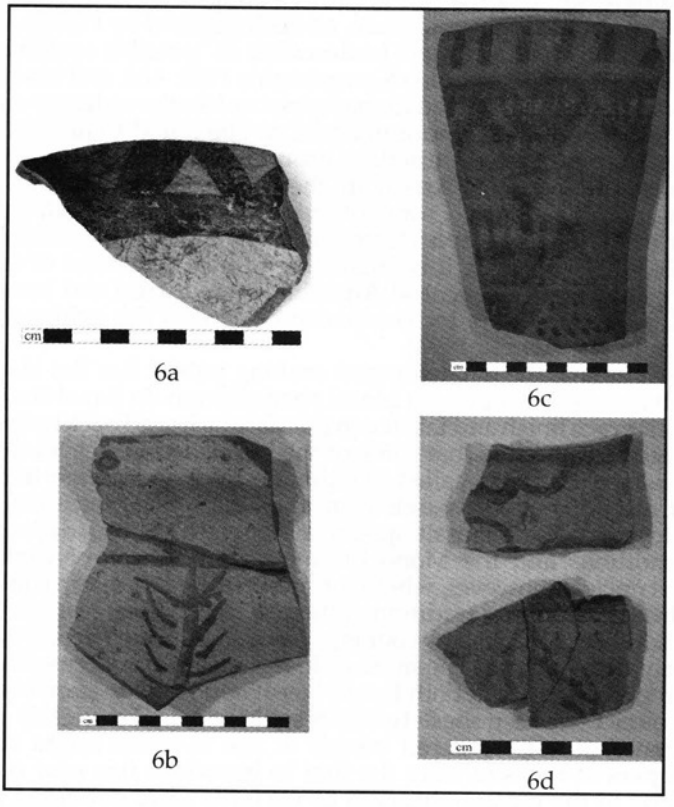

Fig. 6. Painted Iron I pottery from Ras el-Bassit.

[10] The shape resembles kalathoi from Cyprus, but no close parallels were found for the decoration (see for example Yon 1971: nos.137–140).

[11] There is also a very small vessel fragment that is similar to carinated bowls from Ras Ibn Hani.

Several fragments of local Iron I fabric belong to large storage or transport vessels (Fig. 6b), and were covered with a thick white slip and dark brown painted decoration. Similar fragments, but without a white slip, were found as well. In general, the painted pottery is decorated with a brown paint. Two fragments of a large krater had a white slip and were decorated with red painted dots and triangles (Fig. 6c; see also Courbin 1986: fig. 14), reminiscent of EIA pottery from Tille Höyük in Turkey (Blaylock 1999: fig. 1), Hama (Riis and Buhl 1990: 186, fig. 85, nos. 674–676), Tyre (Bikai 1978, pl. XLI: 18), and Tell Kazel (Capet 2003, fig. 43k, and 44a). Non-stratified fragments from Ras Ibn Hani exhibit the same decoration, while a number of white-slipped sherds from the LBA levels at Ugarit are also decorated with dots (Monchambert 2004: 219, fig. 98, nos. 1302–1306). Several fragments of Levantine Monochrome and Bichrome pottery, mainly reflecting a Phoenician style, can be dated to the Iron I period as well (Fig. 6d). The rims of a few transport jars of possible Iron I date seem to be of general Levantine manufacture. Most of the local Iron I wares consist of simple bowls and cooking vessels, while the painted fragments belong primarily to closed vessel forms.

The Non-Cooking Iron I Assemblage at Ras Ibn Hani

Although there is no clear change in fabric with the transition to the EIA, a remarkable change occurs in the range of forms. Almost all of the EIA pottery at Ras Ibn Hani associated with drinking and serving, including cups, deep bowls and kraters, are Aegean in style. Some of these vessel forms, such as the carinated bowl and the skyphos (see Monchambert 1996: 45–46; and Yon et al. 2000: 486–88, where these vessels are interpreted as local or of Cypriot origin), appear to have been introduced at Ugarit at the very end of its existence. At the same time, it is also clear that local regional forms account for a substantial portion of the EIA pottery assemblage. The Iron I pottery continues to be produced on a wheel.

Several previous reports on Ras Ibn Hani have already described the general development of the pottery repertoire from the Early Iron I levels (Bounni et al. 1979; 1981; Lagarce and Lagarce 1988; Badre 1983). Consequently, I will only briefly summarize the pottery from the first and second phases, and I will not discuss the third phase at all, which marks the appearance of the Phoenician Bichrome black and red painted tradition and, at the end of this phase, the first appearance of red slipped pottery.

The Aegean-Style Pottery

The Aegean-style pottery at Ras Ibn Hani is made of a local pinkish clay and usually contains dense quantities of inclusions. The pottery is unslipped and decorated with a matte monochrome paint, usually red, although a small number were decorated with a brown paint. Although the fabrics of some brown-painted vessels also appear to be local, they were generally made of a slightly paler fabric, and appeared to have been fired at a higher temperature (personal

communication, P. de Paepe), suggesting the possibility of a non-local source of origin (perhaps Cyprus). In most cases, no attempt was made to conceal the coarse grits on the surface, and the decoration often was applied loosely by hand. However, some fragments exhibited a much finer quality, with a nicely smoothed surface and carefully applied painted decorations that appear to imitate Mycenaean proto-types more closely, especially in the way the different shades of colour are applied. Unfortunately, these examples were found mainly in later fills and pits.

The dominant Aegean-style forms in Phases I and II consisted of bell-shaped bowls and kraters (Figs. 7a–f), carinated bowls (Fig. 7g), and other serving vessels, including closed forms (Figs. 8a–b) and jugs with flared rims. Spirals and horizontal bands comprised the most common motifs in Phase I, while in Phase II, wavy lines appear to have replaced spirals as the preferred decorative motif (Fig. 8c–d). Undecorated vessels, some made of a bright orange clay fabric, were found in both phases.

The carinated bowl with horizontal strap handles, usually decorated with horizontal bands and concentric circles on the inside (Fig. 7g), occurred frequently in Phase I. In Phase II, these vessels were gradually replaced by convex bowls (Fig. 8e; see Bounni et al. 1981: 266; Badre 1983: 208). Phase II also produced fragments of lipless bowls, at least one of the one-handled type (Fig. 8f). The distribution of these one-handled bowls appears to be restricted primarily to the eastern Aegean; they occur only rarely in Cyprus (e.g., Maa-Palaeokastro; Kling 1988: 328–29, no. 574) and the Levant (e.g., Tarsus; Goldman 1956, no. 1264).

Other EIA forms at Ras Ibn Hani associated with the Aegean-style repertoire include feeding bottles and small spouted jugs, a spouted bowl, and knobs of stirrup jars. One vessel, a cylindrical jug with a white-slipped surface and complex pattern of red and black paint (Fig. 9a), although of local or regional manufacture, is reminiscent of Philistine Bichrome Ware (see Lagarce and Lagarce 1988: 153–54). A second vessel made of the local fabric, a strainer-spouted jug with bichrome decoration (Fig. 9b), also has parallels from the southern Levant and Cyprus (Dothan 1982; Lagarce and Lagarce 1988: 154). One possible southern Levantine Philistine Bichrome import was made of an orange fabric with a white slip and semi-circle painted decoration; similar examples have also been found at Tarsus (see Goldman 1956: 208).

In general, the Aegean-style pottery at Ras Ibn Hani closely resembles similar material found on Cyprus, and follows Cypriot fashions, such as use of the wavy line decoration (Bounni et al. 1981: 260; Lagarce and Lagarce 1988: 147). However, it should also be noted that this motif occurs in the LBA as well, for example on amphoroid kraters at Ugarit (Monchambert 2004: fig. 94, no. 1280). There are also general similarities with the Aegean-style pottery repertoire at Cilician sites such as Tarsus (Goldman 1956) and Soli Höyük (Yağci 2003).

Levantine Forms in the Ras Ibn Hani Assemblage

Phases I and II also produced pottery common to the Levant. Many LBA decorative motifs continued to be used in the EIA, including net-patterns, bichrome bands, and hatched triangles (Lagarce and Lagarce 1988: 147). Although some forms, such as the popular amphoroid kraters and bichrome plates (Figs. 9c and e), overlap with the Aegean-style material, most of the Levantine forms consisted of storage and transport vessel types, and included jars, pithoi, one- and two-handled pilgrim flasks (Fig. 9d), and jugs. Their fabric sometimes closely resembles that of the Aegean-style pottery, although a wide variety of fabrics, probably the product of numerous Levantine workshops, do occur. In Phase I, most of the amphoroid kraters are white-slipped and bichrome or monochrome painted (Figs. 10a–b). During Phase II, bell-shaped kraters are completely replaced by amphoroid kraters, which were now no longer white-slipped. As with the white-slipped kraters before them, these amphoroid kraters are painted mainly in bichrome, with crosshatches, panels, and triangular motifs in the Levantine tradition (Figs. 10c and 11a), as well as wavy lines. Parallels occur at Ras el-Bassit, Tarsus and Tell Kazel, or the Levantine coast in general, but also inland at Hama, and somewhat less frequently at Tell Afis. One monochrome painted krater (Fig. 11b) is similar to an example from Tarsus (Goldman 1956: pl. 391, no. 1352), while its decoration is reminiscent of a krater from LBA Ugarit. Undecorated kraters also occur in Phases I and II (Fig. 11c).[12]

The only close parallels to the white-slipped kraters appear at Tell Kazel (Lagarce and Lagarce 1988: 154–55; Badre et al. 1994: 304; Capet and Gubel 2000: 438–39, figs. 13–14; Capet 2003: 112), while their fabric suggests a similar provenance as well. At Ras Ibn Hani, most of the examples show traces of burnishing. This type of decoration appears at the very beginning of the Iron Age, mainly on kraters.[13] A few fragments of yet another white-slipped burnished pottery with bichrome decoration, again in the form of kraters, were found at Ras Ibn Hani (see Lagarce and Lagarce 1988: fig. 27c). However, it is unclear whether this tradition was a contemporary of the white-slipped pottery of the EIA, or a forerunner that corresponded to similar material found at LBA Ugarit (Caubet 1992: 127), Kition-Bamboula on Cyprus, and in Anatolia (see below).

The source of white-slipped pottery has been linked to Cyprus, 'Philistine' sites in the southern Levant, Egypt and even Anatolia (Lagarce and Lagarce 1988: 155), where it occurs in small quantities in the LBA Hittite repertoire (Genz 2005: 76). The thin, gritty, white-slipped (and often burnished) carinated and convex bowls from Ras Ibn Hani (Fig. 12a) are paralleled at Porsuk (Dupré 1983: pl. 44, nos. 4–6), where white-slipped pottery first appears in Level V, and

[12] The illustrated example may not be of local origin, as its fabric differs from other examples of this vessel type (personal communication, P. de Paepe).

[13] The cylindrical juglet in Fig. 9a also has a white slip, but was made of a slightly different fabric. The vessel nevertheless probably belongs to the same productive tradition as the white-slipped kraters.

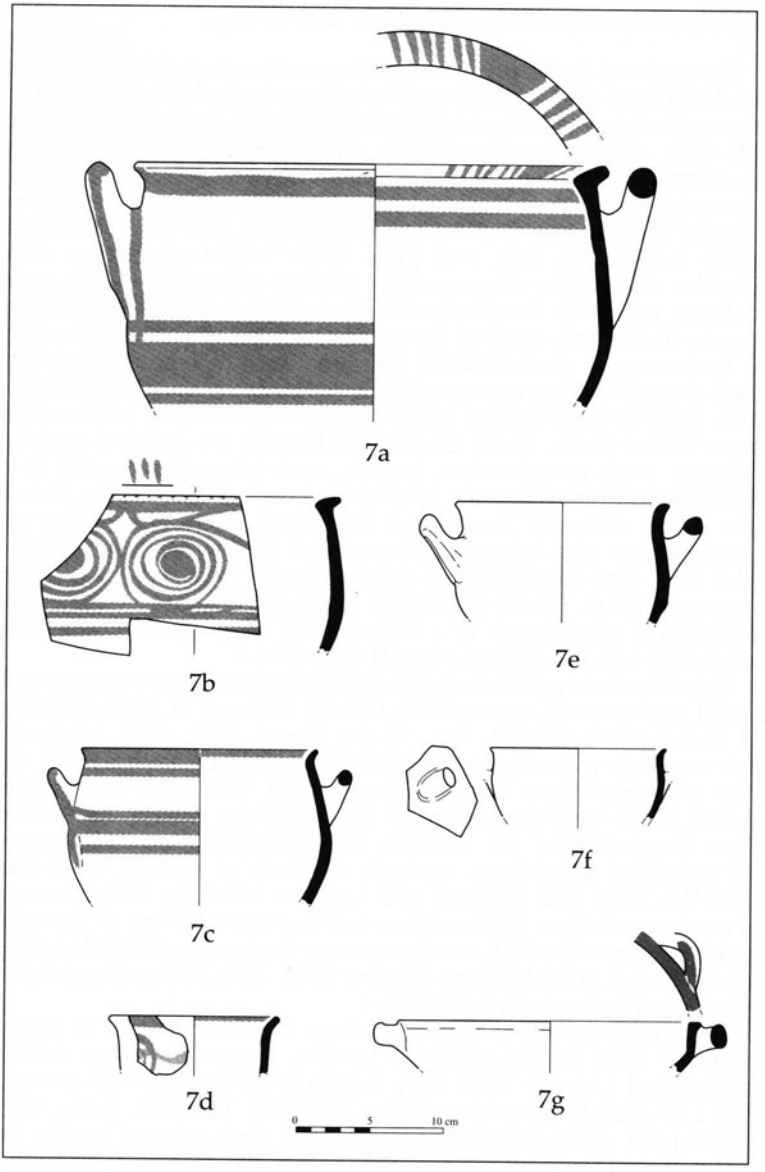

Fig. 7. EIA Aegean-style Bowls and Kraters from Ras Ibn Hani.

then increases in quantity in Levels IV and III. Some of the white-slipped pottery from Ras el-Bassit, although monochrome painted, might strengthen the idea of a northern tradition. In addition, the connection with the LBA white-slipped Cypriot tradition seems less than convincing, especially since the examples are not close in shape, technique, or decoration; in Philistia even non-slipped amphoroid kraters occur rarely in the EIA.

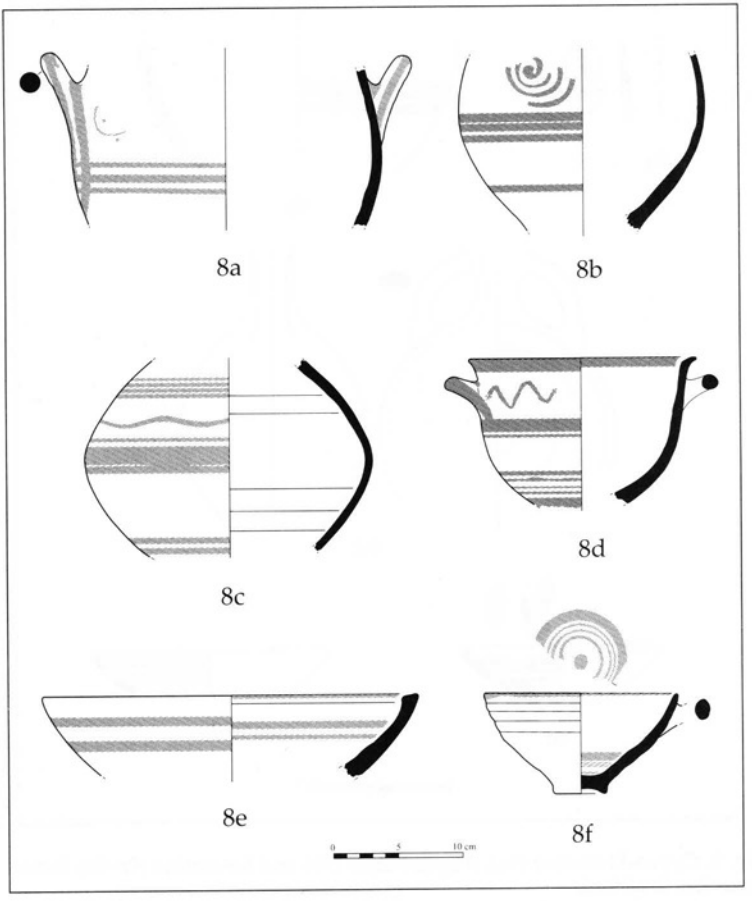

Fig. 8. EIA Aegean-style Pottery from Ras Ibn Hani.

The pottery of Phases I and II also preserve derivatives of the LBA Canaanite storage jar, both short- and long-rimmed types (Fig. 12b; Bounni et al. 1979: fig. 26). Their bases are not thickened, as with the LBA type, and several different manufacturing techniques were used, often even on the same vessel. A more slender type became common in Phase II (Figs. 12c–d). The large variety of fabrics and forming

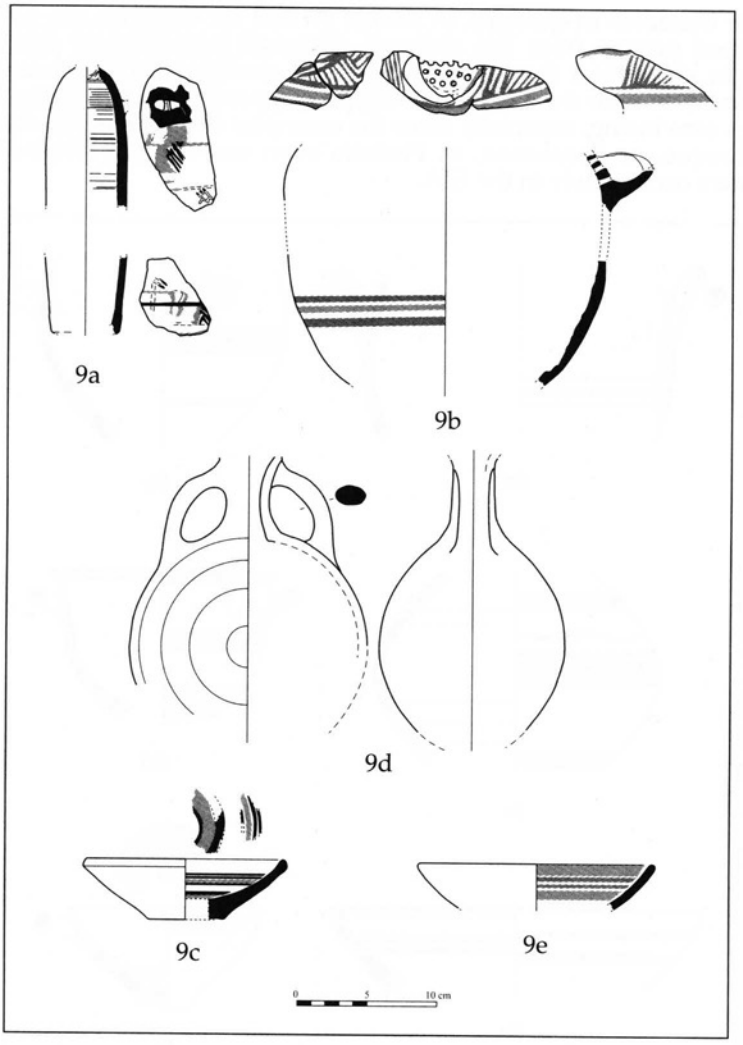

Fig. 9. Cypro-Philistine (9a), Aegean-style (9b) and Levantine (9c–9e) forms from Ras Ibn Hani.

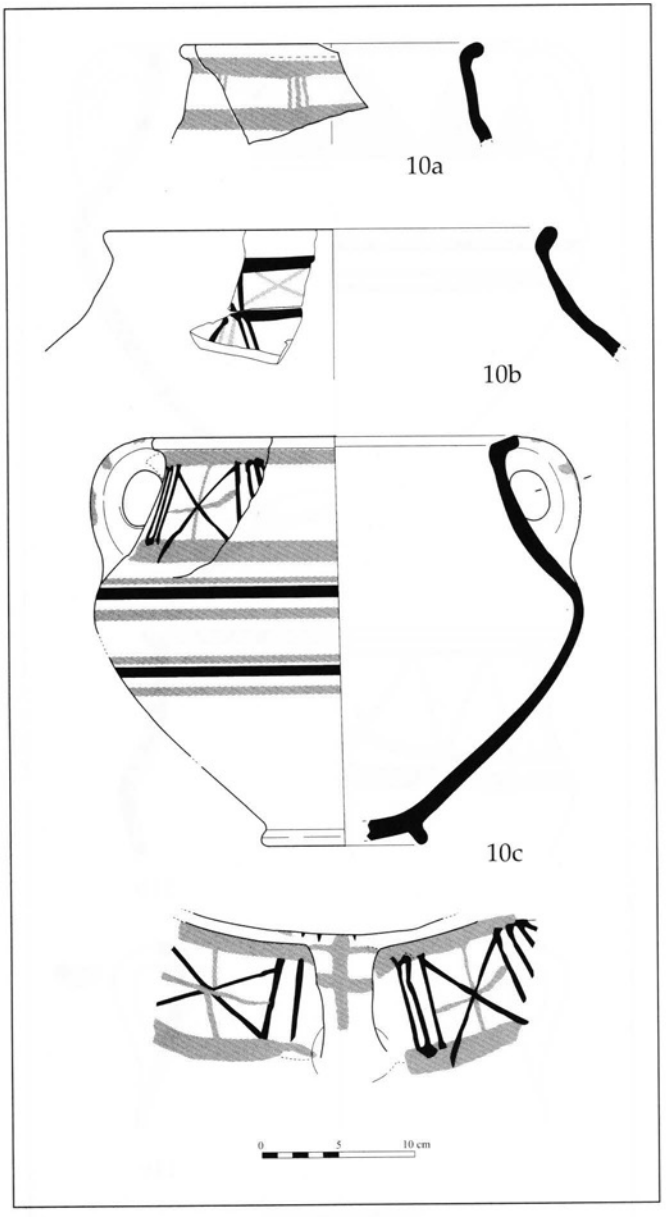

Fig. 10. White-slipped (10a–10b) and non-slipped bichrome painted (10c) amphoroid kraters from Ras Ibn Hani.

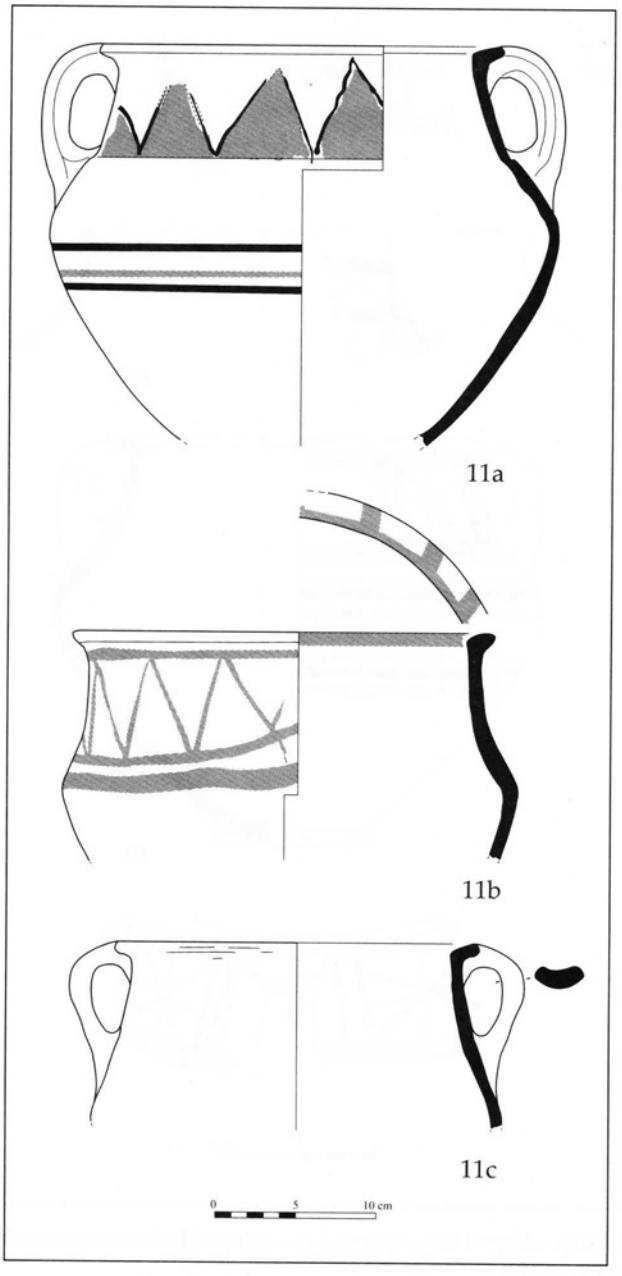

Fig. 11. Iron I amphoroid kraters from Ras Ibn Hani.

techniques point to imports from elsewhere in the Levant, such as Tell Kazel, but possibly also Cyprus. The heterogeneity of the fabrics is in sharp contrast to the homogeneity of the storage jar fabrics from the Iron II period. Some LBA vessels might even have been reused, or were still being produced in the Iron I period, as appears to have been the case at Tell Kazel (Capet and Gubel 2000: 439).

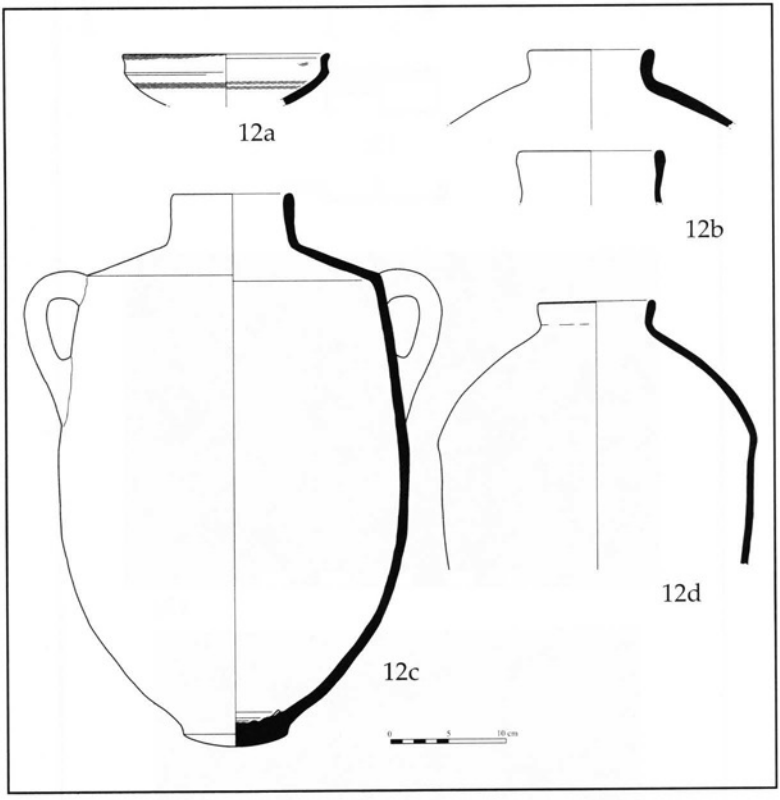

Fig. 12. Carinated bowl (12a) and Storage Jars (12b–d) from Ras Ibn Hani.

Cypriot Imports in the Ras Ibn Hani Assemblage

In addition to the few possible imported Aegean wares, the EIA levels at Ras Ibn Hani also produced Cypriot shapes and fabrics. Some vessels of clearly Cypriot manufacture exhibited Aegean-style forms (Fig. 13a), while others reflected Cypriot profiles (Figs. 13 b–e). The variety of Cypriot fabrics would appear to indicate contacts with different Cypriot sites. There is a slight increase of Cypriot imports in Phase II, which corresponds well with the adaptation of Cypriot styles in the local wares during this phase. The associated finds suggest

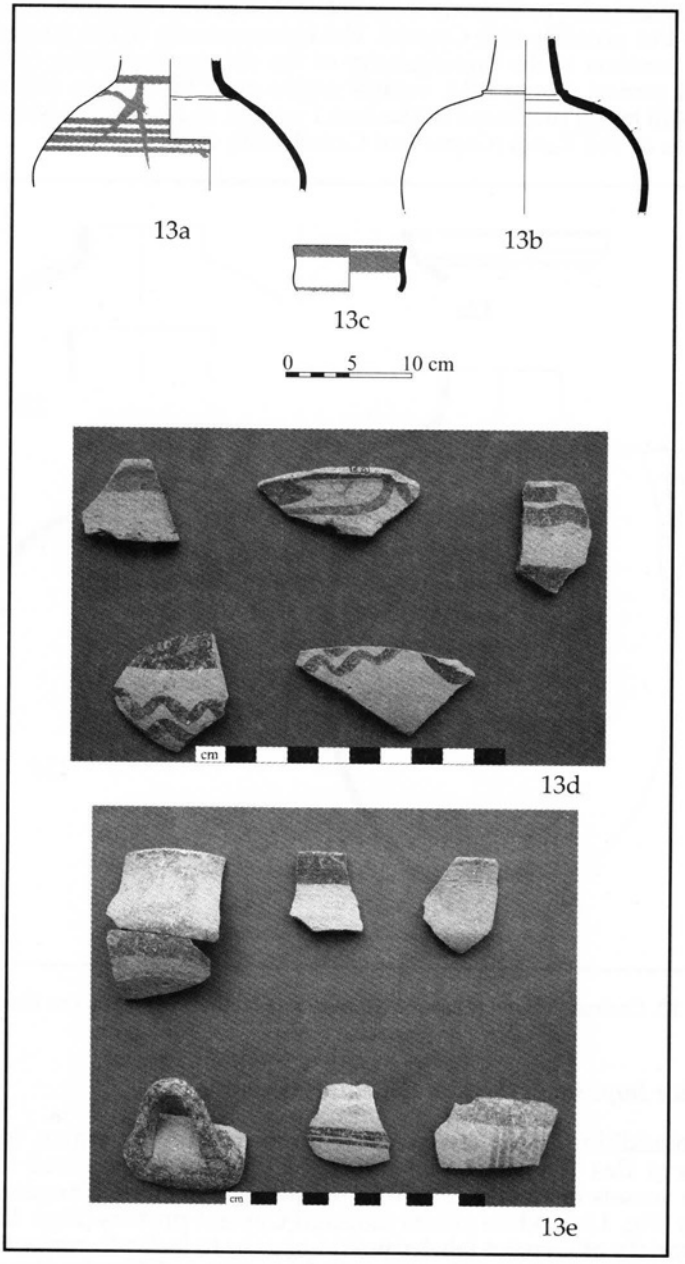

Fig. 13. Cypriot Imports in the Ras Ibn Hani Assemblage, including Aegean-style forms.

that these should be placed in either the Proto White Painted or the beginning of the White Painted I phases.

The Nature of the EIA Settlements at Ras el-Bassit and Ras Ibn Hani

Although there are similarities, as I have demonstrated in this paper, the EIA assemblages from Ras Ibn Hani and Ras el-Bassit also exhibit significant differences. At Ras el-Bassit, some LBA shapes and fabrics continued into the Early Iron I period, while new types, such as the talc-tempered cooking pots and fabrics with dense blue-grey cores were introduced gradually. Meanwhile, at Ras Ibn Hani, a clear break occurred in the production of both the cooking and table wares, the latter exhibiting an almost complete morphological transformation, though no evident change in fabric. Continuity is reflected in the storage and transport vessel categories, while in the later Iron I period, Levantine shapes and decorative styles, such as bichrome plates, increasingly reappear.

As others have noted (cf. Lagarce and Lagarce 1988: 146; Badre 1983: 206), trade contact with Cyprus clearly continued in the Iron I, although the number of imports was much smaller (Bounni and Lagarce 1998: 53, 86–87). In particular, close contacts can be inferred from the adaptation of new Cypriot trends in the locally produced Aegean-style pottery. At the same time, no undisputed northern Levantine EIA imports have been found on Cyprus. Close relations are also evident between the northern and central Levant, and to a lesser extent with the southern Levant and Anatolia.

However, the Ras el-Bassit pottery assemblage shows little evidence of direct or continuing contact with Cyprus. Although there are Cypriot parallels for some cooking pots, specifically the so-called Monochrome Ware, the examples from Ras el-Bassit are better explained as a development from LBA traditions.[14] Consequently, Ras el-Bassit does not appear to have been an active port of trade in the Iron I period, as it was later in the Iron II. It nevertheless was in contact with the Syrian interior, including sites such as Afis, and probably also with Cilicia and highland Anatolia. Ras el-Bassit's role as a key outpost for the kingdom of Ugarit ended with Ugarit's destruction at the end of the LBA, and in the EIA it became a small village of little international importance. A slight increase in the number of imports in the 10th century, particularly from Cyprus and the Aegean, may point to its re-emergence as an important trading centre in the Iron II period. It is interesting to note, for example, that Ras el-Bassit has produced some of the earliest Euboean imports found thus far in the Near East (for the Proto-Geometric imports, see Courbin 1993b; Perreault 1993), and that they occur in this early period.

Ras Ibn Hani was more densely settled than Ras el-Bassit in the EIA, and appears to have been more actively involved in trade during this period. Its pottery assemblage points to active contact and interaction

[14] Interestingly, some of the Monochrome shapes found on Cyprus are considered possible imitations of Handmade Burnished Wares (see Pilides 1994: 81).

with sites in the immediate vicinity, as well as throughout the rest of the Levant, Cyprus and possibly also Anatolia. Ras Ibn Hani, therefore, appears to have maintained its role as an important port in the region. If the ceramic evidence accurately reflects the ethnic composition of its population, one might suggest a multicultural coexistence comprised of peoples from the Levant, the Aegean, Cyprus, and Anatolia (for this view, see Lagarce and Lagarce 1988: 148–49). Unfortunately, very little non-ceramic evidence has been found at Ras Ibn Hani to support this proposition. The existing evidence includes a fibula (Bounni et al. 1981: 268 and fig. 34; Badre 1983: 208 and fig. 3), a mould for amulets (Bounni et al. 1979: 255 and fig. 31), and Aegean-style unbaked loom weights from a pit (personal communication, J. Lagarce). Nevertheless, it seems reasonable to assume that new groups or individual migrants did settle along the Levantine coast during this period, as suggested by the appearance of Handmade Burnished Wares at Tell Kazel, and possibly at Ras el-Bassit and Ras Ibn Hani as well.

However, such hypothetical settlement activity by itself does not account satisfactorily for the large amount of locally made Cypro-Aegean inspired table wares—specifically drinking vessels—that have been found at Ras Ibn Hani. It is not the goal of this paper to discuss the possible source(s) of origin for this distinctive pottery (also found in large quantities on Cyprus and elsewhere in the Levant, especially in the south), or whether it can be associated ethnically with the Sea Peoples. Rather, I wish to emphasize the local or regional character of this distinctive pottery, in particular as it occurs in the northern Levant, and more specifically at Ras Ibn Hani.

Although at first glance there might appear to be striking similarities between the pottery assemblages found throughout the region, there are also important regional differences (cf. Dothan and Zukerman 2004: 45–46; Killebrew 1998: 391; Gilboa 2005). In general, the range of shapes in Cypriot assemblages is larger than it is in Levantine assemblages, but there are also marked differences from region to region and from site to site within the Levant. For example, popular shapes in the southern Levant, such as the strainer-spouted and cylindrical jugs (Dothan 1982: 132–68), and the cooking jug (Killebrew 2000: 242–43), are almost entirely absent from sites in the northern Levant.[15] Conversely, the amphoroid krater occurs infrequently at southern Levantine sites yet appears common in the north. In addition, the range of decorative styles and motifs preserved in the Ras Ibn Hani assemblage is very limited, especially when compared to the southern Levant, and Cyprus. These morphological and stylistic differences also extend to choice of raw materials and manufacturing technology, and strongly suggest that individual potters and their communities developed local styles reflecting the complex mix of social, economic, and cultural choices that uniquely defined the experience of each region (cf. Killebrew 1998; Dothan and Zukerman 2004; and Gilboa 2005). Monocausal explanations, such as

[15] Examples of the cooking jug have been found at Tarsus, and now also at Tell Ta'yinat (see Janeway, this issue), and two possible fragments were recovered from later pits at Ras Ibn Hani.

those that attribute its distribution to trade, general fashion (Caubet 1992: 130), or import substitution (Sherratt 1998), do not satisfactorily account for this complexity. The local context, therefore, is crucial if we are to accurately understand the significance of the widespread occurrence of locally produced Aegean-style pottery at Ras Ibn Hani and elsewhere in the Levant.[16]

In contrast to southern Levantine assemblages, where there is a notable functional difference between the LBA Mycenaean imports (mainly closed forms) and the EIA Aegean-style pottery (mostly open forms) (Dothan and Zukerman 2004: 45), a large portion of the Mycenaean imports at LBA Ugarit consisted of open vessels, such as skyphoi, amphoroid kraters, and other serving vessels (Bell 2005: 82–83; van Wijngaarden 2002: 109). They therefore share a functional similarity with the drinking sets (bell-shaped bowls and kraters) and table wares (carinated bowls and jugs) that dominate the EIA assemblage at Ras Ibn Hani (Bounni and Lagarce 1998: figs. 152–57). A few of the local imitations of Mycenaean pottery at Ugarit, for example the carinated bowl (see Monchambert 1996: 45–46), have close parallels at Ras Ibn Hani as well. Thus, with some caution, (since only a limited range of the Mycenaean repertoire has been found at Ras Ibn Hani), we may infer that the two assemblages served a common functional purpose.[17]

As we have seen, the EIA assemblage from Ras Ibn Hani appears to reflect a multicultural population, as at Ugarit before it (Yon 1992: 113–117; Bell 2005: 46–48). Moreover, since there is clear evidence that a large portion of the resident population was indigenous to the region, as evidenced by the continuing use of local LBA fabrics and forms, there is no pressing need to attribute the appearance of Aegean-style pottery to large-scale immigration. A number of theories have been proposed for the 'disappearance' of Ugarit's inhabitants after its destruction, including suggestions that they fled to the mountainous interior (Yon 1992: 119–20), and to Enkomi on Cyprus (Courtois 1975: 35), a view that is supported by the evidence for continuing contact between Cyprus and Ras Ibn Hani reflected in the EIA pottery assemblage.

Texts from LBA Ugarit emphasize the elite status of the mercantile class, and it seems reasonable to assume that this group engaged in the consumption of 'value-added' products, such as Mycenaean pottery, as a way of expressing their elevated social and economic status within Bronze Age Ugaritic society (cf. Sherratt 1998: 295–98). If so, it is tempting to infer that a similar mechanism was operative

[16] I have dealt with regional and intra-regional contacts in more detail in my dissertation, and in a forthcoming paper, in particular the differences and similarities between Early Iron Age repertoires in the Levant and Cyprus, and the explanations for these differences, including their cultural, social and economic aspects.

[17] However, it is also important to note that Mycenaean imports account for less than one percent of the LBA assemblage at Ugarit (Yon et al. 2000: 2–3), while at Ras Ibn Hani the Aegean-style pottery accounts for as much as 50 to 60 percent of the EIA assemblage from Phases I and II.

in the EIA, and that it was this class of 'independent' merchants that used Aegean-style pottery to affirm their 'new' group identity and legitimize their status as traders, while displaying a cosmopolitan way of life. In any case, the dominance of vessels associated with communal drinking and feasting, in both Aegean and Levantine styles, suggests the continuation (and transformation) of longstanding social habits, as well as the need to legitimize the establishment of a new social reality.

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LES PEUPLES DES CÉRAMIQUES "BARBARES" À TELL KAZEL (SYRIE)

Cette communication présente un niveau d'occupation en cours de fouille à Tell Kazel particulièrement riche et original par la qualité et la quantité de ses restes architecturaux et de son matériel céramique. Ce niveau, datable du XII^e^s, est postérieur à la chute des empires du Bronze récent (en l'occurrence l'Empire hittite). Le fil rouge stratigraphique est un long incendie qui le clôt et le scelle. Le marqueur chronologique céramique est la présence de vases de la catégorie dite Handmade Burnished Ware (HMBW), associés à d'autres classes céramiques, locales et importées, au spectre chronologique plus large.

Le site est fouillé depuis 1985 par la mission du musée de l'université américaine de Beyrouth, sous la direction de Leila Badre[1] et la fouille s'inscrit dans la suite des recherches qu'elle a menées à Ras Ibn Hani dans les niveaux de transition Bronze récent-Fer. Son objectif était de mettre en lumière le tout début du Fer sur la côte et il commence à donner ses fruits à Tell Kazel certainement au-delà même de ce qu'on pouvait attendre.

Tell Kazel se situe au milieu de la plaine du Akkar (Fig. 1), à peu près à mi-distance entre Byblos et Ougarit, en face de Chypre, et au débouché de la Trouée de Homs. Comme tous les sites côtiers du Levant, Kazel a participé, au Bronze récent, au commerce maritime international avec la Méditerranée orientale, ce qu'atteste abondamment la céramique chypriote et mycénienne retrouvée sur le site. Les niveaux des XIV^e^ et XIII^e^s. pour l'heure dégagés ont en effet livré plus de 4000 tessons de Chypre ou d'Égée,[2] avec un compte minimum de 500 vases. Cette richesse tient au statut politique de la cité: on identifie en effet Tell Kazel avec Sumur, siège d'un gouverneur égyptien pendant la période d'el Amarna, puis une des capitales choisies par Aziru lors de la constitution du royaume d'Amurru. Lorsque l'Amurru devient vassal des Hittites, il est possible mais non assuré que la capitale (capitale que les textes d'Ougarit et de Hattusa appellent "la ville du pays d'Amurru") soit restée à Sumur.

Le niveau "barbare": présentation générale et situation stratigraphique

Nous présentons ici un quartier domestique, constitué pour l'heure de trois maisons autour d'un temple, avec son matériel

[1] Leila Badre aurait dû aujourd'hui (31 mars 2006) être présente. À cette même heure, elle donne une conférence sur Tell Kazel à l'auditorium du Louvre et m'a donc déléguée, je l'en remercie, pour me faire le porte-parole des "Barbares" de Tell Kazel.

[2] Essentiellement l'Argolide—comme pour tout le Levant—, à Berbati: Badre et al. (2005).

céramique et ses installations. Le temple a été deux fois construit au cours du Bronze récent et reconstruit au Fer I.[3] L'emplacement du temple du dernier état du Bronze récent est marqué en noir sur le plan (Fig. 2).

Fig. 1. Vue satellitale de Tell Kazel sur le Nahr el-Abrach. Le nord est en haut.

L'interprétation actuelle de l'architecture de cet ensemble nous fait dire qu'il s'agit d'un ensemble bâti au même moment que le temple ou peu après, c'est-à-dire au XIII[e]s. Ce quartier a été par la suite réutilisé presque tel quel, ou au prix d'aménagements mineurs, par des gens qui emploient, dans leur vaisselle domestique, à côté de vaisselle de tradition levantine du Bronze récent, des vases en céramique "barbare". Cette nouvelle vaisselle apparaît sous forme d'ustensiles courants plus que d'objets de valeur.

Dans ce niveau qui nous intéresse,[4] les importations en provenance de Chypre ou d'Argolide sont interrompues. La classe de vaisselle qu'occupait la céramique mycénienne est pour une part remplacée par

[3] Il s'agit du chantier IV, "chantier du temple", proche de la porte ouest de la ville. Pour la présentation des résultats de ce chantier, voir Badre et al. (1999–2000). Pour la présentation du lot de céramique "barbare" et de son contexte stratigraphique, voir Badre (2003 et 2006).

[4] Il s'agit du "level 5 superior" de la publication Badre et al. (1999–2000).

la céramique troyenne (cratères, coupes), pour une autre part, par de la production locale de ces mêmes formes mycéniennes avec adaptations (coupes essentiellement); la céramique "barbare" quant à elle remplit une fonction parallèle à la céramique levantine traditionnelle (grand et petit stockage, bols et gobelets). Il ne semble pas en revanche que les habitants de ce niveau aient éprouvé le besoin de confectionner localement l'équivalent des importations chypriotes de la période précédente, à savoir des cruchons (Shaved Ware, Base Ring Ware) et des bols fins (Monochrome, White Slip et Base Ring Ware).

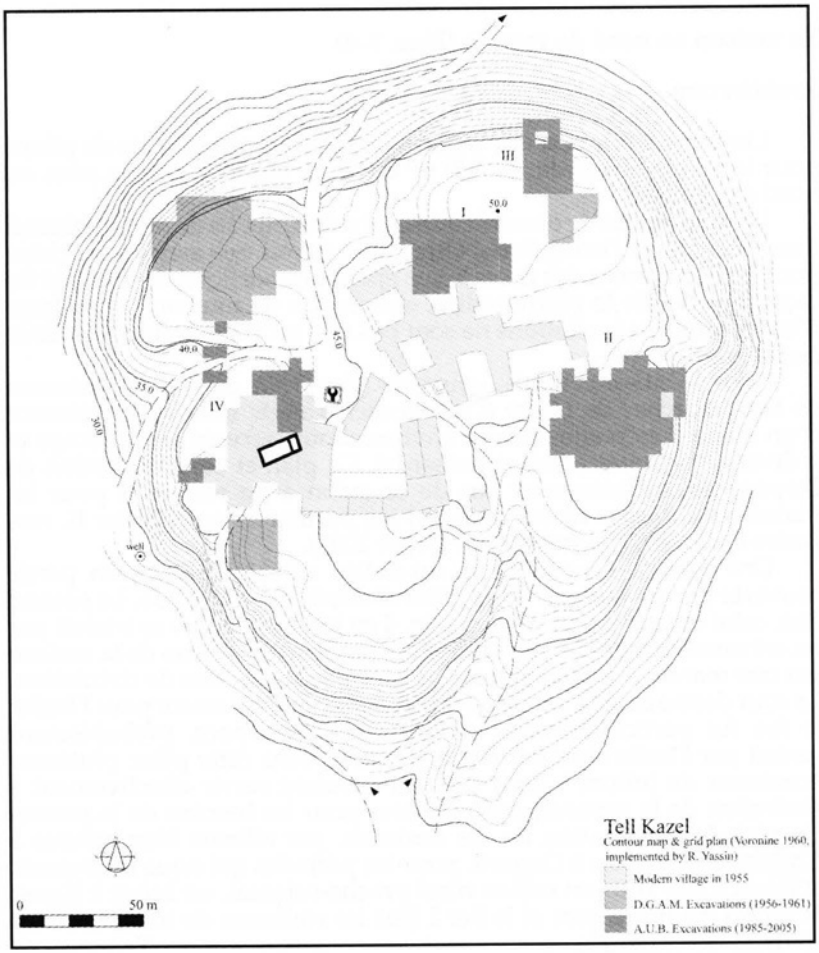

Fig. 2. Plan topographique de Tell Kazel (2005). Les numéraux des chantiers sont en chiffres romains. De la céramique "barbare" a été retrouvée en place aux chantiers II et IV (zones en gris clair). Le temple du Bronze récent du chantier IV est esquissé en noir.

Ce secteur a été incendié sans que ses habitants aient eu le temps de sauver les meubles. Il faut noter que cette installation ne succède pas à un niveau détruit: c'est bien l'installation contemporaine de la céramique "barbare" qui a brûlé.[5]

La durée d'occupation de ce niveau est difficile à apprécier. La couche de destruction est épaisse de 50 cm à un mètre. Les ruines ont été nivelées après un temps d'usure pas trop long car les alignements étaient encore repérables par ceux qui ont aménagé le niveau suivant, daté du Fer I. Le temple en particulier a été reconstruit au même endroit.

La maison au nord du temple (Figs. 3–4)

Architecture

L'ensemble nord est une maison de moins d'une dizaine de pièces pour le rez-de-chaussée, de 200 m^2 environ, bordé par deux rues, au nord et à l'ouest.

Les techniques de construction sont celles du bâti du XIII^e^s. habituel dans la région (à l'exception d'Ougarit), à savoir une architecture avec pour soubassement des murs assez épais, en moellons, et utilisant de façon ponctuelle la pierre taillée, aux angles de mur ou en jambage d'ouverture. Les fondations ne sont pas très profondes, de une à deux assises seulement.

Dans la pièce centrale, couverte (Fig. 3 au centre), la présence de trois marches de pierre d'un escalier d'angle indique la présence d'un étage. Les petites pièces environnantes servent au stockage et à diverses activités (silos et puisards). Ce plan et cette utilisation de l'espace ne se distinguent pas de ce qu'on a pu retrouver pour les maisons du Bronze récent de Kazel (en particulier au chantier II, voir Badre et al. 1994; Badre 1997; et Capet 2003).

Une grande cour (Fig. 4), mi-dallée mi-terre battue, en partie couverte par un auvent, est la pièce d'entrée depuis la rue. Le second état, celui qui nous intéresse ici (Fig. 4 en haut à gauche) se traduit par un exhaussement de la rue, compensé par les utilisateurs de la maison par une marche supplémentaire qui empiète sur la zone de circulation. La cour donne accès à une zone de pressoir (probablement pour l'huile: le feu fut particulièrement violent dans cet espace, probablement nourri par l'huile stockée). On a retrouvé dans cette pièce plusieurs "rouleaux de toiture", dont certains devaient servir effectivement à l'entretien de la terrasse, mais d'autres pour les besoins de la presse. La période d'utilisation de ces rouleaux, par ailleurs bien connus à Chypre, à Hazor ou à Ougarit, pour les périodes qui nous intéressent et jusqu'à nos jours en milieu rural proche-oriental, est brève à Kazel: la fin du Bronze récent et le Fer I (sur les rouleaux de toiture, Elliott 1991: 34–35 et fig. 11).

[5] Pour cette raison nous n'attendons pas d'archives du XIII^e^s en place dans ce secteur: ce type de documents, rendus caducs lors des changements politiques, ont dû être mis au rebut dans tous les secteurs réoccupés.

Fig. 3. Pièce centrale de la maison au nord du temple. Vue vers l'est.

Fig. 4. Maison au nord du temple, vue vers le sud-ouest. Au premier plan, la pièce centrale (cf. Fig. 3); en haut à gauche, la cour avec escalier montant vers la rue.

Matériel céramique

On compte pour l'heure une centaine de vases provenant de cette maison, en majorité de la vaisselle domestique sans grand luxe. 1/3 sert aux réserves (ce qui est beaucoup), 8% à la cuisson, 35% au service de table, à quoi il faut ajouter des lampes et de rares exemples de vaisselle fine. Cet assemblage est un mélange, premièrement, de céramique levantine traditionnelle, deuxièmement, de formes qui traduisent l'évolution normale et continue de la céramique du Bronze récent, enfin de catégories tout à fait nouvelles.

La Figure 5 présente d'une part un échantillon de la vaisselle commune retrouvée dans cette maison, tout à fait dans la tradition de la côte:

– des jarres de stockage (Figs. 5:3–4) dérivées des jarres cananéennes (avec marques incisées sur une des anses, ce qui est un trait tardif, peut-être chypriote);
– des cruches biconiques (Fig. 5:12) propres à la tradition nord-levantine (comme à Ougarit);
– les petites jarres globulaires peintes (Fig. 5:8) dans le style de celles de Byblos;
– des gourdes de pèlerin (Fig. 5:9; on en trouve en général une par maison);
– les cruches trilobées à fond arrondi (Fig. 5:10) caractéristiques du Bronze récent II;
– des plats et couvercles de jarre (Fig. 5:5) du Bronze récent indifférencié.

Dans ces cas de réutilisation de locaux en transition douce, on se pose bien sûr la question de savoir dans quelle proportion ces vases ne sont pas eux aussi un héritage de la phase précédente. Cela se pose en particulier pour la grosse vaisselle.

Dans ce même assemblage sont aussi présentes des formes nouvelles par rapport au Bronze récent mais qui s'inscrivent dans sa continuité:

– le pithos est caractéristique de la toute fin du Bronze récent: les pithoi les plus fréquents du Bronze récent à Kazel sont ceux de tradition ou de fabrication chypriotes, tels qu'on en retrouve dans le Levant nord, notamment à Ougarit (voir plus loin Fig. 14 ; Pilides 2000). Celui que l'on présente ici est une forme évoluée (Fig. 5:1);
– de grands vases (Fig. 5:2), retrouvés au nombre de six dans la cour de la maison, ont un fond percé (avant ou après cuisson) et servaient peut-être de pots horticoles. On peut y voir la forme basique du cratère levanto-chypriote, mais agrandie, peut-être sous l'influence de formes connues en Syrie intérieure (Pedrazzi 2003, et sous presse) et sur l'Euphrate ou à Tarse;
– la marmite illustrée ici (Fig. 5:7) a déjà évolué par rapport à la marmite syro-palestinienne du Bronze récent, qui est très carénée et à lèvre triangulaire, mais la technique reste la même: un réel changement dans la confection n'intervient qu'au début du Fer II;
– les petites cruches en forme de poire (Fig. 5:11) s'inspirent de

cruches à servir l'eau de la période précédente, mais cette forme et ces proportions sont inhabituelles pour le Bronze récent. Nous les avons retrouvées dans presque tous les ensembles de ce niveau;
– enfin les calices aplatis (Fig. 5:6) sont la forme, élaborée à la toute fin du Bronze récent, qui deviendra générale au Fer pour ce type de vases. Au Bronze récent au contraire, les calices sont plus généralement des gobelets à pied de forme droite et font plutôt partie de l'inventaire des temples.

Enfin la Figure 6 illustre quelques intrus dans un paysage du Bronze récent côtier:

– une cruche en pâte "barbare" (Fig. 6:1) d'une quinzaine de cm de haut;
– deux tessons de grands gobelets (Figs. 6:2–3) dans cette même fabrique;
– une coupe à anse (Fig. 6:4), de forme mycénienne et en pâte "grey lustrous wheel-made ware" (que j'appellerai par la suite, abusivement, mais pour faire simple "troyenne");
– enfin une petite jarre (Fig. 6:5) bénéficiant d'un traitement de surface et d'un décor propre à la côte nord et qui se développe au XII^e^s. Il s'agit d'un engobe plâtreux clair (blanc, jaunâtre, beige) plus ou moins épais appliqué avant cuisson sur une pâte assez grossière, peu cuite, peint ensuite de motifs géométriques rouges. Cette technique sera développée pendant le Fer, principalement sur des cratères amphoroïdes, puis passera à la bichromie noir-rouge. L'effet recherché semble être un rappel de l'aspect des vases mycéniens, étendu à d'autres catégories de vases que le répertoire habituellement importé d'Argolide au XIII^e^s. Or ce "maquillage" s'applique alors sur des formes mycéniennes jusque-là presque inconnues sur la côte levantine, réservées à la consommation en Grèce propre, telles les jarres à trois anses.

La maison au sud-ouest du temple

Architecture et stratigraphie

Le deuxième ensemble domestique s'annonce comme une maison du même type que la précédente: on reconnaît la cour mi-dallée à auvent. Le matériel en place est beaucoup moins abondant: les perturbations ultérieures ont été nombreuses, mais il est aussi possible qu'une partie au moins du matériel ait été emportée par les habitants avant la ruine: les traces d'incendie sont en effet moins violentes.

La Figure 7 montre la stratigraphie du secteur: le dallage du Bronze récent est recouvert d'une recharge d'argile, qui est la surface de circulation du niveau qui nous intéresse, le tout scellé par un écroulement de brique sur 70 cm de haut mais qui devait être plus épais, arasé par un mur datant du Fer I.

Il s'agit comme plus haut d'une architecture à la base datant du Bronze récent. Mais ce secteur a connu pendant son utilisation plusieurs remaniements, plus ou moins bricolés: on peut voir en Figure 8 certaines de ces retouches, murs doubles, bouchages. Les

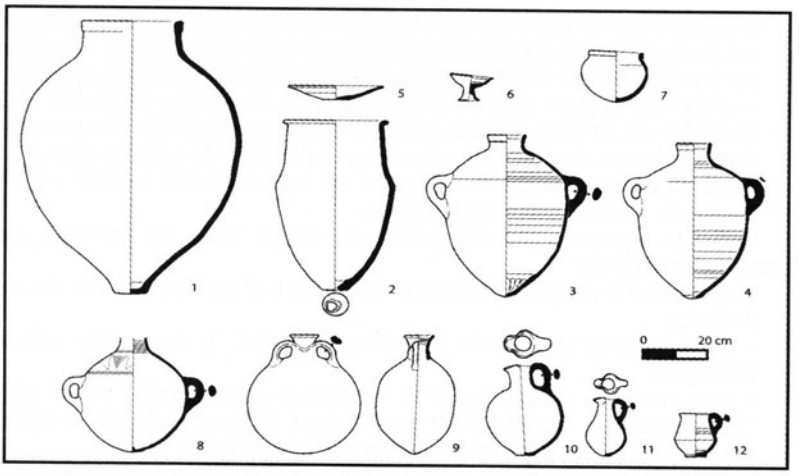

Fig. 5. Échantillon de vaisselle commune de la fin du Bronze récent en provenance de la maison au nord du temple. (Numéros d'inventaire: 1 = TK01.201; 2 = 5092.83; 3= 6089.8; 4= 6086.13; 5 = TK01.99; 6 = TK02.7; 7 = TK01/02.30; 8 = 5374.178; 9 = TK01/02.31; 10 = TK01.199; 11 = TK01.194; 12 = TK01.181).

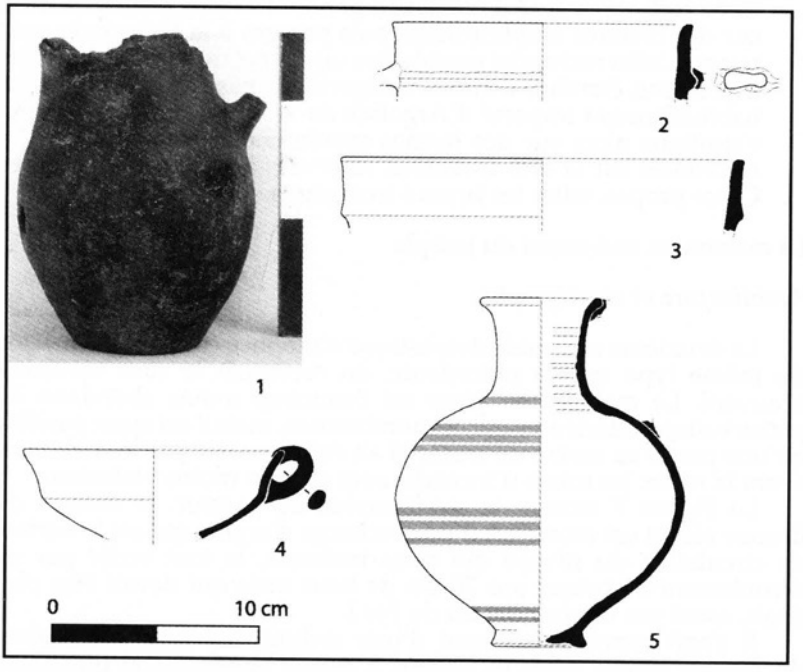

Fig. 6. Céramique "barbare" (numéros d'inventaire: 1 = 6089.1; 2 = 4486.23; 3 = 5092.102), coupe "troyenne" (4 = 6071.7) et jarre à engobe blanc (5 = 5374.48) en provenance de la maison au nord du temple.

Fig. 7. Stratigraphie de la maison au sud-ouest du temple: dallage du Bronze récent, recharge de sol du XII^e^s. (sommet indiqué par une flèche), couche de destruction et mur du Fer I (base indiquée par une flèche). Vue vers le sud-ouest.

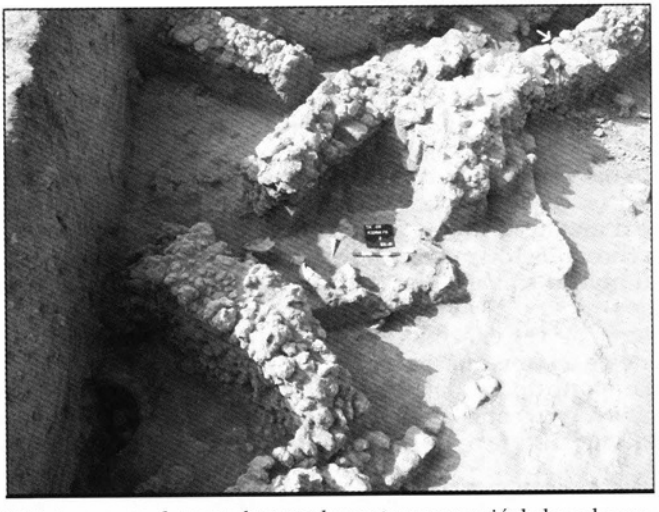

Fig. 8. Maison au sud-ouest du temple, secteur remanié de bouchages, réparations etc. Vue vers le sud. La flèche blanche en haut à droite pointe un bloc de ramleh taillé en remploi.

murs ajoutés sont un exemple de technique de construction assez différente de celle du Bronze récent: le soubassement est très haut, les moellons sont de taille assez diverses et certains blocs taillés du Bronze récent sont en remploi non justifié, comme le parpaing indiqué par une flèche, qui a dû être taillé à l'origine pour marquer une tête de mur. Enfin les murs ne sont pas parementés. Ils ont d'ailleurs très mal résisté aux pressions des terres, comme l'indique leur fort pendage.[6]

Matériel céramique

Dans la cour ont été retrouvés deux coupes notables et, au sommet de la couche de destruction, un ensemble de tessons en pâte "barbare" et plusieurs vases fragmentaires en "grey ware".

La kylix mycénienne (Figs. 9:1–2) est une production locale, bien que l'aspect et la cuisson de ce vase, qui n'est pas isolé dans les trouvailles du tell, soit très différents de la céramique commune. Des analyses de pâte (analyses macroscopiques, analyses pétrographiques et analyses chimiques par neutro-activation), ont été prises en charge par R. Jung, avec M.-C. Boileau et L. Badre (Badre et al. 2005). L'échantillonnage a concerné la céramique mycénienne ou supposée telle de Kazel, la céramique "barbare", la céramique "troyenne" et quelques témoins de céramique commune. Les résultats, qui doivent encore être confirmés, montrent que rien n'exclut que cette catégorie mycénisante soit de fabrication locale.

Le grand bol ouvert (Figs. 9:3–4) est une forme très inhabituelle dans un vaisselier du Bronze récent du nord-Levant, mais rappelle les formes mycéniennes de cratères en cloche. Il est un précurseur d'une gamme de jattes du Fer, souvent peintes, comme ici, de décors rouges.

Notons que nous n'avons pas trouvé de coupes à spirales antithétiques (comme à Ibn Hani [Badre 1983] ou à Afis [Bonatz 1998: 217–19 et fig. 5:1]). Les études de R. Jung montrent que la céramique "mycénienne" locale de Kazel (Myc IIIC:1b) se rapproche par sa fabrique de celle de Chypre ou de celle de Syrie du Nord (Badre et al. 2005: 27–31).

Toutefois son répertoire est plus vaste: elle ne se contente pas de remplacer ce qui auparavant était importé, mais est proche au contraire d'un vaisselier de Grèce propre. Cette production, à Kazel, déborde chronologiquement le niveau présenté ici: elle se poursuit au début du niveau suivant (Fer I), en association avec de la céramique bichrome.

L'intérêt de cet ensemble vient aussi du lot non en place mais homogène de tessons "barbares" et "troyens".

Nous avons donc conjointement de la céramique "barbare", de la céramique "troyenne" et de la céramique "mycénienne" locale: un tel assemblage diffère ainsi de ce qu'on peut trouver plus au sud, par

[6] Rien ne dit cependant que ces murs et remaniements bricolés soient le fait des gens qui utilisent la céramique "barbare": les remaniements et réparations qui s'écartent du plan initial et en divisent l'espace ou travestissent les fonctions des pièces ont pu intervenir dans le courant du Bronze récent.

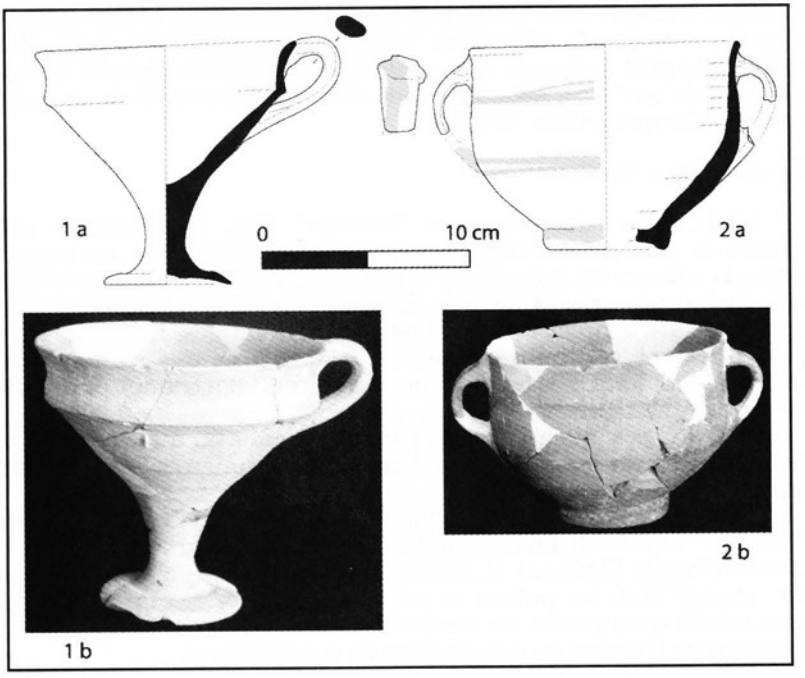

Fig. 9. Céramique mycénienne locale en provenance de la maison au sud-ouest du temple. (Numéros d'inventaire: 1, kylix = TK05.101; 2, bol = 7264.40).

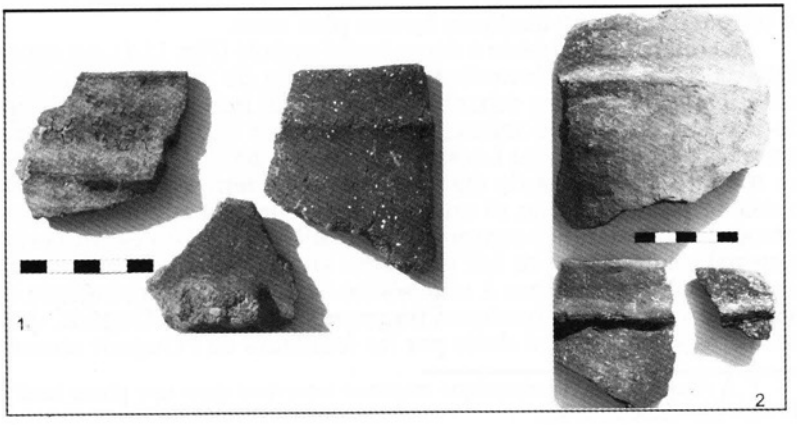

Fig. 10. Échantillon du lot de tessons "barbares" dans la couche de destruction de la maison au sud-ouest du temple.

exemple à Miqne ou à Lachish (Na'aman 2000; Allen 1994),[7] où on a souvent noté que la céramique "troyenne" était associée avec de la céramique plus ancienne, comme du Mycénien IIIB2 importé, et daté de la fin du XIII[e]s. En revanche, cette situation est proche de ce qu'on trouve à Chypre (Allen 1991, 1994).

La céramique "barbare"

L'échantillon de céramique "barbare" (Fig. 10)[8] présente une variété de pâte, grise à dégraissant minéral et granuleuse, ou beige à noire; la cuisson est irrégulière; la consistance est dure ou très friable, et le lustrage est très variable en densité et en qualité. Les décors sont appliqués: de simples cordons linéaires[9] ou ondulés, horizontaux et plus rarement verticaux, de section triangulaire; des cordons sur-imprimés au doigt; des tenons. Tous ces décors sont connus pour cette classe de céramique.

Les formes sont simples: les parois sont plus ou moins droites et le module va du gobelet d'une dizaine de centimètres à de grandes jarres d'un mètre de haut.

Selon les analyses menées par Boileau et Jung, la céramique dite "barbare" semble de fabrication locale, malgré une grande variété de classes d'argile (Badre et al. 2005). Ce ne sont donc pas les vases qui ont voyagé mais les potiers et peut-être, dans ce cas de céramique sans intérêt commercial, les consommateurs. Mais cela ne règle pas la question de l'origine ou des origines de ces traditions.

La céramique "troyenne" **(Fig. 11)**

Le répertoire en céramique grise ou noire lustrée reprend les formes déjà recensées sur la côte d'Anatolie et de Chypre, et ces formes reproduisent ce qu'on avait l'habitude d'importer d'Argolide: cratères et coupes, mais aussi quelques formes plus rares.

Le cratère amphoroïde à décor incisé ondulé (Fig. 11:1), est connu dans la zone chypro-levantine pour ce type de fabrique depuis le XIII[e]s. Les analyses des échantillons de Kazel indiquent une origine de production à Troie même, ce qui recoupe les résultats d'autres analyses à Chypre ou au Levant (Badre et al. 2005; Allen 1991, 1994). Le nombre de tessons de cratère de ce type retrouvés à Tell Kazel n'excède pas la dizaine et aucun cratère complet n'y a été encore retrouvé. Les exemples complets sont d'ailleurs rarissimes sur la côte syro-palestinienne, et ce fait (la valeur stratigraphique douteuse de tessons isolés) n'aide pas à une bonne évaluation chronologique de ces importations. Les quelques fragments retrouvés à Ougarit, dont un réel vase entier, sont datés par les fouilleurs de l'Ougarit récent 3

[7] À Abu Hawam, la céramique troyenne intervient dans une phase tardive du Myc IIIB (Balensi 1984).

[8] La restauration est en cours. Le lot consiste en une quinzaine de gobelets. Voir Badre (2003 et 2006: fig. 17) pour une gamme de profils de grands gobelets.

[9] Voir Jung (2006) pour l'extension géographique de cette forme, de l'Italie au Levant.

(début du XII^e^s). À Kazel comme à Chypre, grâce à l'association ici avec de la céramique "barbare", on peut donner un spectre chronologique de consommation sur la côte à cheval sur la fin du Bronze récent et couvrant la transition vers le Fer.

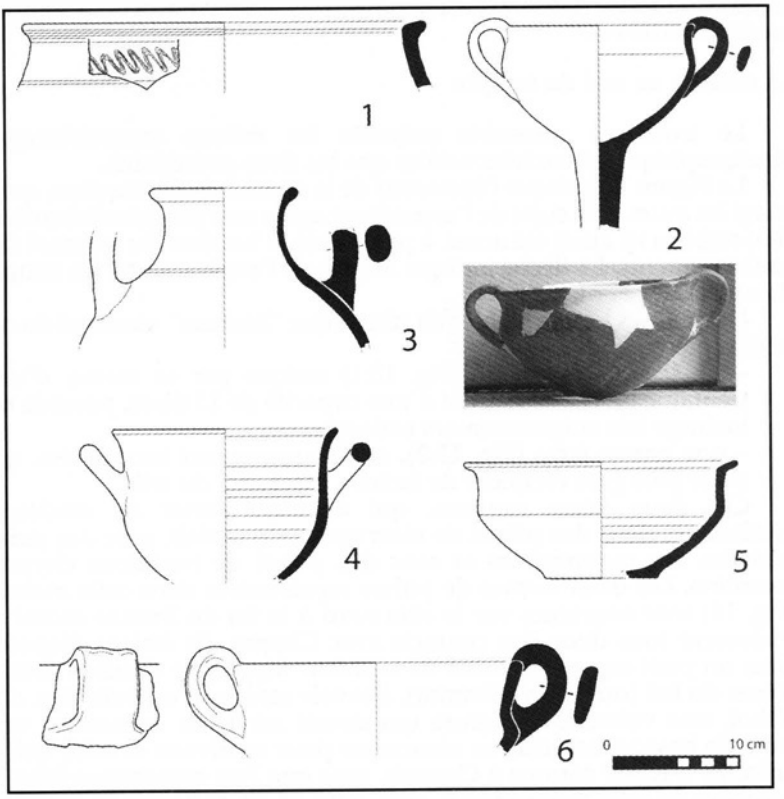

Fig. 11. Céramique "troyenne" (1–5) et hybride (6) en provenance de la maison au sud-ouest du temple. (Numéros d'inventaire: 1 = 6025.37; 2 = TK03.143; 3 = 6343.51; 4 = 6343.44; 5 = 6343.45; 6 = 6343.9).

La coupe à pied Figure 11:2 est une forme bien connue et les analyses indiquent également une production à Troie (Badre et al. 2005). Les petites jarres en céramique grise anatolienne (Fig. 11:3) sont en revanche beaucoup plus rares sur la côte levantine. La pâte de la coupe en céramique grise lustrée Figure 11:4 n'est pas assignable à une source connue, mais sa forme la rattache à la koiné mycénienne-troyenne. En revanche la coupe Figure 11:5 trouve ses meilleurs parallèles en Italie du sud (Badre et al. 2005: 31, fig. 7:2 et note 48; Jung 2006) et la source de l'argile est inconnue.

Enfin l'exemplaire Figure 11:6, fait à la main et pourvu d'un lustrage lui donnant un aspect d'un noir brillant assez uni, pourrait être vu comme un hybride entre la céramique grise lustrée anatolienne pour

sa finition et ses formes (gauchement) mycéniennes, et la céramique "barbare", par sa texture et sa confection.

Dans l'ensemble, le lot de ce secteur permet d'étendre considérablement l'horizon géographique des influences présentes de façon simultanée dans ce niveau, qui se révèle un creuset de traditions méditerranéennes.

La maison au sud du temple

Le troisième ensemble présente les mêmes caractéristiques stratigraphiques et architecturales que les deux précédents.

La Figure 12 indique l'épaisseur de la couche de destruction, qui a rougi les murs. À la suite de l'incendie et après une période d'abandon, l'ensemble a ici aussi été arasé, à peu près à la hauteur du sommet des soubassements. La flèche indique la base de l'angle sud-est du temple du niveau du Fer I.

Deux vases remarquables en céramique "barbare" viennent de ces petites pièces (Fig. 13):

- un grand conteneur (Fig. 13:1) unique par sa forme, d'une trentaine de cm de haut et d'une capacité de 13 litres, possède un lustrage très soigneusement exécuté;
- une grosse jarre (Fig. 13:2), malheureusement incomplète, qui est le plus gros récipient de facture "barbare" du tell.

Ces deux vases uniques, qui devaient servir au stockage, voisinaient, dans des pièces de réserves ou de travail, avec des jarres dérivées des cananéennes et avec des pithoi de traditions chypro-levantine. Les deux formes de pithos représentées dans cette maison (Fig. 14) sont courantes sur la côte nord à la fin du Bronze récent et traduisent tous deux des contacts avec Chypre. Ils étaient disposés dans un petit espace organisé de la même façon que d'autres petites pièces du tell (ou de Ras Shamra), à savoir associant un petit silo, des pithoi, une vaisselle miniature qui devait servir de mesure, et une lame de bronze: association récurrente pour ce niveau et celui qui le précède, à Kazel comme à Ougarit, sans que l'on comprenne bien la nécessité de cette association (Capet 2003: 74–76 et fig. 17; Badre et al. 1994: 311–13).

La vie matérielle

Je suggère ici quelques pistes à explorer si l'on s'efforce de cerner quels sont les changements dans l'organisation de la vie quotidienne par rapport aux niveaux du Bronze récent, si tant est qu'il y a eu des changements réels:

- la façon de construire les silos pourrait en être une: en effet à Tell Kazel les silos du niveau qui nous intéresse sont faits de dalles dressées (Fig. 15), quand ils étaient faits de moellons ou de dalles empilées au niveau précédent;
- les tannours ne semblent pas changer, ni en nombre ni en structure;
- les installations de mouture avec bassin de réception en plâtre (Fig. 16; voir aussi fig. 23:g dans Capet 2003) de ce type n'ont été

Fig. 12. Maison au sud du temple. La flèche et les pointillés indiquent à quelle hauteur la couche de destruction a été arasée par le temple du Fer. Vue vers le nord.

Fig. 13. Vases de stockage "barbare" de la maison au sud du temple (numéros d'inventaire: 1 = TK99.274; 2 = 00.206).

trouvées à Tell Kazel pour l'instant que dans le niveau "barbare", ce qui n'exclut pas que ce ne soit une installation héritée du niveau antérieur. Le reste du matériel de broyage est strictement identique à celui qui précède et à celui qui suivra: mortiers tripodes et pilons coniques tronqués en basalte, en tous points identiques à ceux du Bronze récent de Syrie ou de Chypre. L'emploi de "rouleaux de toiture" a été signalé plus haut.

Quant aux habitudes alimentaires, nous n'avons pas encore suffisamment de données pour déceler des changements ou des continuités. Les analyses palynologiques sont en cours et un archéozoologue du museum d'histoire naturelle de Paris doit venir étudier les ossements animaux des niveaux du Bronze récent et du Fer.

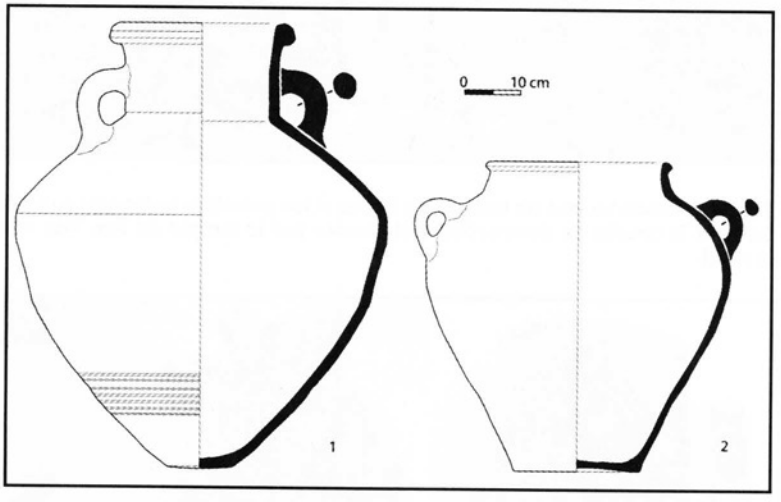

Fig. 14. Deux types de pithos de la maison au sud du temple (numéros d'inventaire: 1 = TK99.264; 2 = TK00.206).

Des comptages de tessons par catégories de vases,[10] effectués dans différents ensembles, ne traduisent pas d'évolution frappante entre les niveaux du Bronze récent et ceux du niveau qui nous intéresse ici. En particulier la proportion de marmites, et donc la part du bouilli dans l'alimentation, semble rester la même. Cet ustensile (la marmite) est une catégorie assez résistante aux innovations: à Kazel, tandis que le reste de la vaisselle se rapprochait de plus en plus, au cours du Bronze récent, des façons d'Ougarit et de Chypre, les marmites sont restées comme auparavant marquées par la tradition palestinienne: et à un exemple encore douteux près (Badre et al. 2005: fig. 4:1), nous n'avons pas trouvé de marmites mycéniennes à Kazel dans notre niveau par ailleurs très "mycénisé". On a signalé plus haut l'abondance de jarres,

[10] Comptage de tessons dans les couches de destruction d'une part et comptage de vases en place de l'autre.

Fig. 15. Silo en dalles dressées à proximité d'un pithos de type chypriote. Chantier II, pièce 6IIN, niveau 6 supérieur ("barbare"). Vue du sud.

Fig. 16. Installation de mouture à double bassin de la maison au sud du temple. Vue vers le nord.

mais ce fait peut être le reflet d'une période de crise économique ou historique. Tout au plus pourrait-on noter un accroissement du nombre des cratères et des gobelets et tasses à la fin du Bronze récent et au niveau qui nous occupe. Nous ne dirons pourtant pas que cela renvoie à une culture du banquet nouvellement introduite: en effet nous ignorons beaucoup de l'utilisation réelle, simple ou multiple, des catégories de vaisselles mêmes les plus fréquemment retrouvées; en outre, si l'on s'en tient aux vases seuls, le cratère est présent par sa forme (sinon dans sa fonction) dans la région côtière et en Syrie intérieure depuis au moins le Bronze moyen. Les gobelets, calices ou tasses, fréquents au Bronze ancien et au Bronze moyen, se raréfient au début du Bronze récent; puis la coupe mycénienne devient un objet d'importation proportionnellement majeure sur l'ensemble de la production mycénienne.

La faisselle ou passoire pourrait être un indice de changement dans les usages culinaires. En effet aucun des tessons ou fragments de faisselles de Kazel, qui n'excèdent pas la vingtaine, n'a été trouvé en contexte antérieur à notre niveau "barbare". C'est en revanche un ustensile assez fréquent par la suite, pendant le Fer.[11]

Conclusion

Il reste quelques points encore en suspens que les recherches ultérieures espérons-le pourront éclairer:

Chronologie absolue

Comment traiter l'hypothèse suivante: le niveau "barbare" présenté ici s'inscrirait à l'intérieur du Bronze récent (au sens politique du terme)? La présence de matériel "occidental" (mycénien, "troyen" et "barbare") ne traduirait rien de plus qu'une évolution des échanges, dans la continuité de ce qui se faisait auparavant: échange au sens d'importation de vases et au sens d'importation de styles et techniques. Je renvoie aux diverses hypothèses de Susan Allen sur la question (Allen 1994: 44–45): elles peuvent se poser au XIII^e^ comme au XII^e^s, avant ou après la guerre de Troie.

Nous ne disposons pas de datations radiocarbones; de toute façon, la fourchette chronologique qu'elles pourraient proposer serait trop grossière. Nous n'avons donc à notre disposition que la chronologie relative comparée fournie par la céramique.

J'ai rappelé tout à l'heure que nous n'attendons pas de tablettes datées en place à Tell Kazel. Tournons-nous donc du côté d'Ougarit, en laissant de côté, sans pour autant l'oublier, la question qui agite actuellement les fouilleurs du site, à savoir: y a-t-il eu réoccupation temporaire des ruines après la chute du palais? Admettons aussi que la chute du palais d'Ougarit est liée au passage des Peuples de la mer, même s'il n'en est pas l'unique cause.

[11] Voir en comparaison aux ensembles présentés ici l'inventaire de la pièce Q-R du chantier II dans Capet (2003: 87, figs. 20–21 et 24-a), avec notamment d'abondants cratères et une faisselle.

Le niveau de Tell Kazel immédiatement antérieur au niveau "barbare" présente un faciès céramologique tout à fait comparable au dernier état d'Ougarit. Notre niveau "barbare", on l'a vu, associe ce même faciès à des formes de tradition locale mais évoluées, et de nouveaux arrivants occidentaux, inconnus à Ougarit. C'est pourquoi nous proposons de dater en chronologie relative notre niveau barbaro-troyen de phase Ougarit-post-palatiale.

Pour dater la fin du niveau nous avons les critères suivants:

– la céramique troyenne est encore en usage et ne le sera plus après;

– la céramique de style Mycénien IIIC:1b est en usage et se poursuit au-delà, au niveau suivant (le "niveau 5" du chantier II et le "niveau 3–4" du chantier IV);

– la céramique "barbare" est propre à ce niveau;

– les cruches et cratères bichromes ne sont pas encore fabriqués.

Nous sommes donc probablement à l'intérieur du XII^e^s ou au tout début du XI^e^s.

Cultures

La deuxième question est une question d'identité culturelle: peut-on, quand on utilise la locution "population céramique", laisser tomber au passage le mot "céramique": doit-on associer les utilisateurs de la céramique "barbare", mycénienne locale et "troyenne" avec les Peuples de la mer? La céramique "barbare" est-elle utilisée uniquement par des gens originaires de leur région de production, encore à chercher?

Les analyses ont pour l'heure montré une origine locale de l'argile et une grande variété de pâtes, ce qui indique une production locale peu centralisée. La grande banalité des formes jointe au caractère utilitaire des vases produits en pâte "barbare" fait penser à une production ponctuelle de remplacement, de type familial. On peut aussi envisager cette production comme une production issue de la population locale pour pallier l'interruption momentanée de l'approvisionnement en vases "industriels", qui ferait appel à des savoirs techniques ruraux locaux.

Autre hypothèse, et toujours en raison de la faible valeur commerciale de la céramique "barbare" qui ne la prédispose pas à être un objet d'échange, à la différence des céramiques égéennes ("mycénienne" et "troyenne"), il est possible que le niveau ici présenté soit les restes de l'installation en Amurru des Peuples de la mer:[12] non pas un passage destructeur mais une réelle occupation avec toute son épaisseur chronostratigraphique. Tout indique une transition en douceur et l'assemblage céramique témoigne d'une symbiose de cultures variées; l'archéologue se doit de s'arrêter à ce constat matériel.

Centre National de la Recherche Scientifique (CNRS)

[12] Inscription de l'an 8 de Ramsès III sur le deuxième pylône de Medinet Habu: Breasted (1906: §64).

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Ayelet Gilboa

FRAGMENTING THE SEA PEOPLES, WITH AN EMPHASIS ON CYPRUS, SYRIA AND EGYPT: A TEL DOR PERSPECTIVE

The Philistine Paradigm

Archaeological research of the Sea Peoples phenomenon in the southern Levant is largely dominated by finds in Philistia and by Egyptian and biblical records. Based on this evidence, with few exceptions (in recent years this has been mainly S. Sherratt, e.g., 1998), most scholars would concur nowadays that many material cultural phenomena in Early Iron Age Philistia can best be explained by the arrival of a significant new population.

Debates concern mainly the following points: (1) the origin of this population, chiefly in the Aegean-Anatolian sphere (Mazar 1988: 256–257; T. Dothan 2003; Yasur-Landau 2003a; Singer 1988; 1992), or in Cyprus (e.g., Brug 1985: 135; Killebrew 2000), (2) the way the newcomers arrived—by land or by sea (e.g., Yasur Landau 2003b), (3) the size of the new population (Stager 1995: 344 vs. Finkelstein 2000: 172), (4) the chronology of the settlement process and, as an integral part of this issue, (5) the balance of power between the Philistines and the Egyptians (Wood 1991; Finkelstein 2000: 163–165 vs. Mazar 1985a; Bietak 1993). Two to four distinct waves in this process have been identified by some scholars, based on the different styles in Philistine pottery, but others perceive these as exemplifying local stylistic developments (Dothan and Dothan 1992: 165–70 vs. Mazar 1985b), though this latter debate has subsided somewhat lately.

Starting in the late 1980s, some scholars started to address the social aspects of Philistia, and as part of this enquiry they attempted to define the material manifestations of social dialectics. Bunimovitz's study (1990) was pioneering in this respect and subsequently followed by others (e.g., Bunimovitz and Yasur-Landau 1996; Bunimovitz and Faust 2001; Yasur-Landau 2002; Sharon 2001; cf. also Gilboa, Cohen-Weinberger and Goren 2006).

Based on the Egyptian records, mainly the Medinet Habu reliefs, the Great Harris papyrus, Amenope and Wenamun, the following familiar picture is usually drawn regarding the southern Levant (rendered graphically in Stager 1995: fig. 2): three 'groups', supposedly of different origin and ethnicity,[1] settled on the Canaanite coast, each in its own territory, a result of some extraordinary coordination of the Sea Peoples contingents (somewhere "in their isles…."). Slight divergences

[1] However, the notion that the Šikila arrived from Sicily and the Shardana from Sardinia seems generally to have been abandoned.

from this picture, for example Pritchard's (1968) identification of Sea Peoples in the Jordan Valley, and Zertal's (2001) of Shardana at the 'Iron pass, not far from Megiddo, have by and large been ignored.

Interpretations of Philistine pottery outside Israel's southern coast and Shephela depend on its locale versus the Egyptian and biblical testimony. If it is found in the Jezreel Valley, at Megiddo for example, it testifies to a late Philistine presence (T. Dothan 1982: 69–82; Raban 1991). Philistine pottery in the highlands or in the Negev, on the other hand, testifies to commercial contacts (T. Dothan 1982: 269).

Breaking Loose from the Philistine Paradigm: The Tel Dor Case

My uneasiness with this model started to develop following the excavations at Dor, the Šikila town according to Wenamun. In the mid-1980s, when Ephraim Stern first reached the Early Iron Age levels there,[2] bets were laid. What would the Šikila material culture look like? Jokingly someone said that Šikila pottery would be something akin to that of Philistia - but painted in purple and yellow. This was the sort of expectation, to find something analogous to Philistia, but slightly different, as befits another Sea People. It seems that this is still what some scholars expect to be uncovered along the southern Levantine coast north of Philistia, something similar, but with a different ethnic tinge.

The finds at Dor, however, have not lived up to expectations, and the 'western association' of the Šikila has turned out to be elusive. Though a few artifacts do find corollaries in Philistia, like a lion-headed cup (for which see further below), incised scapulae and bimetallic knives (see summaries in Stern 2000b; Sharon and Gilboa in press), the broader picture is different. At Dor, in the earliest Iron Age phases, there are no 'western' architectural traits. The two 'domestic' units excavated are ordinary courtyard buildings of Canaanite type (see summary of Area G in Sharon and Gilboa in press; the second building, in Area D5, is as yet unpublished). The are no western figurines, and the pottery is mostly of Canaanite derivation. The Myc IIIC and Philistine Bichrome phenomena, or anything remotely similar, do not exist there.

Recently, I offered an interpretation of the Šikila material culture as revealed at Dor, which is based mainly on its juxtaposition to the coastal region to its south (i.e., Philistia; Gilboa 2005). In a nutshell, the most revealing difference between these two regions is the role of pottery in general, and especially that of decorated vessels. This difference, however, cannot be explained in ethnic terms, but by the different circumstances in which newcomers settled along the southern Levantine coast. At Dor, there is evidence for the arrival

[2] Excavations at Dor, directed by Ephraim Stern in 1980–2000, and by the Renewed Tel Dor Expedition, headed from 2002 by Ilan Sharon and myself, have produced the first data base pertinent to the elucidation of the 'other' Sea peoples, or at least to the definition of Early Iron Age material culture north of the Yarkon River (for surveys on Dor in this period, see Stern 1990, 1991, 1993, 1999, 2000a: chap. 3 and pp. 345–64; 2000b; Gilboa and Sharon 2003; Sharon and Gilboa in press).

of some new groups from Cyprus, a region from which at least part of Philistia's population also originated (see below). However, the material manifestations of the settlers at Dor are different, as their social, economic and perhaps also political status was not the same. Among other things, this is expressed in the ceramics that were singled out for decoration. In Philistia, as is well known, significant effort was invested in hand-painted designs on a variety of vessels, including table wares. These are the "Philistine Monochrome", "Philistine Bichrome" and the later "Ashdodian" and red slipped and burnished vessels (for these later traditions, see lately Ben-Shlomo, Shai and Maeir 2004). These had a role in maintaining and expressing group affiliation and status. At Dor, on the other hand, as well as along the Canaanite coastal stretch to the north, such a phenomenon does not exist. The only systematically decorated vessels were commercial containers, first in Canaanite-derived designs, which later developed into the so-called "Phoenician Bichrome style". Significantly, these commercial containers reveal a mixture of Canaanite and Cypriot stylistic traits.

Contrary to Stern (e.g., 2000b), who suggested that the first part of the Early Iron Age at Dor should be identified with the Šikila (i.e., Sea Peoples) settlement, and that later on the place was conquered by the Phoenicians, to my mind, the entire sequence should be understood as one cultural continuum, with the Šikila and Phoenicians essentially synonymous. Cypriot elements were paramount to this culture, and to Early Iron Age commercial activities along the Phoenician/Šikila coast.

Social Negotiations

To reiterate, the difference between the southern and northern parts of the Canaanite coast should not be explained in ethnic terms, but rather by the discourse between the symbolic properties of the material cultural components of the newcomers, and by their local contexts. If we accept that the traumatic events at the end of the Late Bronze Age caused the dislocation of different populations (from different locales), we must also acknowledge the intricacy of this process. For example, it stands to reason that the southern Levant (and other regions) witnessed the arrival of different populations (or smaller groups or individuals) for different reasons and at different times (see similarly, Yasur-Landau 2007). Although material manifestations of newcomers depend on a plethora of factors, including the circumstances in the country of origin (willful or coercive emigration, planned or not, etc.), they mostly depend on two factors: the symbolic or other meanings objects convey to their users (or the lack of such meaning), and the social negotiation the newcomers engage in, or are forced to conduct, with the indigenous and other immigrant populations they come in contact with. There is no *a priori* reason to assume a necessary correlation between the size of the new population and its impact on the local material culture. We must also anticipate the opposite, the material cultural 'reactions' of locals to the newcomers. To my mind,

the Early Iron Age should be treated as a sort of 'dialectic laboratory' of group identities. This attitude is similar to 'recontextualization' and 'localization' approaches prevalent in recent post colonial and creolization studies (e.g., Friedman 1990; Stein 2002; Gosden 2004: esp. pp. 7, 18–19, 30–32; Van Dommelen 2005; Hodos 2006: e.g. 7, 11, 15–17).

An example of the types of questions that should be asked regarding the local matrix, concerns the nature of Egyptian control over LBA Canaan. In recent years, a growing number of scholars (e.g., Bryan 1996; Higginbotham 2000; Gadot 2005) have concluded that the Egyptian administrative hold on the southern Levant was implemented mostly through local elites, whose power, prestige and legitimacy was drawn from Egypt. These elites probably occupied most of the so-called residencies, while their sons were sent, willingly or unwillingly, to be educated in Egypt (and indoctrinated in the royal Kap). Some of these individuals already bore Egyptian names, they controlled a significant portion of the trade, and they held a variety of functions within the Egyptian administration. What was the fate of these elites when the Egyptians lost control of the region? How did this affect the absorption of new populations and their status (this is especially pertinent to the issues of interest here)? And how, of course, was this reflected in their material culture?

This last question will be of utmost importance in any elucidation of different absorption processes in the south (meaning Philistia) versus the north. For example, it would be essential to assess what happened to all the lands controlled by these elites (and those controlled by the Crown) after they lost their support and legitimacy. Is it just a coincidence that the cultural and demographic phenomenon that we have dubbed 'Philistine' is known mainly in the south, in areas where Egyptian control was greatest, and perhaps lasted longer? Why is such a phenomenon not attested elsewhere?

A case in point regarding 'the local material response': it is well known that in Philistia, alongside the decorated pottery of foreign derivation, production of traditional Canaanite shapes continued to flourish, and these comprise the bulk of most ceramic assemblages (e.g., for the Myc IIIc phase, Dothan and Zukerman 2004: Table 1, Dothan and Ben-Shlomo 2005: 78; for the Philistine Bichrome phase, e.g., Brug 1985: 68–103). Yet very little attention has been given to tracing changes in this 'local' repertoire, and to determining whether there were differences in this respect between sites or regions. Perhaps the most conspicuous trend is the rapid disappearance of the Late Bronze Age painted tradition. If we consider Late Bronze Age closed kraters, for example, which were elaborately decorated, many featuring composite figurative designs, and found in 'special' contexts (those from the Lachish Fosse Temples are the best known; cf. Tufnell, Inge and Harding 1940: pl. XLVIII), and therefore must have been imbued with special meaning—why do they disappear in the Early Iron Age? (And in Philistia they seem to vanish particularly quickly.)

"Sea Peoples" from Nearby Regions: Cyprus

As mentioned above, most scholars identify some part of the Aegean or western Anatolia as the primary 'source' of the Sea Peoples. However, I would like to examine two closer regions. The first is Cyprus.

The 'real' crisis in Cyprus occurred somewhat later than in neighboring regions—during the transition from LC IIIA to LC IIIB. (The latter period is contemporary with the Bichrome-bearing contexts in Philistia.) The island witnessed one of the most severe crises in its history (as demonstrated by Iacovou 1994; 2005: 20–23; contra Negbi 2005: 5, 27). Nearly every site was abandoned, and the social and economic structure of Late Bronze Age Cyprus collapsed. Iacovou (1994) has suggested that the 'vanishing' population either congregated at the few remaining sites, or dispersed into the countryside.

Is it possible that this did not affect the Levantine coast? At Dor, for instance, on present evidence, this seems to have been the period when the Early Iron Age town emerged. Although, the Late Bronze Age settlement has not been located yet, it was certainly very small, and probably located on the southwestern part of the tell. No levels paralleling the Myc IIIC horizon in Philistia have been located yet, either, though it is unclear whether this is accidental or not. What is clear is that somewhat later, paralleling the LC IIIB period in Cyprus and the Bichrome levels in Philistia, the town occupied more or less the entire extent of the tell, or approximately 8 ha, and was fortified (Sharon and Gilboa in press). This brings to mind the experience at Tel Miqne/Ekron (and perhaps Beirut). However, the growth of Dor was significantly later than at Ekron (the expansion of Beirut cannot be dated closely enough, see Badre 1997: 50–66). The conspicuous "Cypriot connection" at Dor may point in the direction we should look to explain this phenomenon.

The 'late' Cypriot crisis is also reflected in Philistia, during the Bichrome period, which has produced strong Cypriot connections. Well known examples include the cylindrical and horned-shaped bottles in the Bichrome repertoire (which have no clear local Myc IIIC antecedents for the time being), the incised scapulae and bimetallic knives (see similarly Yasur-Landau 2002: 211, but he sees these objects as attesting to trade relations).

As I have mentioned, the significance of the transition in Philistia from the Monochrome to the Bichrome phase has been ignored for quite a while now. Implicitly or explicitly (for example, Stager 1995: 335), it seems that most scholars prefer A. Mazar's view of a local stylistic development over the 'immigration waves' model first suggested by T. and M. Dothan. However, perhaps it is time to re-visit some aspects of this latter model, and to link at least some of the developments in the Bichrome phase to the Late Cypriot IIIB calamity.

"Sea Peoples" from Nearby Regions: Syria

The Syrian coast (and perhaps not only the coast) also needs to be considered. What happened to the inhabitants of the kingdom of Ugarit,

which totalled about 3,000 in the city and 10,000 in the kingdom, according to Liverani (cited in Yon 1992; for somewhat different estimates see Calvet and Castel 2004: 219), after its destruction? Yon (1992) has suggested that they fled to the mountains, while others (e.g., Courtois 1975: 31; Negbi 1992: 604–605) have traced part of the population to Cyprus. What happened, for instance, to the social/professional class that included such major figures as Rapanu, Yabinu, Urtenu and Rašap Adu who, alongside their services to the crown, maintained independent entrepreneurial commercial activities (see, for example, Monroe 2000: 342–343; Liverani 2003: 124; cf. Sherratt and Sherratt 2001), and had extensive interregional contacts, *inter alia* with the Phoenician cities to the south. (for a recent evaluation of the economic activities of these individuals, see Bell 2005: 130–35.)

The picture for Early Iron Age Syria is still fragmentary, but it is being unveiled increasingly. Early Iron Age settlements are usually small and non-urban in nature, and a significant portion of the LBA population appears to disappear from the archaeological 'radar' (e.g., Capet and Gubel 2000: 427, 428, 437; Klengel 2000: 23; Venturi 2000: 532–533). In most regions, significant commercial activity, including maritime trade, does not resume until Iron Age II.

The Early Iron Age in the southern Levant, especially in its more northern parts, cannot be understood without considering the fate of Syria. Is it possible that some portions of the Syrian population, perhaps specific social/economic groups, chose to seek their fortunes in the thriving centers on the coast to their south (see similarly Liverani 1987: 69–70; Bell 2005: 211)?[3]

The Foreign Associations of Selected Šikila Pottery Types from Dor: Syrian or Cypriot?

As I have discussed previously (2005), and summarized above, the primary characteristic of the decorated ceramics of Early Iron Age Dor (and regions to its north) is the presence of commercial containers bearing stylistic affinities with Cyprus. Here I wish to complicate the picture by discussing those very few vessels at Dor that were adorned with paint, but which apparently were not used for trade. Some of them have already been illustrated previously (Gilboa 1999: figs. 15:5–8; Sharon and Gilboa in press), and from the outset it has been evident stylistically that they represent a phenomenon distinct from the commercial containers; there is a complete dichotomy between the two groups. Recently, more fragments of such vessels have been uncovered, enabling a better definition, and a possibility of interpreting the group.

Figures 1 through 3 illustrate nearly all of the Early Iron Age ceramic vessels at Dor on which some decoration can be discerned beyond simple linear designs (excluding, as mentioned, commercial containers). Most of these vessels were recovered from Area G, Phases 10–9. These two phases (Ir1a early and late in Dor terminology)

[3] Capet and Gubel (2000: 43) suggest that in the Early Iron Age, parts of western Syria, like the Akkar plain, where occupied by Phoenicians.

parallel chronologically the Philistine Bichrome-bearing occupations in Philistia, and the LC IIIB and probably also the LC IIIB/CG I transition in Cyprus (for these associations and the chronological terminology at Dor, see Gilboa and Sharon 2003: table 21). One vessel (Fig. 1:9) originates from deep in a small probe in Area F on the western fringe of the tell. Its stratigraphic context is not entirely clear, but the associated pottery parallels material from Phases 10–9 in Area G. Two vessels (Fig. 1:10, 11) originate from Phases 8–7 in Area G (Ir1a/b and Ir1b), and thus are somewhat later than the rest. In the following discussion, I will examine whether these vessels reveal any recurrent stylistic phenomena.

The Decorated Amphoroid Kraters

Other than the commercial containers, amphoroid kraters (KR 1 at Dor) are the only vessels at Early Iron Age Dor that are almost always painted. They are different from the bulk of the rest of the kraters, which are open, neckless, handleless and never decorated (see Gilboa and Sharon 2003: figs. 2:14–17). It thus seems that they had some other, 'special' function. They are represented in restricted quantities in Ir1a (Phases 10 and especially 9 in Area G), further diminishing later, until Ir1b (in Phases 8–7 in Area G), when they practically disappear. Three items (Figs. 1:4, 6–7) have been submitted to petrographic analysis. They were apparently manufactured on the Carmel coast, perhaps at Dor itself (Anat Cohen-Weinberger and Yuval Goren, personal communication). Macroscopically, the fabric of the rest of the vessels resembles the predominant fabric types at Dor, and thus is probably also 'local'.

Amphoroid kraters clearly had a special significance along the northern Canaanite coast. Towards the end of the Iron I and beginning of Iron II, when the Phoenician Bichrome Style started to be employed on vessels other than commercial containers (see Gilboa 1999), amphoroid kraters were among the few shapes still being decorated (e.g., kraters at Tell Abu-Hawam and Sarepta: Balensi 1980: pl. 10:9; Anderson 1988: pl. 34:10). This would seem to confirm that a special function continued to be assigned to them.

At Dor, the specific contexts in which these kraters were uncovered do not hint at their precise function (the only two primary contexts that produced such kraters were apparently domestic storerooms). However, it is reasonable to assume that they functioned as serving/mixing vessels, perhaps of liquids, for special events.

The krater in Figure. 1:1 has a depressed globular shape, with a disc base, a cylindrical upright neck, two vertical handles and a protruding ledge rim, oblong in section. Most of the other examples at Dor are very fragmentary. Sometimes it is possible to deduce that the vessel shape is similar to Figure 1:1, but often the form of the vessel is unclear; all of the fragments that were large enough revealed upright necks (indicating closed kraters) and oblong ledge rims, either horizontal or diagonal. Only one krater had a conical neck.

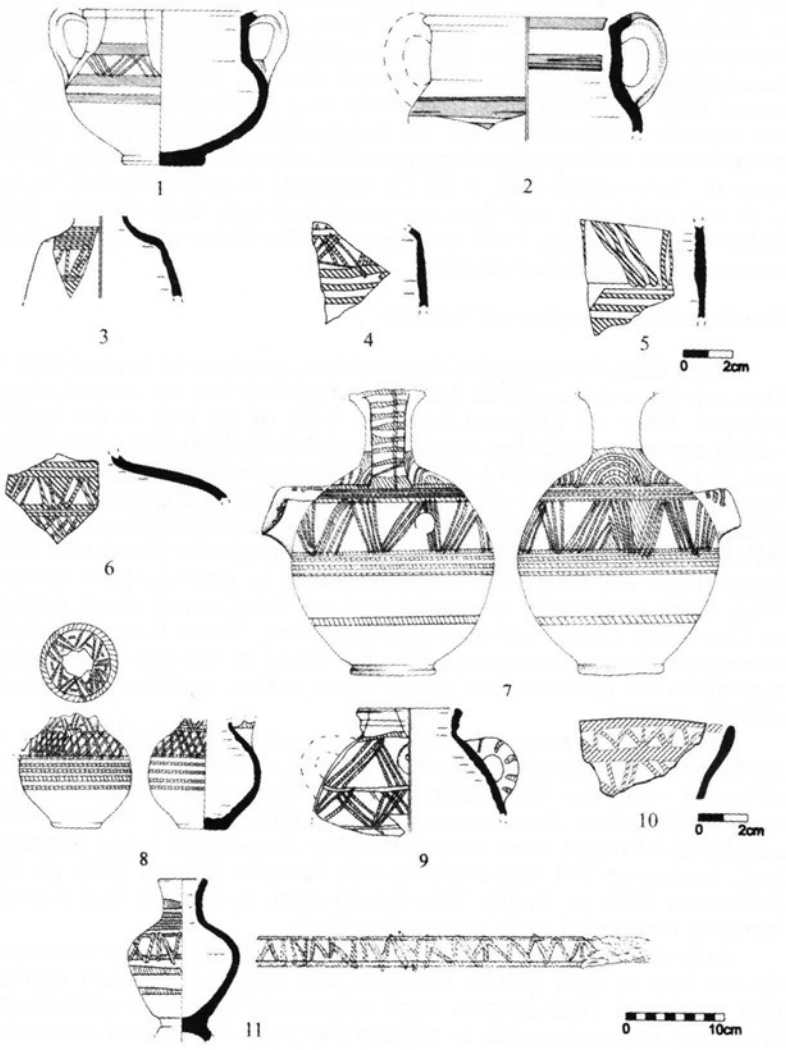

Fig. 1. Decorated Iron I vessels form Dor. (1) Krater --, L18265, Phase G/9; (2) Krater 98368, L9832, Phase G/9; (3) Strainer(?) jug 181993, L18267, Phase G/10; (4) Strainer(?) jug 183955, L18312, Phase G/10; (5) Strainer(?) jug 04G0-0125/2, L04G0-004, Phase G/9; (6) Jug?/Jar? 182177/1, L18286, Phase G/10; (7) Strainer jug 181964, L18241, Phase G/9; (8) Jug 181953+181989, L18242, Phase G/9; (9) Amphoriskos 86769, L8890, Area F; (10) Jug 180095/2, L9727, Phase G/8-7; (11) Goblet 99434+99466, L9903, Phase G/8.

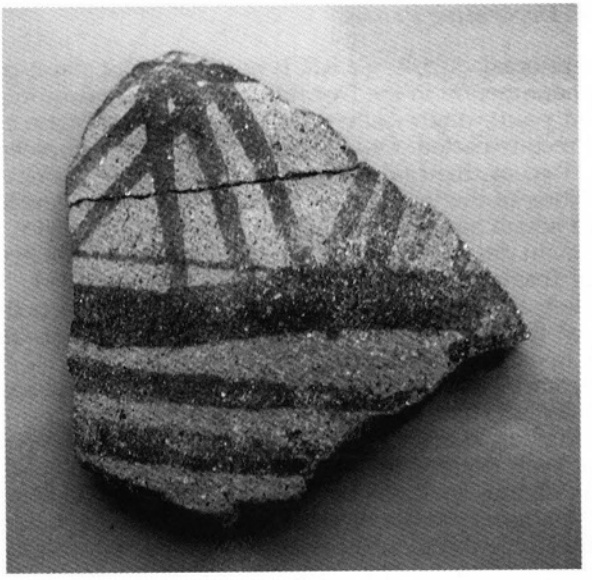

Fig. 2. Photograph of fragment Fig. 1:4.

Fig. 3. Photograph of fragment Fig. 1:9.

The OMDS Decorative Pattern

As mentioned, nearly all KR 1 vessels at Dor were painted, an unusual phenomenon in the Dor repertoire. The decoration is always only in red paint, often quite faint, and in many cases the designs cannot be reconstructed. Only three vessels were complete or nearly complete. Two of them (e.g., Fig. 1:2) bear simple horizontal bands of paint. None of the vessels revealed the use of the "enclosed band design", in which narrow bands flank a wider one, or vice versa; this being the main design employed on commercial containers, a design originating from Cyprus (cf. Gilboa 1999: figs. 4–5, 8–9, 15:1–4). As I have stated, a clear distinction can be drawn between the stylistic affinities of the commercial containers and those on the vessels discussed here. Only one vessel (Fig. 1:1) bears on its shoulder a somewhat more complex design; possible traces of the same design have survived on some other fragments as well.

I would thus like to highlight the more 'complex' pattern (Fig. 1:1). It has been defined in the past (by myself and by others) as a continuous zigzag enclosed by horizontal bands. In fact, the basic decorative patterns consist of groups of parallel diagonal stokes (in our case there are three, in other cases usually two to four) applied in alternating directions. The strokes overlap each other at the points of contact between the groups, and in many cases they also overlap the horizontal bands that enclose the design (this latter trait is more evident in the vessels discussed below). As a result, I have called this design "Overlapping Multiple Diagonal Strokes", or OMDS. This, syntactically, is very different from the multiple zigzag design (i.e. a design formed by parallel zigzags that do not meet, and that enclose 'empty' zigzag spaces that can be filled with various other continuous designs, like wavy lines), a standard design in Late Bronze Age Canaan.

Possible Parallels of Kraters with the OMDS Pattern

1). Bronze Age Canaan/Phoenicia. Although closed/necked kraters were already singled out for special decoration in Late Bronze Age Canaan, they differ from the vessels discussed here in general shape (they are usually carinated or biconical in profile), and none have ledge rims. A few exceptions are amphoroid kraters from Tel Michal (Negbi 1989: figs. 5.8:11–14), and Beth She'an (James and McGovern 1993: fig. 21:4); other kraters, from Megiddo, are mentioned below.[4] The situation is similar in those regions of Canaan that later became part of Philistia, There too, 'true' amphoroid kraters are extremely rare (but see a krater of unclear stratigraphic association in Dothan and Freedman 1967: fig. 26:8).

Furthermore, in all these regions the OMDS pattern, as defined above, is practically non-existent, other than two examples: an

[4] However, they are more carinated than the Iron Age examples considered here, they lack handles, and except for the Tel Michal krater that has a ledge rim, they are equipped with thickened rounded rims.

amphoroid krater from Tomb 73 at Megiddo (Guy and Engberg 1938: pls. 64:34; 159:2), which bears the pattern twice, and a similar krater with a conical neck from Tel Zippor (Yannai 2000: fig. 5:1).[5]

Along the north Canaanite/Phoenician coast (admittedly, there are not many Late Bronze Age assemblages from these regions), the situation is as follows. At Sarepta, amphoroid kraters do exist, but are extremely rare before Iron II (their exact shapes are unknown; see Anderson 1988: Table 7, K-6a). However, in Stratum G1 in Trench II/Y (a quite long-lived transitional LB/Iron Age horizon), one such krater, of depressed globular shape, was encountered bearing an OMDS pattern (Anderson 1988: pl. 28:5; here Fig. 5:7).[6] It is impossible to determine with any confidence to which phase in this long period the krater belongs.

In addition, closed kraters bearing designs similar to the OMDS pattern are attested at Kamid el-Loz in the southeastern part of the Lebanese Biq'ah, where similar patterns occur on other vessels as well (see Metzger 1993: pl. 105:2; here Fig. 5:2, but the rim is not a ledge rim).[7]

2). Iron Age Canaan/Phoenicia and the "Megiddo Style". Tracing the fate of the decorated kraters in the Early Iron Age reveals the following processes. In Philistia, painted kraters in the Bronze Age tradition practically disappear and amphoroid kraters are non-existent.[8] Generally, there are no decorated closed kraters in the Monochrome and Bichrome horizons of Philistia. Their (ceremonial?) roles, requiring large and deep open vessels, seem to have been replaced by the bell-shaped kraters which, both in shape and decoration, are rooted in a non-Canaanite tradition, of some 'western' derivation.

Regarding the OMDS pattern in Philistia, the variegated painted repertoire does include various zigzag and zigzag-like patterns (T. Dothan 1982: chp. 3, fig. 71), but most of them are unrelated to the pattern we seek, and the exceptions are commented on below.[9]

[5] Morphologically, the Tel Zippor krater is very similar to the krater from Dor, mentioned above, with a conical neck.

[6] As can be gleaned from Figure 5:7, two fragments of this vessel were found, but they do not join. In the Sarepta report they were placed in such a way as to render the decorative design incomprehensible. In Figure 5:7 the fragments are placed differently. This, no doubt, is an OMDS pattern, though the placement suggested here is not necessarily the correct one (the fragments could belong, for instance, to different sides of the vessel).

[7] There is at least one other amphoroid krater, but it is unadorned, taller than the vessels pursued here, and has a ring base (Metzger 1993: pl. 105:1).

[8] Possible exceptions are two closed kraters (but not amphoroid) with 'Canaanite designs' from Strata XIIIB and XI in Area A at Ashdod (M. Dothan 1971: figs. 1:4; 3:1), but their stratigraphic attribution, mainly that of the earlier example, is not entirely clear (M. Dothan 1971: 25).

[9] In general, continuous horizontal geometric configurations are rare in Philistia. This is evident on the Monochrome vessels (see Dothan and Zukerman 2004). There, decorative friezes are usually subdivided into metopes with independent designs, usually differing from each other (for example, Dothan and Zukerman

However, there is one design in the Philistine Bichrome repertoire that does resemble the OMDS pattern (see T. Dothan 1982: chp. 3, 214: figs. 17:1; 27:1; 72:6–9); Dothan considered it a western, Myc IIIC-derived pattern. In some instances, the triangular spaces formed by the groups of strokes are painted solid red, a phenomenon that is also attested on some of the Dor vessels discussed here (Figs. 1:6–7, and see below). But the Philistine designs are different from those at Dor in some respects, most notably in the quality of their execution. They are meticulously rendered, the groups of strokes are usually considerable in number, but do not overlap with each other, nor with the horizontal bands that frame the designs (which is the practice at Dor, and at other sites as well; see below). The high quality of the painting in Philistia differs from the sloppy work and faint colors on the examples from Dor.

The only vessel in Philistia that bears a design that closely resembles our OMDS is the cylindrical bottle from the Gezer cache (T. Dothan 1982: fig. 1:4, pl. 1 on right); this vessel is discussed further below. Similarly, a horn-shaped bottle of unknown provenance (T. Dothan 1982: chp. 3, fig. 41, pl. 81:2; here Fig. 4:1) is adorned with three friezes containing a continuous pattern of faint red diagonal strokes, partly overlapping each other, and the horizontal bands that enclose the pattern. It does not seem accidental that Dothan underscored the unusually low quality execution of the decoration on this bottle (in comparison with regular Philistine ware), and compared both fabric and decoration to those of a cylindrical bottle found in Stratum VI at Megiddo (T. Dothan 1982: 168–171; chp. 3, fig. 40:2, pl. 80). Dothan attributed both vessels to her late, degenerated phase of Philistine Bichrome. However, the difference between these two vessels and the 'standard' Philistine products is regional, rather than temporal (see below).

Similarly, in Israel's northern valleys, the Carmel coast, Galilee, and the Lebanese littoral, kraters decorated in the Canaanite manner practically vanish, and amphoroid kraters, adorned or unadorned, are extremely rare. One such krater was uncovered in Megiddo VIB (Loud 1948: pl. 85:5). Morphologically it is similar to the Dor krater in Figure 1:1 and it is painted with a composite design in red.[10] Dothan also attributed this vessel to the late, debased stage of Philistine Bichrome (T. Dothan 1982: chp. 2, 79–80, fig. 14:3), though in fact the shape, style and fabric are totally different. Here too, the difference is regional

2004: fig. 18:8), or with single geometric designs, repeated, or antithetic, but not continuous. The few rare exceptions in this regard are continuous wavy lines or horizontal bands of lozenges or triangles. Likewise, on the Philistine Bichrome group, decorative friezes are usually divided into metopes (T. Dothan 1982: chp. 3, fig. 7), sometimes with further subdivisions. In other instances the friezes are not divided, but the geometric designs in them are separate, usually repetitive, or alternate with other designs, or are antithetic (T. Dothan 1982: figs. 10:1–4). Here too, continuous geometric designs are rare, though they are definitely attested (for instance, chains of cross-hatched lozenges, T. Dothan 1982: chp. 3: figs. 70:12–13). This notwithstanding, the prevailing decorative syntax is different.

[10] Another tall plain amphoroid krater from Megiddo is probably a Cypriot import (Finkelstein, Zimhoni and Kafri 2000, fig. 11.2:8).

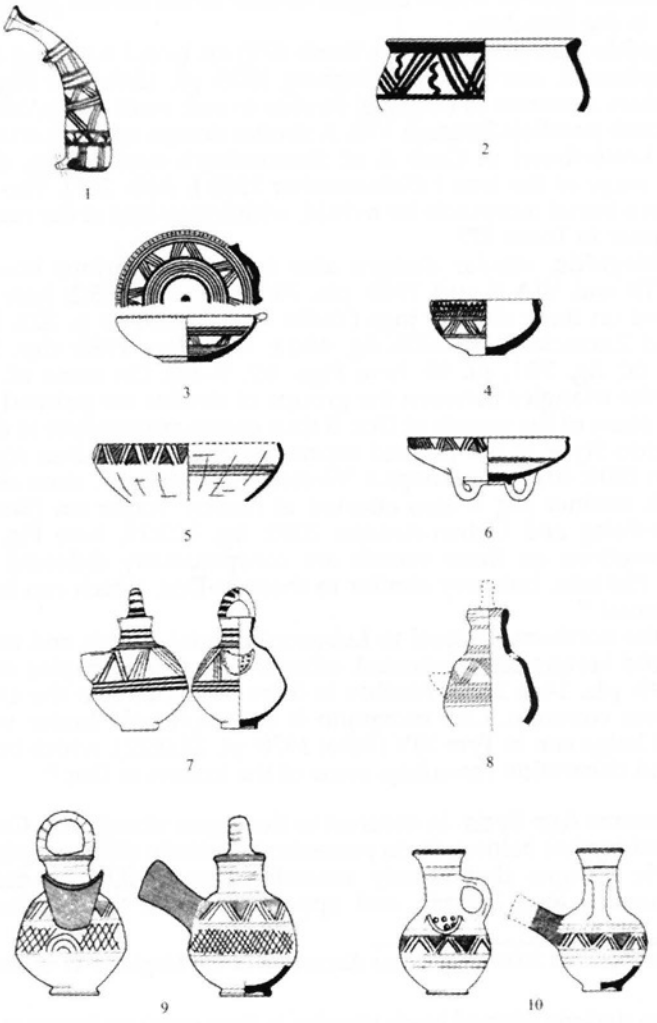

Fig. 4. Vessels of the 'Megiddo Style': (1) unknown provenance, T. Dothan 1982: chp. 3, pl. 81:2); (2) Megiddo, Tomb 877, Guy and Engberg 1938: pl. 13:9; (3) Megiddo VIb (Loud 1948: pl. 74:11); (4) Megiddo VI (Loud 1948: pl. 85:2); (5) Megiddo VI (Loud 1948: pl. 79:4); (6) Megiddo VI(b?) (Loud 1948: pl. 74:10); (7) Megiddo VIa (Zarzecki-Peleg 2005: fig. 40:14); (8) Yoqne'am XVII (Ben-Tor, Zarzecki-Peleg and Cohen-Anidjar 2005: fig. I.23:19); (9) Megiddo (Dothan 1982: chp. 3, fig. 59:1); (10) Megiddo (Dothan 1982: chp. 3, fig. 27:7).

and not chronological. Megiddo, as detailed below, is the main site in the Canaanite sphere where designs similar to the OMDS pattern are attested in the Iron Age.

Megiddo also produced (in Tomb 877) an Iron I rounded krater (not amphoroid, see Guy and Engberg 1938: pl. 13:9; here Fig. 4:2), which bears a pattern of diagonal strokes in red; most of the contents of this tomb parallels Stratum VIB. A similar design appears on a bell-shaped krater/bowl in Grab A of Shumacher's excavations, dating to some stage of the Iron I (Schumacher 1908 I: Abb. 247). The latter served as a burial receptacle for a child, which may hint at the function of the krater in Tomb 877.

At Megiddo, similar designs also appear on various bowls in Strata VIB and VIA (Loud 1948: pls. 74:10, 11; 79:4; 85:2; here Figs. 4:3–6) and on three strainer jugs (Yadin 1975: figure on p. 223, lower right and Zarzecki-Peleg 2005: fig. 40:14; T. Dothan 1982: chp. 3, fig. 27:7, pl. 60; fig. 59:1, pl. 95; here Figs. 4:7, 9–10). On some of these vessels, the triangles between the groups of strokes are painted solid red, like some of the vessels at Dor. It thus seems appropriate to define a 'Megiddo Style' in the painted repertoire of the Early Iron Age (cf. Harrison 2004: 40),[11] or perhaps a 'Western Jezreel Style', since at least one such strainer jug is also attested at nearby Yoqne'am (Ben-Tor, Zarzecki-Peleg and Cohen-Anidjar 2005: fig. I.23:19; here Fig. 4.8). The decorations on these vessels are conspicuously different from those in Philistia, but very similar to those at Dor, which can hardly be accidental.[12]

On the northern (Carmel to Lebanon) coastal stretch and inland, amphoroid kraters are unattested, other than a few examples at Dan (Ilan 1999: pls. 14:6; 28:3). Neither is there evidence that the OMDS design was common. One exception is an amphoroid krater with a diagonal ledge rim in Tyre XIV (Bikai 1978: pl. XLII:22), which both in shape and decoration resembles some of the kraters at Dor.[13]

3). Bronze Age Syria. In contrast to the vague situation in Canaan (discussed further below), Syria presents an entirely different picture. Geometric designs that closely resemble our OMDS, as defined above, have a long history, and appear on other vessels besides

[11] See also Arie 2006 for a recent discussion of the Megiddo VI ceramic repertoire.

[12] Two similarly adorned bowls (skyphoi in these cases) are known at other sites: a single bowl at Beth She'an, in Stratum VI which, like the Megiddo specimens, was considered by Dothan to be a Philistine vessel (T. Dothan 1982: chp. 2: figs. 13:2, 14:2), and one lately uncovered at Tel Kinrot, on the sea of Galilee. It is a complete vessel found out of context, but should probably be attributed to either Stratum VI or V. I thank Stefan Münger for permitting me to mention this find. The significance of these two isolated examples is unclear.

[13] Another possible site is Tell el-Ghassil in the Lebanese Biq'ah, where one closed krater in Stratum 4, correctly attributed by Baramki to the Early Iron Age, bears a design that may possibly be identified as OMDS (Baramki 1961: fig. 5:3). Generally speaking, the painted decorations there are mainly evident on strainer jugs and kraters, as at Dor.

the amphoroid krater, and frequently in ceremonial contexts. The monochrome (usually red) design is prominent on the painted pottery of the Syro-Cilician sphere from the Middle Bronze Age (for example Garstang 1940: pls. LIX:1; LXVI:1, 4, 7; LXVIII; LXXI:1; Matthiae 1989: figs. 5–7; Nigro 2002: fig. 26). On some of these vessels, as at Dor, it is clear that the groups of strokes deliberately overlap each other and/or the horizontal bands enclosing the designs. Closed, necked kraters adorned with this pattern appear towards the end of the Middle Bronze Age (for example at Ebla, see the lower frieze in Nigro 2002: fig. 35; here Fig. 5:1).

In the Late Bronze Age, the OMDS design is known mainly from Ugarit, especially on goblets, jugs, amphoriskoi and zoomorphic vessels, and chiefly in one color (Schaeffer 1949: 205, fig. 84:7; Courtois and Courtois 1978: 229, figs. 9b:2, 4; 11:6, 10; 12:12; 14:2, 6–7, 10; 15:13; 16:3, 6; 17:2–3), on amphoroid kraters (Yon, Lombard and Renisio 1987: fig. 37: no. 79/979; Monchambert 2004: 219, esp. fig. 95:1281), and on other krater shapes (Yon, Lombard and Renisio 1987: fig. 84: no. 81/947). In some cases, the strokes overlap each other and the horizontal enclosing bands (in some cases the illustrations are not clear enough to determine). Occasionally, the spaces between the groups of strokes are filled with dots or very short strokes, similar to a jug from Dor (fig. 1:8). In addition to the decorated kraters, the Ugarit assemblage also includes an abundant collection of undecorated amphoroid kraters with ledge rims which, according to Monchambert, were modelled on Cypriot Plain White Wheel made [PWWM] amphoroid kraters (see 1983: 28, fig. 3:14; 2004: especially kraters of Classe 1, see the examples in fig. 51).

It thus seems that OMDS was significant in Ugarit, as were the amphoroid kraters, whether decorated or not. Ugarit has provided the most numerous examples, but the design was not confined to that site (cf. a krater from Tell Rif'aat, Seton Williams 1961: pl. XL:6, with overlapping groups of strokes).

4). Early Iron Age Syria. The two phenomena continue to be attested in Syria during the Early Iron Age, and appear to become even more common. Kraters that resemble Figure 1:1 in both shape and decoration are known from Tell Afis in level E/7, dated by the excavators to the second half of the 11th century BCE (Mazzoni 1998: fig. 16:8; here Fig. 5:4), and apparently also in level E/9a, attributed to the late 12th/first half of the 11th century BCE (Venturi 1998: fig. 4:2). At Afis, similarly to Dor, these kraters are among the few vessels that are decorated. Decorative motifs closely resembling the Dor OMDS are most prominent among the Early Iron Age red-painted designs (Venturi 2000: 513; dubbed by him "des linges en zigzag par groupes de trois").[14]

Likewise, in the territories of the former kingdom of Ugarit, there is evidence both for the continuous importance of the OMDS pattern, and of the association with amphoroid kraters. At Tell Tweini (ancient

[14] At Afis, this design (but in black) is also attested on an Iron II deep bowl (Degli Esposti 1998: fig. 7:4).

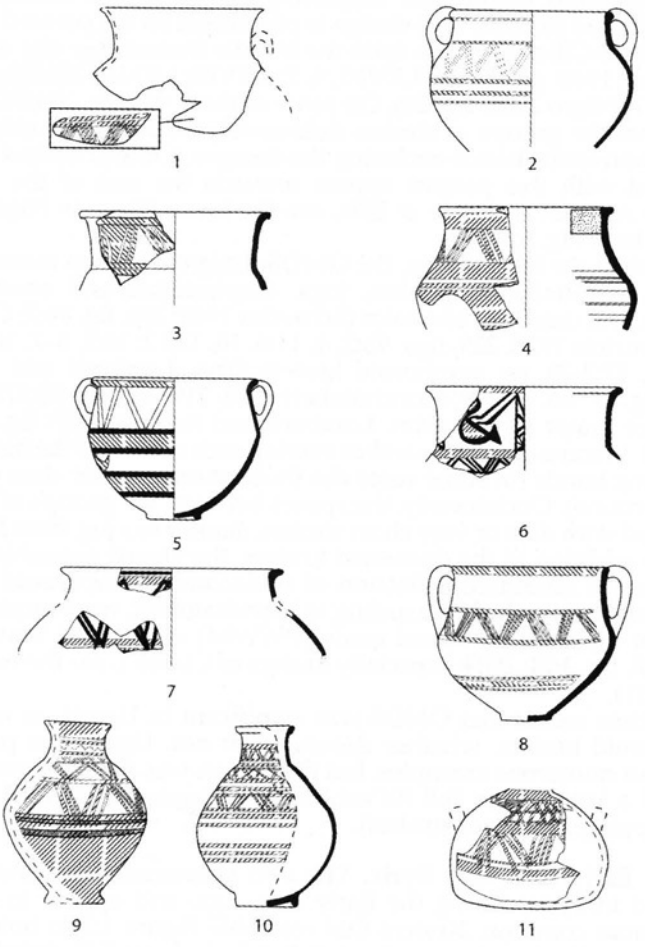

Fig. 5. Decorated vessels from Lebanon, Syria and Anatolia: MB II krater from Ebla (after Nigro 2002: fig. 35); (2) LB krater from Kamid el-Loz (after Metzger 1993: pl. 105:2); (3) LB krater from Ugarit (after Courtois and Courtois 1978: fig. 15:16); (4) Iron I krater from Tell Afis E/7(after Mazzoni 1998: fig. 16:8); (5) Iron I krater from the 'Amuq, Phase O (after Swift 1958: fig. 38); Iron I(?) krater from Tell Tweini (after Vansteenhuyse, Al-Maqdissi and Van Lerberghe 2002: fig. 6 and unpublished photograph); (7) LB/Iron I krater from Sarepta Y/G (after Anderson 1988: pl. 28:5, re-arranged); (8) Iron I krater from Tarsus (after Goldman 1956: 228, fig. 391, no. 1352); (9) Iron I urn from the Hama cemetery, Period I (after Riis 1948: fig. 123); (10) Iron I Urn from the Hama cemetery, Period II (after Riis 1948: fig. 29); (11) Iron I amphora from Troy VId (after Blegen, Caskey and Rawson 1953: Figs. 382, lower).

G'abla), south of Lataqiah, at least four such kraters were recovered from insecure stratigraphic contexts, dating somewhere between the end of the Late Bronze Age and Iron II (for example, see Vansteenhuyse, Al-Maqdissi and Van Lerberghe 2002: 41, fig. 6; here Fig. 5:6).[15]

In general, amphoroid kraters are among the most frequently decorated vessels at Twieni, a phenomenon also attested at the Ugaritic port site of Ras Ibn Hani. The excavators of this site explicitly mention the existence of kraters decorated with diagonal groups of strokes, which according to them were similar to configurations at Hama. However, there are no published illustrations of these vessels (see Lagarce 1983: 225, n. 8; for Hama see below). They also mention that these kraters were the only decorated vessels shared by Ras Ibn-Hani and Hama. Generally speaking, decorated amphoroid kraters are prominent among the painted assemblage of Ras Ibn-Hani, but the specific morphology and decoration of the published examples are different from those at Dor (e.g., Badre 1983: figs. 1:f; 2:c–d).

At Tell Kazel, south of Ras Ibn Hani, closed kraters, including amphoroid ones, where among the vessels where investment in decoration was most apparent, as noted by the excavators (Capet and Gubel 2000: 439, figs. 12–13).[16]

Other regions and sites in the Syro-Cilician sphere where the OMDS design is attested include the Amuq (Swift 1958: fig. 38; here Fig. 5:5), 'Ain Dara (probably a krater, Stone and Zimansky 1999: fig. 25:3), Tarsus (Goldman 1956: 228, fig. 391, no. 1352; here Fig. 5:8), but most clearly at Hama.

The evidence from Hama originates mainly from the Early Iron Age burial receptacles of Periods I and II, conventionally assigned to the 11th century BCE, and concurrent with Citadel F (Mazzoni 2000: 34). Generally, the majority of the decorative designs on the Hama urns are horizontal and continuous (division into metopes is rare), and clear OMDS like patterns were prominent (see Riis 1948: 98–99, motifs 10–12). In some cases, it is obvious that the groups of strokes were deliberately rendered so as to overlap each other and/or the horizontal bands flanking the design. Examples include a jug/jar from Grave GVIII of Period II (Riis 1948: fig. 26, pl. 10:A). At least one triangular space is filled with dots, like the Dor vessel in Figure 1:8, and the manner in which the decoration has been executed is very reminiscent of the Dor goblet in Figure 1:11. Another similar vessel was recoverd from the same context (Riis 1948: fig. 29; here Fig. 5:10), and a jug/amphora from Grave GXII of Period I, with two friezes with such patterns (Riis 1948: fig. 123; here Fig. 5:9).

Similar designs are also attested in Early Iron Age burials at Carchemish (Woolley 1939: pl. XII:b; 1952: pl. 68:c), and at Tille Höyük

[15] The line drawing produced here is based on the published illustration and on an unpublished photograph of the sherd that reveals more details of the decoration, for which I thank Klaas Vansteenhuyse.

[16] Also, there is an unadorned amphoroid krater in the Iron I 'temple'. Tell Kazel is the only site in Syria from which an amphoroid krater clearly decorated with a Myc IIIC-like design has been published (Badre and Gubel 1999–2000: fig. 44:b).

on the Euphrates, about 130 km from Carchemish (Blaylock 1999: fig. 1:2, 3; Blaylock highlights the similarity of these designs to those at Hama and Afis).

5). Cyprus. Can the decorated amphoroid kraters phenomenon and the OMDS be traced to Cyprus, which, as I have noted (see Gilboa 2005; Sharon and Gilboa in press), had a close association with Dor throughout the Early Iron Age?

In the Late Cypriot period, amphoroid kraters are very common. In addition to those imported from the Aegean, such shapes were produced locally, especially in the Plain Wheel made Wares I and II, but their morphology is quite different from the Dor (and the Syrian) examples. With very few exceptions, they are taller and more elegant (not squat) and are provided with a high foot. Nearly all are equipped with oblong ledge rims, similar to those of the KR 1 category at Dor.[17] Other than the vessels adorned in Mycenaean style (e.g., Karageorghis and Demas 1984: pl. XIX:105), these kraters are rarely decorated, but designs reminiscent of the OMDS do occur. The best examples are zigzags (not OMDS patterns), that cross the horizontal bands flanking them (Karageorghis 1976: pl. LXIX: 87, 2; Courtois 1981: figs. 122–124; Schuster-Keswani 1991: 112, fig. 11.1:U).

During LC IIIB (the period that is chronologically equivalent to Phases G/10 –G/9, which produced most of the vessels discussed here), large amphoroid kraters and smaller krateriskoi occur, especially in Proto-White Painted (PWP) and PWWM wares (Iacovou 1991: 202), but they are uncommon. As in earlier periods, most are taller and more elegantly shaped than the Dor specimens.[18] Kraters in this period are rarely adorned with paint (on these issues see also Iacovou 1988: 34). When they are decorated, the designs are very simple, usually comprising only horizontal bands or wavy lines. Not only do these vessels fail to exemplify some special attention regarding input in decoration, but at Alaas, for example, they are among the least decorated vessels (Karageorghis 1975: pls. XX: no. 7; XL: nos. A9–A10; LXVIII: no. 11).

Still, two kraters from this period are very similar, both in shape and decoration, to the vessel in Figure 1:1, an unprovenanced PWP krateriskos (Karageorghis 1985: 826, fig. 5, here Fig. 6:1), and a krater from an Early CG I context in Tomb MA 1723 at Larnaka (Georgiou 2003: pl. II: 14). However, these vessels have a high foot, and on the Larnaka krater the groups of strokes do not overlap. Also, though both could parallel Dor Phases G/10–G/9, the context at Larnaka is certainly later than G/10 (and possibly also later than G/9, which apparently equals the LC IIIB/CG I transition).

On Cyprus, amphoroid kraters become prominent again only in Cypro-Geometric IB (i.e., later than most of the Dor examples), and

[17] Occasionally there are also some squat examples, but unadorned (for instance, Åström 1972b: figs. LXII:8, 10; LXIII:3).

[18] Occasionally, as at Alaas, there are some depressed globular shapes, but they are still not as squat as the Dor kraters, and they are equipped with ring or torus bases.

thus this phenomenon cannot be associated with the origin of these vessels at Dor (see Iacovou 1991: 202 and notes regarding Hermary and Iacovou 1999: no. 5).[19]

The OMDS design occurs in Cyprus as it does in Syria, quite frequently on ceramic vessels throughout the second millennium BCE (for some examples antedating LC II, see Åström 1972a: figs. V:8, 11; VIII:4; XV:12; Vermeule and Wolsky 1990: 196, nos. T.I.404, T.I.401, T.I.1633; 208, T.I.415; 301, T.V.108). In the Toumba Tou Skourou tombs, for example, this is one of the most popular motifs on bowls, jugs and tankards (but not on kraters). In most cases the strokes do not overlap each other (but see Nicolaou 1989: figs. 4:323, 329, 378). After the onset of LC II, the OMDS design still appears frequently on Bichrome vessels (Epstein 1966: pls. II:6, VI:6; VII:9; Åström 1972b: fig. XLIV:1–2; with or without overlaps); on White Painted Wheelmade wares (Webb 2001: nos. 119–120; Åström 1972b: fig. LXXIII:2, 4; with no overlaps), and occasionally also on Base Ring Ware (for instance on the strainer jug in Karageorghis 2002: 41, no. 45). Nevertheless, during the course of LC II–LC IIIA the popularity of this design diminishes.[20]

A revival in the use of OMDS-like designs can be traced during LC IIIB and the transition to CG I, in other words during the periods paralleling Phases 10–9 in Area G. They are still not particularly common even then, but considering the relative paucity of known LC IIIB ceramics on the island, they appear to assume more importance then attested in other periods. In addition to amphoroid kraters, they adorn mainly PWP 'special' vessels, such as the cylindrical bottle and other shapes at Alaas (Karageorghis 1975: pls. X: no. 9; XXVIII: no. E2), bottles in Tomb 74 at Lapithos (Pieridou 1965: pl. X:3, no. 59; T. Dothan 1982: chp. 3, pl. 78), an askos, probably from the vicinity of Lapithos (Karageorghis 1963: pl. 35:3, here Fig. 6:2; part of the groups of strokes there overlap), a PWP or WP I amphora from Tomb 6 at Kouklia (Myres and Ohnefalsch-Richter 1899: pl. III:439), an unprovenanced stirrup jar (Karageorghis 1965: pl. 24:1), and PWP and WP I bowls from Tomb 132 at Kouklia-Xylino (Flourentzos 1997: pls. XXIX:12, XXX:20).[21]

6). The Aegean. Amphoroid kraters are, of course, common in the Aegean, but there are no squat-shaped examples such as the ones discussed here. Likewise, OMDS designs (termed by Mountjoy

[19] In CG I, in contrast to LC III, there are some hints that amphoroid kraters with OMDS-like designs may have had some significance. This is indicated, for example, by miniature vessels attached to kernoi (e.g., Gjerstad 1948: fig. VII:1). Tomb 521 at Amathus (CG Ib) produced a vessel in the shape of a woman, holding on her head a krater identical to the Dor one in Figure 1:1, adorned by a continuous zigzag (Karageorghis and Iacovou 1990: pl. VII:83). This similarity does not seem to be accidental.

[20] A LC IIIA vessel (of unclear stratigraphic association), which possibly bears an OMDS design, was uncovered in Maa-Palaeokastro (Karageorghis and Demas 1988: pl. CCIV). Incidentally, it has a conical neck.

[21] Such designs continue to feature on later pottery, especially in CG IA-B (e.g., Flourentzos 1997: pl. XXX:20), but the geometric configurations are much more meticulously rendered.

"stacked zigzags") are extremely rare, even during LH IIIC and the Sub-Mycenaean period, when they are somewhat better attested (for some examples, see Mountjoy 1999 I: figs. 60:461, 61:472; 98:221; II: fig. 421:129). There is no association between the OMDS design and amphoroid kraters, other than a few instances (e.g., on a Sub-Mycenaean krater from Phocis, Mountjoy 1999 II: fig. 309:259; but the strokes there do not overlap). In general, the decorative patterns on the Aegean vessels are much more 'orderly', and rendered with precision and the diagonal strokes hardly ever overlap each other.

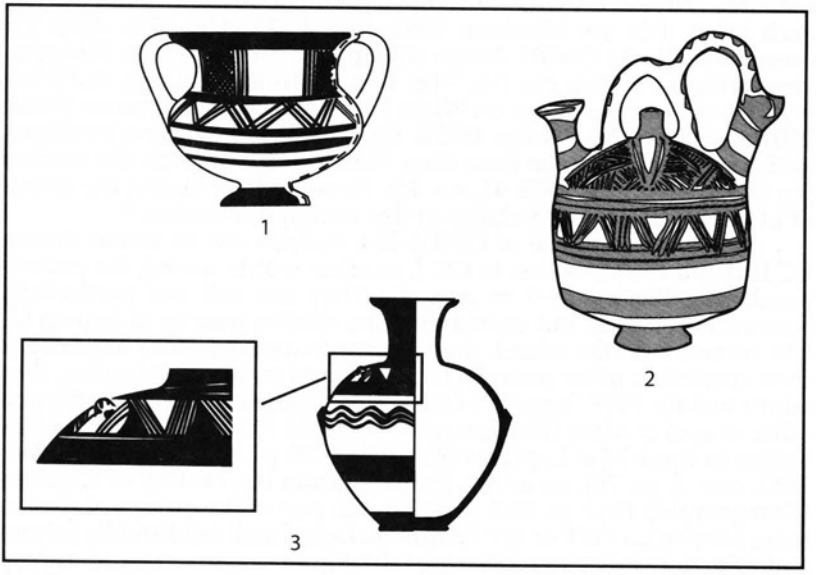

Fig. 6. Decorated LC IIIB vessels from Cyprus. (1) Unprovenanced PWP krateriskos (after Karageorghis 1985: 826, fig. 5); (2) PWP askos from the Lapithos region (after Karageorghis 1963: pl. 35:3); (3) PWP amphora from Floor II of the Ingot God Sanctuary at Enkomi (after Courtois 1971: fig. 140, no. 122).

Strainer Jugs, other Containers, and their Decorations

In addition to kraters, Phases G/10–9 also attest to special and systematic decorative input in strainer jugs (Fig. 1:7 and Figs. 1:3–5 that belong to carinated vessels). The fragment in Figure 1:6 may belong to a rounded strainer vessel like those in Figures 1:7–8 (but larger) or possibly to a jar. The amphoriskos in Figure 1:9 had a (now missing) tubular spout, and the shape of Figure 1:10 is unclear. It seems reasonable to assume that the spouted vessels were used for drinking and/or pouring at exclusive occasions.

Meaningful parallels can be traced only for the carinated strainer jugs, the morphologies of which are rooted in the Canaanite potting

tradition.[22] Identical jugs, with the same decoration, are the "Megiddo style" vessels from Yoqne'am and Megiddo mentioned earlier (Figs. 4: 7–8).

The origin of the rounded strainer jug has been the subject of some debate, but as suggested by T. Dothan (1982: 154–155), it can be traced to Cyprus. The amphoriskos in Figure 1:9 is definitely a Canaanite shape. Similar vessels are known elsewhere in Iron I, including some that bear Philistine Bichrome decoration, and they continue in Iron II (see Mazar 1985b: 59). However, no known amphoriskoi carry a decoration similar to the Dor example.

On all the vessels at Dor, the prevailing decorative configuration, with some variation, is the horizontal frieze with (red) continuous OMDS design, as seen on the kraters. The Dor vessels portray well the distinctive characteristics of this design, especially the overlapping strokes, which occurs with few exceptions, implying that it was done deliberately. Another trait is evident on two of the examples (Figs. 1:6–7): the red painted triangles formed between the groups of strokes, although this was only partially carried through on the complete strainer in Figure 1:7.

The OMDS design also adorns the neck of the jug in Figure 1:8 (note that the triangular spaces are dotted with very short strokes, as seen on the Hama vessels mentioned above), and apparently also on the rim of the vessel in Figure 1:10.

Other than the OMDS design (and the simple horizontal bands), the only patterns attested on these vessels are horizontal friezes of irregular net patterns (Figs. 1:6, 8) and the single conspicuous example of the concentric semi-circles pattern in Figure 1:7.

The OMDS design has already been discussed above. Here I wish only to highlight those vessels in which solid red triangles are incorporated into the pattern, as in Figures 1:6–7.

In Syria, this combined pattern is first attested in the Late Bronze Age on a variety of vessels at Ugarit, including kraters (Courtois and Courtois 1978: figs. 11:2; 14:1, 3, 17; 15:16; 16: 2, 10; Yon, Lombard and Renisio 1987: fig. 84, nos. 81/687, 81/946). Only one of the kraters is clearly amphoroid (Fig. 5:3), and at least in one case the design clearly adorns a strainer jug (Courtois and Courtois 1978: fig. 6:22; see also Buchholz 2001: fig. 1j and accompanying discussion). On another amphoroid krater (Yon and Arnaud 2001: fig. 20:90.5312; rendered more clearly in fig. 19) this composition is combined with a net pattern (on the neck) – a combination which also typifies some of the vessels from Dor and Megiddo discussed here.

Parallels on Cyprus, as expected, date nearly exclusively to LC IIIB, and frequently occur on 'special' vessels of PWP ware, such as on an amphora and kalathos from Enkomi (Courtois 1971: fig. 107, no. 826; 140: no. 122; here Fig. 6:3; it is unclear whether the strokes overlap) on a pyxis in the Cyprus museum (Iacovou 1988: fig. 34, Cat. no. 15); on the "Boston kernos" (T. Dothan 1982: chp. 4, pl. 7); and

[22] In Iron I, this shape is also attested in the Philistine assemblages, but decorated differently than at Dor, frequently in the Philistine Bichrome style (see discussion in Mazar 1985b: 64–65).

on a cylindrical vessel, possibly an askos, of unknown provenance (Karageorghis 1965: pl. 40:5).

A Painted Goblet

The goblet in Figure 1:11 is later than the vessels discussed above (Phase 8 in Area G, the Ir1|b transitional horizon at Dor). It belongs to the occupation immediately following the Ir1a destruction at Dor, and is the only decorated vessel to have been found in an assemblage of clear ritual nature (see Stern 2000a: fig. 47;[23] Sharon and Gilboa in press).

The shape is of Canaanite derivation. Similar goblets are widespread in the Late Bronze and Early Iron Age southern Levant (including the painted Philistine repertoire), especially in cultic contexts (see Mazar 1985b: 49–51).[24]

The decoration on this goblet is different from those on the Dor vessels discussed above, as it lacks the OMDS pattern. Again, however, both the decorative syntax and the design may be related. The decoration is in red, featuring a continuous geometric design, but without a division into metopes. Likewise, the design is not a continuous zigzag. Rather, the basic components comprise diagonal strokes that, in places, deliberately overlap each other and the horizontal bands enclosing them. No other goblets with such designs are known.[25]

Summary of the Ceramic Evidence

The Dor vessels presented here comprise most of the non-commercial pottery vessels that were adorned with anything more than a stroke of paint. Since the vessels consist almost exclusively of kraters and spouted vessels, they were probably used in ceremonies involving drinking. As such, they are the foremost pottery vessels in the earliest Iron Age horizons at Dor that preserve stylistic traditions that may carry symbolic meaning. Chronologically, they mainly belong to the Ir1a (early and late) horizons at the site, and parallel

[23] There it was attributed to a pre-destruction context, Phase G/9.

[24] Late Bronze Age examples occur at Tell Kazel, Area IV, Level 5, unadorned (Badre and Gubel 1999–2000: fig. 36:f); Deir 'Alla (Franken 1992: fig. 4-24:7), and Beth She'an VIII (James and McGovern 1993: fig. 18:1). In the Iron I, they occur at Ta'anach IA (Rast 1978: fig. 8:14) and Yoqne'am XVIIIA (Ben-Tor, Zarzecki-Peleg and Cohen-Anidjar 2005: Photo I.31 on right; this goblet is roughly contemporary with the Dor one). It May be of some significance that at Tell Qasile, where such goblets are numerous, only one, perhaps two, where embellished with Philistine Bichrome decoration.

[25] Some of the Hama urns may bear similar designs (e.g., Riis 1948: fig. 26). The decoration on the Dor goblet is also reminiscent of a miniature red-painted goblet from Megiddo, probably part of a kernos. Though the latter does not bear a zigzag, its overall decorative scheme resembles that of Dor vessels. It is painted with a sloppy net design (one of the designs typifying the Iron I "Megiddo Style" and some of the Dor vessels), and with at least one design of concentric semi-circles (see T. Dothan 1982: chp. 4, pl. 5).

the Bichrome-bearing strata in Philistia, with the exception of the goblet, which is slightly later. The foregoing discussion allows some conclusions, but many questions remain.

(1) Though few, these vessels definitely constitute a stylistic group. The characteristics of the Dor drinking vessels are red/orange painted designs comprising undivided horizontal friezes with continuous geometric decorations. The repeated design on most of them is the OMDS design, as defined above. This hardly seems accidental. Occasionally, part of the triangles are painted solid red or filled with dots/short strokes. Other attested designs include sloppy net patterns, and in one case concentric semi-circles. The metope design, a hallmark of the Canaanite Late Bronze Age syntax, is not attested. Another important characteristic is the frequency of the amphoroid kraters among the painted repertoire (at least two of which bore OMDS designs).

(2) The restricted distribution, and the generally low quality of the decoration on most of the vessels, may hint at the context of their production. They do not appear to have been the product of a specialized production of painted vessels like that attested, for example, in Philistia in this period. The organization of production seems to have been of a lower order, possibly domestic (cf. Costin 1991), and definitely different from that of the much more abundant painted commercial containers.[26]

(3) To date, no other Levantine site has produced vessels that are identical to the Dor vessels. Thus, when trying to define the spatial and temporal associations of this group, the entire phenomenon should be considered, specifically the dearth of painted vessels, the shapes elected for decoration, and the overall syntax, design and color.

(4) Most conspicuous and significant are the differences with Philistia, particularly the vessels chosen for decoration, the colors used, the decorative syntax and the prominence of the amphoroid kraters.

(5) Most of the vessel forms (the carinated strainer jugs, the amphoriskos, the goblet) are rooted in the southern Levantine tradition. The rounded strainer jug may have been borrowed from the Cypriot repertoire, but it is also possible that such rounded vessels developed from the carinated strainer jugs of the Late Bronze Age. The only shape for which a Canaanite origin cannot be evoked is the squat/depressed amphoroid krater. This, ultimately, is an Aegean shape, but one was adopted and adapted in the Levant as early as the Middle Bronze Age, becoming more common in the Late Bronze Age.

(6) However, despite the Canaanite roots of most of the vessel shapes, the phenomenon as a whole cannot be interpreted as (only) of Canaanite derivation, since the OMDS design was rare in Canaan, as was the amphoroid krater.

(7) Syria is the only region where significant similarities to the Dor phenomena occur. The OMDS design seems to have carried special

[26] It should be borne in mind that the main area at Dor where the earliest levels of the Iron Age have been excavated (Ir1a, early and late) is Area G, which was a domestic area, featuring other cottage industries, and perhaps this is the reason that the decorated vessels are so few.

significance as early as the Middle Bronze Age, and certainly by the Late Bronze Age (though the symbolism eludes us). During the Late Bronze and Early Iron Ages, a similar decorative syntax is evident: red-painted horizontal friezes with continuous geometric designs. Syria is also the only region where, starting in the Late Bronze Age, but possibly already by the late Middle Bronze Age, kraters and in particular amphoroid kraters with red-painted decorations become important in assemblages that are otherwise very minimally adorned.

(8) In addition to this Syrian connection, there is also an association with Cyprus, including both the OMDS design and the presence of amphoroid kraters. Although the Cypriot parallels are not many, they seem to be of significance and the resemblance is hardly accidental. Squat amphoroid kraters are not numerous on Cyprus, and are especially scarce in LC IIIB, the period that parallels most of the Dor vessels discussed here, and they are never singled out for special decoration. However, designs reminiscent of the Dor OMDS are well attested from the Middle Cypriot period onward. During LC IIC and LC IIIA they become more scarce, but significantly, a revival in the use of this motif is attested In LC IIIB, including on some 'special' vessels.

(9) In the southern Levant, Megiddo is the only Early Iron Age site that produced several vessels with designs similar to the Dor assemblage. The Megiddo examples occur in Stratum VIB, which is *grosso modo* contemporary with Phases 10 and 9 in Area G (Ir1a), and in Stratum VIA, which is slightly later (Ir1b, parallel to Phase G/7). A significant portion of the so called 'degenerated Philistine' ceramics of Stratum VI are not related to Philistia at all, but constitute a distinctive local stylistic tradition, similar, but not identical to that of Dor. A few similar designs at Yoqne'am may further hint that this "Megiddo Style" had a wider spatial distribution.

Dor, Megiddo, Syria and Cyprus

The Syrian, and especially Ugaritic, associations of the Dor vessels presented here are, of course, not a robust enough platform to suggest that our expectations to trace some influx from this region to the southern Levant have been fulfilled. However, they do suggest that at least at Dor, and possibly at Megiddo, the foreign associations of the material culture extended not only to Cyprus. A major drawback in assessing the significance of this phenomenon is the fact that we cannot pinpoint its beginning. On present evidence, the association is evident only in the Ir1a horizon at Dor, equaling Stratum VIB at Megiddo and the Philistine Bichrome phase in Philistia. Whether at Dor it actually started earlier, in the LB/Iron Age transitional horizon, is a moot question at the moment, as such a horizon has not yet been encountered. At Megiddo, on present evidence, it is not attested earlier than Stratum VI.

In this context, it should be noted that this is not the first time that a Syrian connection has been suggested for the material-cultural

components of the Sea Peoples in the southern Levant. In 1987, Uza Zevulun demonstrated that the famed lion/lioness-shaped cups, prominent in 'Philistine' contexts, are a Syrian (and not an Aegean) phenomenon, a suggestion convincingly demonstrated more recently by Linda Meiberg (2005).

Consequently, perhaps we should also return to some other long-neglected issues. On one of Thutmose III's lists at Karnak, a place named TKR is mentioned in a north Syrian context (cf., Sethe 1961: IV/788, no. 136). Gardiner, in his commentary on the Onomasticon of Amenope (followed by others), dismissed the similarity between this toponym and the name of the inhabitants at Dor as coincidental, a mere homonym (Gardiner 1947: 200*). He denied the Syrian-Šikilian connection, mainly because he deemed it impossible that a toponym that preceded Ramesses III might be connected in any way to the Šikila , and could not envisage any connection between Syria and Dor. But others, such as Anton Jirku (1937: 19, no. 47, n. 19), left the issue unresolved, while still others, like Claude Vandersleyen (1985: 52–53), suggested that the origin of the Šikila and other Sea Peoples should be sought in Syria. This also raises yet another unresolved dilemma, the possible connection between the Šikila and the Šikilayu (who lived on boats) mentioned in Ugarit in RS.34.129 (cf., Lehmann 1979; Rainey 1982; Hoftijzer and Van Soldt 1998).

The association of Dor with Syria admittedly remains vague, but it cannot be ignored anymore. Can we consider the Dor group a first hint that indeed some population of Syrian origin (or at least one family or workshop producing pottery in accordance with Syrian concepts) is attested here? Or should we consider another type of association between Syria and the term Šikila, which to my mind (as noted earlier; cf. Gilboa 2005) is co-terminus with our concept of "Phoenician". As demonstrated above, there are also clear connections between the Dor (and Megiddo) style and some Cypriot pottery, and in the Dor context, with its multiple links to the island, this, *a priori*, may seem more plausible. A connection with Cyprus is further suggested by the association of OMDS designs with shapes of clear Cypriot origin, such as cylindrical and horn-shaped bottles, a phenomenon also attested in LC IIIB Cyprus.

The main obstacle in untangling these links, is that the contexts in which this style develops in Syria remains unclear. Based on the evidence surveyed in this paper, it would appear to be a local development, but scholars working in Syria usually attribute it to a western stimulus (i.e. the "Sea Peoples") (for example Venturi 2000: 513, 532, 534; Blaylock 1999: 266 and more vaguely Lagarce 1983: 225). At Tell Afis, the excavators have debated whether the OMDS design is in fact of Cypriot origin and, if so, whether it 'arrived' in Syria in the Bronze or Iron Age (Venturi 1998: 129, 130 and references; Mazzoni 1998: 166; Degli Esposti 1998).[27] It must be pointed out, however, that

[27] In Syria, another Cypriot association is exemplified by the tall amphoroid kraters with wavy lines on their necks, like those at Ras Ibn Hani and Tell Tweini (e.g., Badre 1983: fig. 1:f; Vansteenhuysen et al. 2005). They are not known in the southern Levant.

other than the OMDS design the Syrian examples differ substantially from their alleged Cypriot models.

The situation is further complicated by the fact that at least one site in western Anatolia (Troy), has produced painted vessels with a resemblance to the group discussed here that does not seem accidental. In Stratum VId a few vessels and potsherds were adorned with clear OMDS designs painted in red, and occasionally combined with net patterns. Blegen dubbed these Trojan Matt-Painted Ware, and he considered them imitations of Mycenaean vessels (e.g., Blegen, Caskey and Rawson 1953: figs. 382, lower; 405 upper middle; here Fig. 5: 11), which is totally unwarranted.

For the time being, I must leave the question unresolved. Future finds, and a better chronological correlation between Syria, Cyprus and the southern Levant, may in time provide some answers. In the meantime, however, it can be demonstrated that LC IIIB Cyprus, Early Iron Age Syria, and at least Dor and Megiddo (but not Philistia), experienced some stylistic interaction, though its specific trajectories cannot be defined at the moment. Regarding Dor, the association with the "Megiddo style" indicates a phenomenon of some significance, beyond one or two potters.

Future Prospects: Fragmenting the "Sea Peoples"

It thus seems that there are some new research avenues to be explored. Above all, the "Sea Peoples" phenomenon must be fragmented into its local components, perhaps even investigated on a site-by-site basis and not only along Amenope's coast. Rather than employing a trait list approach to identify the material correlates of different ethnic "Sea Peoples", social negotiations as reflected in material culture should be defined in each locale.[28] It is quite possible that eventually the Sea Peoples 'settlement' will be demonstrated to encompass such divergent processes as to render the term essentially meaningless. There is, of course, a limit to the resolution possible, but the present paradigm, based on the Philistine model and on Amenope, of three descrete ethnic groups invading and settling in three discrete territories leads us down a blind alley.

In *Foucault's Pendulum*, Casaubon proclaims: "you cannot escape the revelation of the identical by taking refuge in the illusion of the multiple" (Eco 1989: 6). Regarding the Sea Peoples, at this point in time, I would argue for the opposite: it is high time that we address the multiplicity, the differences and the nuances. Only after archaeologically defining (and hopefully understanding) the social and demographic *realia*, will we be able to try to decipher the relevant Egyptian records, and not vice versa, and perhaps eventually, as Von Ranke aspired, to understand better how it really was.

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[28] And as there is no *a priori* reason to assume that these processes were always exemplified by ceramic changes, this should also be carried out free of the tyranny of pottery.

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THE PHILISTINES IN CONTEXT: THE TRANSMISSION AND APPROPRIATION OF MYCENAEAN-STYLE CULTURE IN THE EAST AEGEAN, SOUTHEASTERN COASTAL ANATOLIA, AND THE LEVANT

The complexity and extent of regional interconnections between the Aegean and the Levant during the final centuries of the Bronze Age are well documented in both the textual and archaeological record (e.g., Cline 1994; Cline and Harris-Cline 1998; Gitin, Mazar and Stern 1998; Karageorghis and Stamopolidis 1998; Stampolidis and Karageorghis 2003; Laffineur and Greco 2005). The appearance of Mycenaean-inspired material culture in the east reaches its peak during the late 13th and 12th centuries BCE, coinciding with the crisis and eventual demise of this Age of Internationalism at the end of the Late Bronze Age. Associated with the widespread Aegeanization of Cyprus and the Levant during this period are several peoples mentioned in New Kingdom Egyptian texts whom modern scholars collectively refer to as the "Sea Peoples." The most notorious of these peoples are the biblical Philistines long associated with the appearance of Aegean-inspired material culture at several 12th century urban centers located in the southern coastal plain of Canaan.

At the heart of the ensuing scholarly debate is the identity, origin and wider historical implications of the transmission and diffusion of 14th–12th century BCE Mycenaean-style material culture from its mainland Greek production centers eastward. A majority of scholars continue to endorse the view that the appearance of Mycenaean-style artifacts in the eastern Aegean, Cyprus, and the Levant commenced with trade relations with mainland Greece in the 14th–mid-13th centuries, eventually leading to Mycenaean colonization and migration at numerous sites in the eastern Mediterranean. The sudden appearance of Mycenaean-inspired material culture in significant quantities at key sites corresponding to the Philistine Pentapolis cities (cf. Joshua 13:2–3) is seen as the culmination of this process of transmission and appropriation of Aegean culture in the east, founded literally upon the ruins of the preceding Late Bronze Age. However, does the spread of locally produced Mycenaean-style material culture, especially pottery, actually reflect the movement of peoples from the west Aegean to the east? Or, does it attest to a more complex process of east-west interaction that resulted in the transmission of Mycenaean-inspired practices and ideologies and in the creation of regionally defined "Aegeanized" cultures?

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Following classical and biblical traditions, many scholars postulate that the Philistines are to be identified as a migrating people from the west Aegean (e.g., Dothan 1995; 1998; 2000; 2003; Stager 1991: 36–37; 1995: 337; Mazar 1988; Betancourt 2000; Yasur-Landau 2003a and 2003b).[1] This population movement gained intensity toward the end of the Late Bronze Age, coinciding with the crisis and ultimate demise of the Mycenaean palace system that struck the region during the final decades of the 13th and early 12th centuries BCE. I contend that this "Mycenaeanization" of the east Aegean and select regions of the Levant, including sites along the southern coastal plain of Canaan, was the consequence of a complex and nuanced process of long-term cultural interaction between lands surrounding the east Aegean and the Levant. Over the course of the 14th and 13th centuries BCE, continuous contact between the Mycenaean world and the east Aegean and Cyprus produced a fusion of west Aegean elements and indigenous customs. The result was the formation of regionally defined "Aegean-style" cultures that selectively adopted and incorporated Mycenaean-inspired traditions to suit local tastes and indigenous traditions.

In the case of the Philistines, therefore, the appearance of a locally produced Aegean-style material culture was not the result of large scale emigration from mainland Greece or western Aegean islands triggered by disaster. Rather, in my view, the Philistine presence along the southern coastal plain of Israel was the culmination of an intentional colonization by prosperous and enterprising migrating groups from the east who had appropriated Mycenaean-inspired cultural styles to varying degrees over the course of the 13th and early 12th centuries. These newcomers to Canaan's southern coastal plain were closely connected to an "Aegeanized" and prosperous 12th century east, most likely Cyprus and/or Cilicia and parts of the eastern Aegean.

'Mycenaeanization' of the East during 14th–12th Centuries BCE: An Overview

To place the Philistine phenomenon in its larger regional context, in this section I will briefly discuss key sites and regions in the eastern periphery of the Mycenaean world and neighboring regions where noteworthy quantities of Mycenaean-style material culture have been discovered. The focus of this discussion will be the appearance of Mycenaean-style pottery, both imported and locally produced. These regions include the eastern Aegean islands bordering the western coast of Anatolia, coastal Anatolia, Cyprus, and the Levant. In my discussion, I will use the term Aegean-style or Aegeanizing when referring to those Mycenaean-style vessels which were produced in the East Aegean, Cyprus or Levant.

[1] For a "seaborne" migration, see Barako (2003), contra Yasur-Landau (2003a and 2003b), who supports a land-based migration. Mendenhall (1986: 541–42) proposes both a sea and land migration.

The East Aegean Islands

This region, defined by Mountjoy (1998) as a component of her "East Aegean–West Anatolian Interface,"[2] is key to our understanding of the transmission and diffusion of Mycenaean material culture. The most extensively investigated islands include Lemnos, Lesbos, Psara, and Chios in the northeast, and Rhodes and Kos in the southeast or Dodecanese. Based on the fragmentary archaeological evidence and the appearance of Mycenaean IIIA:2–IIIB pottery, some of which was apparently of local production, Privitera (2005: 234) has suggested that these islands served as "intermediary stations along the trade routes that linked the Greek mainland to Anatolia, Propontis and Thrace" (see also Cultraro 2005: 244, who notes that trade relations with mainland Greece were established as early as the Middle Bronze Age). Thus far, only small amounts of 12th century Mycenaean IIIC (hereafter Myc IIIC) pottery have been recovered (see Privitera 2005, for a recent summary).

The southeastern Aegean Dodecanese islands represent a case study of significant Mycenaean influence that appears together with Minoan, Cypriot, Anatolian and indigenous elements. Several sites on Rhodes and Kos were important centers during the Late Helladic period. Of special interest are the Late Helladic (hereafter LH) cemeteries in the region of Ialysos, on Rhodes (see summaries by Girella 2005 and Karantzali 2005 for relevant bibliography). Based on the burial customs in these cemeteries and their associated finds, Girella (2005) has identified three main cultural phases: LH I–II represents a period of Minoan settlement; LH IIB/IIIA: 1–IIIB is a period marked by Mycenaean presence with pronounced Cypriot and Anatolian influences; and the LH IIIC is characterized by the development of a new ideology and increased Levantine and Anatolian contacts.[3] In addition to the evidence from Ialysos, a more recently excavated 14th–12th century cemetery at Pylona, near Lindos on Rhodes, follows a similar pattern of "Mycenaeanization": imported Myc IIIA, followed by locally produced and imported Myc IIIB pottery and local Myc IIIC ceramic assemblages (Karantzali 2001). Based on the evidence excavated thus far on both the islands of Rhodes and Kos, there are no clear-cut signs of destruction or devastation during the course of the thirteenth century BCE (LH IIIB), such as occurred in the Argolid

[2] Mountjoy (1998: 33) defines the East Aegean–West Anatolian interface as "an area which forms an entity between the Mycenaean islands of the central Aegean and the Anatolian hinterland with Troy at its northern extremity and Rhodes at its southern end." According to her, the "Mycenaeanization" of this interface region is not due to colonists from the Greek mainland, but to an increased acculturation process during which "the local inhabitants of the east Aegean became absorbed into the Mycenaean culture adopting Mycenaean burial customs and pottery to produce a hybrid culture of their own" (Mountjoy 1998: 37).

[3] See also Karantzali (2005), who notes that the LH III material culture was not totally "Mycenaeanized", but rather reflects a combination of Minoan, Anatolian, Mycenaean and local traditions, and concludes that Ialysos served as a major trading center rather than a Mycenaean colony.

and elsewhere on the Greek mainland. The rich finds in the twelfth century LH IIIC cemeteries indicate that Dodecanese sites were continuously occupied throughout the LH IIIC period and witnessed a time of prosperity (e.g., Desborough 1964: 154–56; Benzi 1988: 262; Macdonald 1986; however, see also Mee 1982: 89–90, who claims that Ialysos was destroyed at the end of the LH IIIB).

Western Coastal Anatolia

Beginning in the north, the key site for our discussion is the extensively excavated site of Hisarlik, identified with the legendary city of Troy. During the most recent series of excavations at the site, Korfmann discovered a lower city that extended beyond the extensively excavated citadel, confirming Troy's position as a major regional capital that held a significant position in the trade networks of the Late Bronze Age.[4] Provenience studies of Myc IIIA and IIIB pottery from Troy have also revealed that already in the fourteenth century BCE Mycenaean-style pottery was being locally produced at Troy, strongly suggesting a gradual "Mycenaeanization" of aspects of the Late Bronze Age material culture of the northeastern Aegean (Mountjoy 1997; 1999; Mommsen, Hertel, and Mountjoy 2001; Pavúk 2005; see Becks 2003 for a recent summary of 13th and 12th century Troy). These results parallel those from provenience studies of Mycenaean-style pottery recovered from other sites in the eastern Aegean region (see below). Following the breakdown of the Mycenaean palace system, and the reduction in direct trade contacts with mainland Greece during the 13th – 12th centuries BCE, connections between the eastern Aegean as far north as Troy and the Levant, as evidenced by the appearance of imported grey Trojan ware, continued on Cyprus and at several sites in Canaan (Allen 1991; 1994; Killebrew 1996: pl. 8:1).

Continuing southward, important assemblages of Mycenaean-style material culture are well documented at numerous Late Bronze Age sites along the western Anatolian coast. Particularly noteworthy are the sites of Iasos, Miletus and Musgebi. For a majority of scholars, the appearance of noteworthy quantities of Mycenaean-style material culture was the result of mainland Greek settlers arriving in the region (e.g., Furumark 1950; Desborough 1964: 152–58; 161–63; Mee 1982; 1988; and most recently Niemeier 1998; 2005). Niemeier has gone so far as to propose "a zone of Mycenaean settlement to the south of the west coast of Asia Minor between the Halikarnassos/Bodrum peninsula to the south and Miletus to the north and on the offshore islands between Rhodes to the south and Kos, possibly also Samos to the north. At the different sites the portion of the natives living together with the Mycenaean overlords may have differed" (2005: 203). However, Mountjoy (1998: 37) has argued vigorously for a gradual process of acculturation by east Aegean populations, rather

[4] See the monograph series, *Studia Troica*, for annual reports of recent excavations. For a recent discussion of Late Bronze Age Troy, see Latacz (2004). For a critique and recent analysis of Korfmann's excavations at Troy and recent bibliography, see Easton et al. (2002).

than Greek colonization, resulting in a hybrid east Aegean Mycenaean culture (see also Benzi 2005: 206, regarding the process of Mycenaean acculturation at Iasos).

Cyprus

Strategically located, Late Bronze Age Cyprus served as a regional "middleman" connecting the eastern Mediterranean coastline and the Aegean. It was an increasingly influential player in the international relations of the eastern Mediterranean, especially during the 13th and 12th centuries BCE. The combination of rich copper resources and its ideal geographic position enabled the island to play a leading economic role during the Late Cypriot (hereafter LC) IIC and IIIA throughout the eastern Mediterranean.[5]

The presence of significant quantities of Mycenaean-style material culture on Cyprus during the LC IIC provides indisputable evidence that close relations existed between Mycenaean Greece and Cyprus during this period. This has led to the suggestion that small numbers of Mycenaean Greeks already inhabited Cyprus in the 14th and 13th centuries, perhaps at emporia in the harbor towns of eastern and southern Cyprus (e.g., Karageorghis 1982: 78; 1992: 137; for a comprehensive discussion of Mycenaean pottery on Cyprus, see van Wijngaarden 2002: 125–202). According to this view, following the destruction of LC IIC centers, migration from Greece increased during the ensuing LC IIIA. These disturbances are traditionally attributed to invasions by "Achaeans" or "Sea Peoples" (see Karageorghis 1982: 82–83; 1984; for the two-wave theory, see Karageorghis 1990; for a discussion of the role of the Sea Peoples on Cyprus, see Muhly 1984).

However, the archaeological evidence on Cyprus during the final decades of the thirteenth century is no longer as clear-cut as previously believed. Notions of widespread destruction at sites dated to the end of the LC IIC are increasingly questioned. Re-evaluation of the archaeological evidence from Enkomi, Hala Sultan Tekke, Kition, and the more recent excavations at Pyla-Kokkinokremos and Maa-Palaeokastro, for example, have revealed a more complex transition between the end of the LC IIC and the following LC IIIA. What is increasingly clear is that the end of the LC IIC was not uniform throughout the island: some sites were abandoned, some were continuously inhabited, and others were rebuilt. Several of the "hallmarks" of the Aegean-style Late Cypriot IIIA culture, including locally produced Mycenaean-style pottery, hearths, bathtubs, ashlar masonry, and other well-known features traditionally interpreted as representing the arrival of a new group of people, typically referred to as Achaean Mycenaean colonists, already appear in the LC IIC period, and often have local, Levantine or Anatolian antecedents.[6]

[5] Regarding the significance of bronze on Cyprus at the end of the Late Bronze Age, see Muhly (1996), Pickles and Peltenburg (1998), and Sherratt (2000).

[6] For a summary of the archaeological record regarding Mycenaean – Cypriot interactions during the Late Cypriot II, see Cadogan (2005). For a recent discussion of the LC IIC/IIIA transition, see Iacovou (forthcoming), and Steel (2004: 187–213)

Based on this evidence, Sherratt (1991: 191–95; 1992), one of the first scholars to challenge this interpretation, has suggested that the appearance of significant quantities of locally produced Myc IIIC-style pottery and its associated assemblages was the result of a more gradual adoption of Mycenaean-style material culture by a largely indigenous population. As traced by Antoniadou (2005), the widespread distribution pattern of imported Mycenaean wares (and later their local Aegean-style imitations) suggests that imports were "well integrated into the local systems of meaning and patterns of behaviors" (2005: 75). These observations tend to support a more graduate acceptance and integration of Mycenaean-style material culture by indigenous Cypriots, who eventually developed their own local tradition of Aegean-style wares and material culture that came to characterize LC IIIA assemblages. As explored below, these largely indigenous "Aegeanized" peoples in the east Aegean and Cyprus no doubt played a key role in the transmission of the Mycenaean-inspired Aegean-style material culture, technology and ideology that spread to select areas in Cilicia and the Levant during the 12th century BCE.

Cilicia

During the 13th century BCE, southeastern coastal Anatolia formed part of the Hittite Empire. Limited archaeological excavations in Cilicia reveal a break with the Late Bronze Age Hittite-influenced cultural tradition following the demise and destruction of the Hittite capital at Hattuša (Jean 2003). Although the region remains largely unexplored, five sites—Kilise Tepe (Hansen and Postgate 1999), Soli Höyük (Yağci 2003), Mersin (Jean 2003: 83–84), Tarsus (Goldman 1963) and Kinet Höyük (Gates forthcoming)—are key to understanding the transition between the Late Bronze and Iron Ages. At several sites, such as Kilise Tepe, Soli Höyük and Tarsus, the appearance of locally produced Myc IIIC Early and Middle pottery that closely resembles assemblages found on Cyprus during the 12th century indicates a close relationship to Cyprus following the collapse of the Hittite Empire (see French 1975: 55; Sherratt and Crouwel 1987; Mountjoy 2005b: 86). Most recently, surveys in the Gulf of Iskenderun have revealed a similar transition from the 13th to 12th centuries. At Dağılbaz Höyük, surveyed in October 2006, Late Bronze Age pottery in a Hittite tradition is followed by 12th century Aegean-style wares, including Myc IIIC pottery with a matt painted decoration that is very similar to Cilician, Cypriot and Philistine examples.[7]

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for a recent summary. The gradual introduction of locally produced Mycenaean pottery already in the 13th century has been confirmed by provenience studies (e.g., Catling 1986), but see Karageorghis's most recent treatment of this transitional period (2002: 71–113), which continues to support a clear-cut transition from LC IIC to LC IIIA, marked by the arrival of Mycenaean Greek colonists to Cyprus.

[7] The survey of the Gulf of Iskenderun is part of a five year survey project. It is sponsored by the Pennyslvania State University and Bilkent University, Ankara. Participants during the 2006 season included A. E. Killebrew, G. Lehmann, M.-H. Gates, B. Halpern, B. Cockson and A. Çadan.

Tarsus is one of the most extensively excavated Bronze and Iron Age sites in Cilicia. Unfortunately the excavated area was disturbed, with few architectural remains. The resulting ceramic assemblage from the late 13th and early 12th century levels is mixed due to the confused stratigraphy, as shown in the final reports (see Goldman 1956: 203–9; for a recent analysis of the transitional 13th/12th century pottery assemblage, see Ünlü 2005). Following the destruction of Late Bronze Age Tarsus, the majority of utilitarian Cilcian monochrome wares continued to appear alongside a new element: locally produced Aegean-style ceramics similar to the Myc IIIC Early and Middle assemblages known from Cyprus and Ekron (for the most recent analysis, see Mountjoy 2005b: 86). The style may have been introduced from Cyprus, perhaps indicating closer links with the island and continued trade relations with northwest Syria during the 12th century BCE (Goldman 1963: 93–95; Yakar 1993: 17–18).

Levant

One of the most intriguing regions relevant to our discussion is the northern Levantine coast during the 13th and 12th centuries BCE. Several new excavations and recent publications have examined the Mycenaean-style pottery at key sites along the coast of Syria and Lebanon (Bell 2005; du Piêd, this issue). Most noteworthy is the Mycenaean ceramic assemblage at Tell Kazel, which spans the Late Bronze–Early Iron period, and resembles types found at Ras Shamra/Ugarit (Badre 2006). Significant quantities of traditional imported mainland Greek Myc IIIA Late and Myc IIIB pottery and LC II wares were recovered from the Late Bronze II levels.[8] A dearth of imported Mycenaean wares characterizes the transitional Late Bronze–Iron Age levels at Tell Kazel. However, locally produced Aegean-style pottery does begin to appear in stratified levels above the ruins of the Late Bronze Age city (Badre et al. 2005: 30). This pottery includes an Aegean-style type peculiar to the region that has been termed "Amurru style", and which appears alongside Handmade Burnished Ware (Badre 2006: 82–89; Capet, this volume).

A somewhat different scenario characterizes the southern Levant. Two phenomena can be observed during the closing decades of the 13th and early 12th centuries. At several northern sites, such as Tel Nami, Beth Shean, Akko and Keisan, small quantities of imported simple style Myc IIIB Late and Myc IIIC Early pottery appear in transitional Late Bronze/Iron I levels, following the cessation of imported mainland Greek Mycenaean and traditional LC II wares (Artzy 2005: 357–58; D'Agata et al. 2005; Mountjoy 2005a). These transitional Late Bronze/Iron I vessels, belonging to a group that is also found in Cilicia and Cyprus, are usually closed vessels. The most common vessel form is

[8] See Badre et al. (2005), regarding the mainland Greek (mainly from Mycenae/Berbati) provenience of the majority of the Myc IIIA–B pottery at Tell Kazel. A few vessels originate from Crete. See also Bell (2005) for regional patterns of trade in the northern Levant based on the distribution of imported Mycenaean style pottery and its derivatives.

the stirrup jar. Provenience analyses indicate that they were produced on Cyprus (see Gunneweg and Perlman 1994; Killebrew 1998: 162; D'Agata et al. 2005). Contact with Cyprus during the Iron I period is also evidenced at Tel Dor. Lacking the locally produced 12th century Aegean-style ceramic assemblages that characterize many settlements to the north and south, Dor illustrates the cultural fragmentation and regional variations that typify the eastern Mediterranean during the 12th century BCE (Gilboa, this issue).

Significant quantities of locally produced Aegean-style assemblages, including decorated Myc IIIC Early and Middle pottery, are well documented at such sites as Ekron, Ashdod and Ashkelon, and most probably Tel Safit (Gath) (see Killebrew 2000; 2005: 219–30; Dothan and Zukerman 2004 for detailed discussions of these assemblages). The majority of these are table wares or utilitarian kitchen wares (in contrast to the assemblage of closed vessels generally associated with imported luxury Mycenaean or Aegean-style wares, as outlined above and in Killebrew 1998). These sites, attributed to the Philistines in the biblical account, provide textual evidence for the ethnic identification of the Philistines as producers of this non-indigenous material culture.

Early Philistine Settlement in the Southern Coastal Plain

The analysis of Aegean-style ceramic and material cultural assemblages found at sites associated with the Philistines in the southern coastal plain together with an analysis of the relevant Egyptian and biblical texts form the foundation for our archaeological and historical interpretations of the Philistines. Based on the clear Mycenaean inspiration of Philistine material culture, scholars have traditionally looked westward to mainland Greece as the source of this Aegean-style material culture. More recently, however, it has become increasingly evident that the closest material cultural parallels, both typologically and stylistically, are found on Cyprus, in Cilicia, and in the east Aegean/west Anatolian interface. But how "Mycenaean" is the locally produced Aegean-style material culture in its southern Levantine Philistine context? In what follows, I will briefly highlight the Aegean-style features of this new culture that are usually identified as Philistine in an attempt to answer the what, when, where, why and how of the Philistine phenomenon (see Killebrew 2005: 197–246, for a detailed discussion and comprehensive bibliography).

Pottery

Locally produced Aegean-style pottery, both the decorated fine wares and undecorated plain wares and cooking wares characterize 12th century Philistine sites. These pottery assemblages have been studied extensively in recent publications (e.g., Killebrew 2000; 2005: 219–30; Dothan and Zukerman 2004). This Aegean-style pottery assemblage is best represented at Ekron, where a well-stratified section of the early Iron I city was excavated in Field INE. As I have noted in earlier publications (e.g., Killebrew 2000; 2005: 230), the matt monochrome

and undecorated plain wares find their closest parallels in shape, decoration and technology with Cypriot and Cilician assemblages, especially those from Enkomi.

In addition to this signature ceramic repertoire, several Aegean-style architectural features, installations, and artifacts previously unknown in Canaan make their first appearance at select early Iron I sites typically associated with the Philistines. They share an Aegean-inspired origin. However, as I will note below, the most abundant and appropriate parallels are found on Cyprus and at several coastal Anatolian sites.

Hearths

Unknown in the southern Levant during the preceding Late Bronze Age, fixed hearth installations first appear during the 12th century at early Philistine sites. Prior to their appearance in Philistia, they are well-documented in Asia Minor, in the east and west Aegean, on Cyprus, and in Cilicia during the second millennium BCE. The hearth makes its debut in the classic megaron hearth-rooms of Asia Minor and Crete. They occur later on the Greek mainland, Cyprus, Cilicia and Philistia, hinting at the complex multi-directional nature of Late Bronze Age cultural interaction. The earliest hearths at Tel Miqne-Ekron are rectangular in shape and appear to be domestic in function. Later hearths are generally circular in shape (see Karageorghis 1998; 2000: 266, for a general discussion; Barako 2001: 14–15; Table 2, and Killebrew 2005: 210–16, for parallels and a discussion of the hearths at Philistine sites). Although much has been made of the relationship of the Philistine hearths to those found on the Greek mainland (e.g., Dothan 2003: 196–201), the closest parallels to the more modest circular, rectangular, or square domestic hearths typical in Philistia are found on Cyprus.

Bathtubs

Stone and terracotta bathtubs were common in the Aegean during the second millennium, and later on Cyprus during the LC IIC and IIIA periods. In recent literature, these installations have been interpreted as bathtubs for bathing, or for use in purification rites (for a detailed discussion, see Dothan 2003: 202; Karageorghis 2000: 266–74). More recently, Mazow (this issue) has argued convincingly that some of these tubs were used either for scouring or fulling wool, supporting her view that the Philistines were involved in the large-scale production of a variety of craft industries, including textile and pottery production.

Lion-headed Cups

Lion-headed cups make their first appearance in the southern Levant during the Iron I period. Several cups in the shape of a lioness are known from sites associated with the Philistines, including Tel Miqne-Ekron, Tel Safit (Gath) and Tell Qasile (see Meiberg forthcoming, for

a detailed discussion). These vessels are traditionally compared with lion-headed rhyta from Bronze Age contexts on mainland Greece and Crete (Dothan 1982: 231; Barako 2000: 523). However, as pointed out by Meiberg (forthcoming), several morphological and functional features of these vessels distinguish them from west Aegean prototypes. These include the lack of an opening for the flow of liquids, a feature which is present in west Aegean rhyta, thus pointing to the northern Levant and Anatolia as the source of inspiration. These observations provide irrefutable evidence that the lion-headed cups found at Philistine and other southern Levantine coastal sites were part of a longstanding Anatolian and North Syrian tradition.

Incised Scapulae

Several examples of incised bovine scapulae have been recovered from Iron I levels associated with the Philistine settlement at Tel Miqne-Ekron and Ashkelon (Dothan 1998: 155).[9] Dozens of incised scapulae are known from Cyprus, where they have been found in cultic contexts at several LC IIIA sites (Webb 1985). Although their function remains undetermined, it has been suggested that incised scapulae were used either for divination (Webb 1985: 324–28), or as parts of musical instruments (Karageorghis 1990: 159). I am unaware of evidence that scapulomancy was practiced in the Late Bronze Age Mycenaean world.

Female Figurines ("Ashdoda")

The majority of figurines recovered from Iron I levels at Philistine sites are female, suggesting that a goddess played a major role in the cult of Iron I Philistia. Numerous scholars have noted the Mycenaean inspiration of Ashdoda (for comparative Mycenaean female figurines, see Dothan 1982: 234; Yasur-Landau 2001: Table 1). However, no less significant sources of inspiration may be found in LC IIC–IIIA contexts.[10] Equally convincing is a suggestion by Singer (1992: 432–50) that these figurines should be identified with the Anatolian mother goddess Kubaba/Kybele. Based on the comparative material, and the lack of exact parallels to Ashdoda, she is best understood as a hybridization of Aegean, Anatolian and Cypriot styles and influences (see also Morris 2001, for a discussion of Late Bronze Aegean east-west interactions and Anatolian contributions to Greek religion).

Cuisine

Changes in cuisine mark the transition from the Late Bronze to Iron I levels at Philistine sites. Both the faunal evidence and the appearance

[9] Scapulae have also been found in Iron I contexts at Tel Dor. See Stern (1994: 96, fig. 409; 2000: 199, fig. 10.6), who associates them with the Sikila, another group of Sea Peoples.

[10] Already in LC II, bird-headed female figurines were fashioned out of Base Ring ware.

of Aegean-style table wares and cooking pots signal significant changes in dietary practices. With the establishment of urban Iron I 12th century settlements at both Tel Miqne-Ekron and Askhelon, pig bones, which are rare in Late Bronze Age contexts, suddenly account for over 15% of the assemblage. This shift highlights an increase in the consumption of pig and cattle at the expense of sheep and goats that is not paralleled at contemporary Iron I sites outside of the southern coastal plain (Hesse 1986: 21–22, Table 4; Hesse and Wapnish 1997: 148; Barako 2001: 21, note 17; see also Lev-Tov 2000, for a recent analysis of faunal remains from Tel Miqne-Ekron). However, caution is advised regarding the use of this evidence to determine a distinctive Philistine ethnic identity, since pork consumption was widespread throughout the Bronze Age Aegean, Anatolia and Europe.[11] Examined in its broader cultural context, the noteworthy rise in pork consumption at several southern coastal plain sites associated with the Philistines does provide additional support for the migration of peoples whose origins lay outside of Canaan.

The Philistines in Their Eastern Mediterranean Context

As the above discussion demonstrates, the Philistine phenomenon associated with the sudden appearance of locally produced Aegean-style material culture was part of a broader social, political and economic breakdown and cultural fragmentation that characterized the entire eastern Mediterranean during the 12th century BCE. Scholarly interpretations have traditionally attributed the appearance of Aegean-style material culture to one of two general processes of cultural transmission and change: [12] diffusion (the transference of new cultural traits from one group or location to another, including through migration),[13] and indigenism (indigenous evolutionary, or immobilist, transmission).[14]

Two types of diffusion, stimulus and complex (see Rouse 1986: 11–14), are relevant to this discussion. Stimulus diffusion is the most common form of cultural transmission, and refers to the transmission of information, ideas or elements of material culture, usually as a result of trade relations, or limited small-scale immigration over

[11] In the Aegean, the sign for pig appears in Linear B tables at Knossos (Chadwick, Killen, and Olivier 1971:45–46) and Pylos (Bennett 1955:247–48; Chadwick 1973:205–6). For Anatolia, see Hongo (2003: 259), Ikram (2003: 286–89), and von den Driesch and Pöllath (2003). For Europe, see Lev-Tov (2000: 221–23).

[12] See Renfrew and Bahn (2000: 461–96) for an overview of various approaches to cultural change. For the transmission of culture in the eastern Mediterranean, see Clarke (2005a and 2005b) and Phillips (2005).

[13] See Dothan (1982; 1989; 1998), Mazar (1985; 1988), Stager (1991; 1995), Killebrew (1998; 2003), Bunimovitz (1998), Barako (2000; 2001), and Yasur-Landau 2003a and 2003b. For an alternative view that supports a more limited migration over a protracted period of time, see Finkelstein (2000).

[14] See Brug (1985: 201–5), Bunimovitz (1990, and later revised view in 1998), Bauer (1998), Drews (1998), Sherratt (1998), and Vanschoonwinkel (1999). Several of these interpretations are based on out-dated archaeological information.

time. I would argue that the gradual adoption, or transculturation, of Mycenaean-style material culture, and its local production at sites in the east Aegean and Cyprus during the second half of the 13th century BCE, can best be explained as the result of stimulus diffusion. Complex diffusion, on the other hand, represents the transmission of an entire set of traits and ideas to another culture or region during a relatively short period of time. This less common form of diffusion is usually associated with large-scale population movements, migrations, conquests, colonization, and the forced displacement or transfer of populations (Tilly 1978). The sudden appearance of an entire complex of Aegean-style material culture in the southern coastal plain of Canaan testifies to a significant migration of peoples bearing an Aegean-style material culture. Of the various possible types of migration, the available textual and archaeological evidence suggests that colonization was a prime factor responsible for the appearance of the biblical Philistines along the southern coast of Israel.[15]

The Philistines, therefore, should be seen as one of the "winners" who emerged in the wake of the disintegration and fragmentation of the Late Bronze Age world system. Following the cessation of trade relations and imports from the west Aegean during the final decades of the 13th century BCE, economic relations continued between the Levant, Cyprus, and the east Aegean well into the 12th century (Sherratt 1998; 2003). At several Cypriot and coastal Anatolian sites, Myc IIIB pottery was already being manufactured locally during the 13th century. This gradual adoption and production of Mycenaean-style material culture in the east Aegean and on Cyprus can be attributed to the impact of long term economic, cultural, and social ties that flowed in a multi-directional manner between east and west, and which increased in intensity as Egyptian and Hittite influence waned in the east. This interaction undoubtedly included the small-scale immigration and movements of peoples, resulting in a gradual diffusion of cultural traits, technology and ideology, and the creation of a diffused Aegean-style culture in the east (regarding the impact of this multi-directional cultural contact on the Argolid, see Maran 2004).

In the early 12th century, by contrast, the appearance of a locally produced Aegean-style Philistine material culture in the southern coastal plain was the consequence of a large-scale movement of the more prosperous descendants of these Mycenaeanized eastern populations, now able to flourish, having been freed from "superpower" domination. The Philistines, therefore, are best defined as the descendants and inheritors of the highly sophisticated and cosmopolitan culture of an Aegeanized Late Bronze Age world.

[15] I follow van Dommelen's definition, which states that colonization is "the presence of one or more groups of foreign people in a region at some distance from their place of origin (the 'colonizers'), and the existence of asymmetrical socioeconomic relationships of dominance or exploitation between the colonizing groups and the inhabitants of the colonized regions" (1997: 306). What distinguishes colonization from other forms of political, economic or ideological imperialism is the establishment of colonies in a distant land.

Although we cannot discount violent encounters as one means of cultural transmission, the adoption of Mycenaean-style culture in the east clearly was gradual, fueled by the economic world system operative in the eastern Mediterranean during the Late Bronze Age. The collapse of the Mycenaean palace system and demise of regional imperial powers undoubtedly encouraged the additional dislocation and movements of peoples, some fleeing disaster and others seeking opportunity, profit and adventure. Many of these peoples probably originated from Cyprus and other archaeologically less explored peripheral areas in the east. The establishment of prosperous urban centers in 12th century Philistia was just one consequence of a highly complex reorganization of the fragmented remnants of the Late Bronze Age, a golden era that is dimly remembered in the accounts of Homer, and formed the foundations of the later biblical world.

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David Ben-Shlomo

CULTURAL DIVERSITY, ETHNICITY AND POWER IMBALANCE IN EARLY IRON AGE PHILISTIA

Introduction

Philistine material culture is often seen as a relatively homogenous culture characteristically found at all pentapolis sites (Dothan 2000: 145; Stager 1995: 345; Barako 2000: 522–24). Similar, contemporary phenomena have also been observed on Cyprus (Iacovou 1998). Meanwhile, the political organization of the Philistines during the early Iron Age has been described as either a 'confederation' or an alliance of city-states (e.g., Dothan 1982: 17). Archaeological excavations have revealed distinctive Aegean and/or Cypriot-affiliated material culture at the sites of Tel Ashdod (e.g., Dothan and Dothan 1992; Dothan and Porath 1993), Ashkelon (Stager 1991, 1993, 2006), Tel Miqne-Ekron (e.g., Gitin and Dothan 1987; Dothan and Dothan 1992: 239–54; Dothan and Gitin 1993; Dothan 1998; Gitin 1998; Dothan 2000; Dothan 2003a; Dothan and Zukerman 2004: 3–4, fig. 2) and Tell es-Safi/Gath (Maeir 2003); Gaza has not been substantially excavated, and the Iron I remains are minimally reported (see Burdajewicz 2000). Yet, when the archaeological data are examined more closely, certain variations can be identified between these sites, especially between Ashdod and Ekron, which have been the most extensively studied. The differences are illustrated by diachronic variations in the size and nature of these sites and in elements of their material culture. This paper attempts to define these differences and interpret their significance.

Settlement Patterns

The most noticeable difference is in the varying size of the settlements (see Table 1; see also Finkelstein 2000: Table 8.2). Ekron grows to a size of 20 ha at the very beginning of the Iron I (Fig. 1; Stratum VIIB, Dothan 1992: 96–97; Dothan 1998; 2000), built on a relatively small 4 ha Late Bronze Age II (henceforth, LBII) city. It expands to the lower city in Areas III, IV and X, where the early Iron I levels lie on MBIIC remains. There is evidence for fortification in the form of a city wall, which was built during the early Iron Age. At Ashkelon, the early Iron Age city is reported to be 50 to 60 ha in size, lying on a Late Bronze Age settlement of a mere 6 ha (Stager 1993). Iron I fortifications have also been reported lying on the MB II rampart, although very little of these remains have thus far been published.

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Table 1. The main Philistine sites (area in hectares).

Site/period	Late Bronze	Iron I	Iron IIA	Iron IIB	Iron IIC
Miqne-Ekron	4	20 fortified	4	4	20 olive oil industry, temple complex
Ashdod	8 fortified?	10 fortified?	22 fortified	26 fortified	22/26 open areas; fortified?
Ashkelon	6	50-60? Fortified?	?	?	Commercial quarter
Safi/Gath	Areas A,E 27	Areas A,E 23	Areas A,C 50	Areas A, F 25	?

At Ashdod, on the other hand, the size of the first Iron I settlement (Stratum XIII) is very similar to the LB II town, extending only across the upper tell, for a total of 8 ha (Fig. 2) (Dothan and Ben-Shlomo 2005: 2–6), and there is no clear evidence of fortifications, at least until Stratum XI, which is dated to the later Iron I (Dothan 1971: 136; Dothan and Porath 1993: 92). Unambiguous evidence for fortifications appears only in the Iron IIA (Strata X–VII) in Area M (Dothan and Porath 1982). In contrast to Ekron, there are hardly any indications at Ashdod for such an extensive LB destruction level, while the situation at Ashkelon is not yet clear (Stager 2006: 9), although there is evidence of an LB destruction in Pythian-Adams' section (Dothan 1982: 35–36). The Tell es-Safi/Gath excavations thus far have only reached Iron I levels in a limited area; in Area E there is possible evidence for an LB II destruction layer (Maeir et al. 2004). However, on the basis of probes below the Iron II strata and a survey of the mound, it has been estimated that the Iron I settlement was 23 ha. In contrast to other Philistine settlements, however, the LB II town was larger at 27 ha, and grew again substantially during the Iron IIA (see Uziel 2003: Table 3; Uziel and Maeir 2005; Maeir 2003).

At Ekron the size of the settlement persists until the end of the Iron I, and then diminishes in the Iron IIA after a violent destruction in the lower city. At Ashdod the site begins to expand during the Iron IIA (Stratum X in Area M; Dothan and Porath 1982), and includes the construction of fortifications (Dothan and Ben-Shlomo 2005: 6–7). The site reaches a peak of 28 ha in the Iron IIB during the 8th century BCE, and then decreases in the 7th century at roughly the same time that Ekron becomes a large fortified settlement of 20 ha. Gath experiences a similar settlement history, reaching a peak of 50 ha in the later Iron IIA, during the 9th century (Stratum A3), although its decline starts in the 8th century (25 ha). Thus, Ekron and Ashkelon preserve settlement histories that reflect a pattern of "urban imposition", as Stager has described it (1995: 345), while Ashdod and Gath experienced a different development.

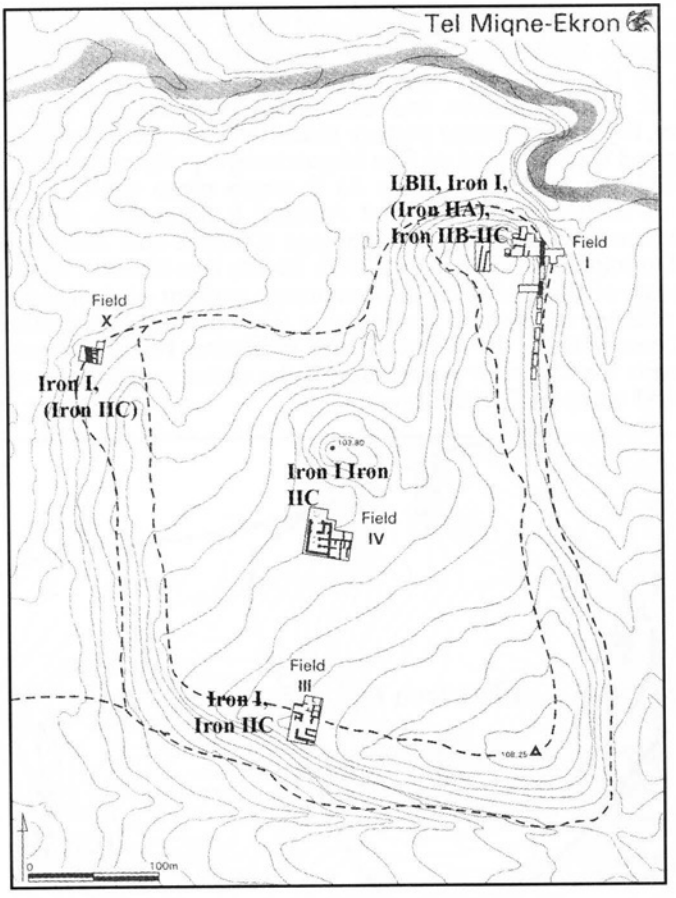

Fig. 1. Extent of the Iron Age settlement at Tel Miqne; adapted from Dothan 1992: 96–97; Dothan 1998; 2000).

Material Culture

Pottery

The material culture of Tel Miqne-Ekron and Ashdod show more subtle differences, especially during the initial stages of the Iron I (see Table 2). Ashdod seems to lack several of the more 'pure' or restricted Aegean-style characteristics that first appear in the initial Iron I phase at Ekron, while at the same time preserving material culture that show few Aegean characteristics. The distribution of Philistine Monochrome, or Myc IIIC:1 pottery (Dothan and Zukerman 2004), represents a good example. Several types of Philistine Monochrome appear only at Ekron. These include the Type A rounded bowls (Figs.

3: 1–2), the tray (Fig. 3:3), and rare closed forms, such as Types L, M, N and O: trefoil rim jug, pyxis and bottle (Fig. 3: 4–6; Dothan and Zukerman 2004: 28). There are also several decorative techniques, such as the inner slip and motifs, which have appeared thus far only at Ekron (Dothan and Zukerman 2004: 36, fig. 6:8). Also, at Ekron, the Monochrome pottery made of fine light-colored and well-levigated clay (defined as fine Monochrome pottery; see Dothan and Ben-Shlomo 2005: 65, Group A) is much more common, reaching 50% in certain areas, while at Ashdod it represents about 10% of the Monochrome pottery assemblage (Dothan and Zukerman 2004: 31; Dothan and Ben-Shlomo 2005: 65–66; Ben-Shlomo 2006a: 24). A majority of the Philistine Monochrome pottery at Ashdod is made of a coarser, reddish or grayish clay (Dothan and Ben-Shlomo 2005: 65, Groups B–C). In addition, the Philistine Monochrome pottery accounts for a smaller percentage of the entire pottery assemblage at Ashdod compared with Ekron.

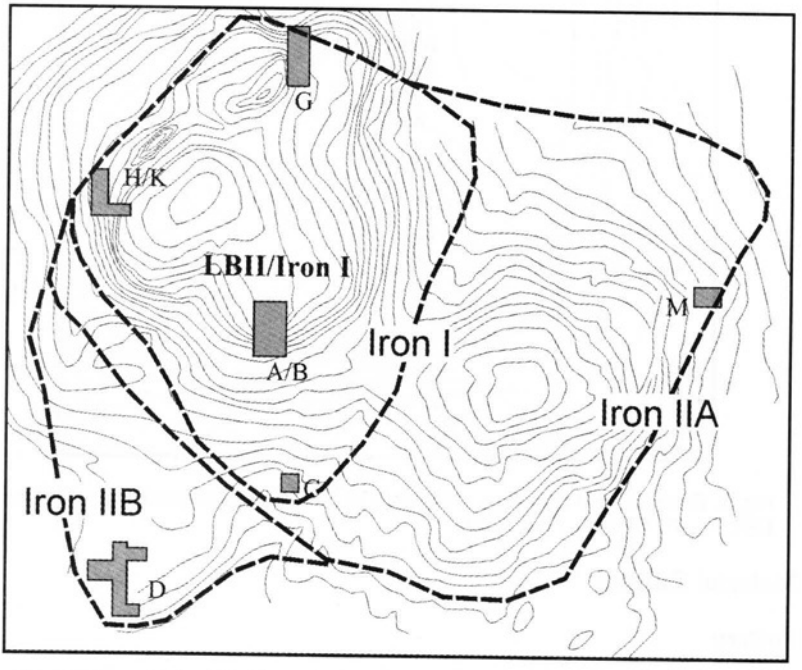

Fig. 2. The extent of the Iron Age settlement at Ashdod (adapted from Dothan and Ben-Shlomo 2005: 2–6).

An archaeometric study of the Philistine Monochrome pottery from the four excavated Philistine sites (Ben-Shlomo 2006a), using both petrographic and chemical analyses (ICP-AES and ICP-MS), has demonstrated that Ekron was a center for the production of the fine Monochrome fabric (Fig. 4), a fact further confirmed by the discovery in Field I of the Early Iron Age (Strata VII and VI) pottery

kilns that produced this pottery (Killebrew 1996: 146–47; figs. 13–15). Archaeometric analysis of the vessels made of this fabric found at Ashdod has shown that they were imported from Ekron. The other fabrics of Philistine Monochrome, as well as the Philistine Bichrome present at Ashdod, were produced locally, as they were at each site. The fine Monochrome fabric is characterized by a calcareous clay that is distinguishable both petrographically and by chemical fingerprinting (Fig. 5; note the high and variable calcium contents of this clay). Killebrew has identified it as Fabric ME-A1 (Fig. 6; Killebrew 1998a: 201–2, figs. IV:2, IV:3: upper), or *wadi loess*. This clay recipe was not used later in Iron II wares, and its appearance imitates Mycenaean prototypes to a high degree. This also suggests that Ekron had stronger Aegean connections in the initial phases of the Iron I.

Table 2. Various elements of the Philistine material culture from Tel Miqne.

Monochrome pottery forms	**Tel Miqne-Ekron**	**Ashdod**
Type A (T. Dothan and Zukerman 2004) bowls	+	-
Types B-K	+	+
Types L-M-N-O	+	-
Cooking jugs	+	+
Kalathoi	+	+
Decorative motifs (Monochrome)		
Inner slip	+	-
Hanged semicircles	+	+
Stemmed Tongues	+	-
Stemmed spirals	+	+
Running tongues	+	-
Hatched spirals	-	+
Drops	-	+
Hatched Triangles	-	+
Delicate lozenge	-	+
Complex spirals	-	+
Bird	+	+
Fish	+	+
Other elements of material culture		
Monochrome Psi figurines	+	-
Ashdoda figurines	+	+
Monochrome bovine figurines	+	-
Monochrome Aegean-style zoomorphic vessels	+	-
Incised scapulae	+	-
Pig bones	+	?
Cylindrical loom-weights	+	+
Aegean style ivories	+	-

According to the chemical and petrographic evidence, the other Monochrome and Bichrome pottery fabrics were made of clays similar to those used in local, Canaanite-style vessels. These wares were produced locally at all of the Philistine pentapolis sites.

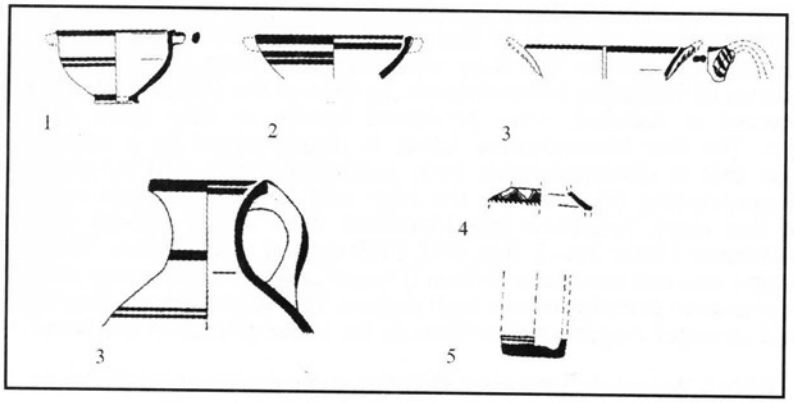

Fig. 3. Rare Philistine Monochrome forms (after Dothan and Zukerman 2004; not to scale).

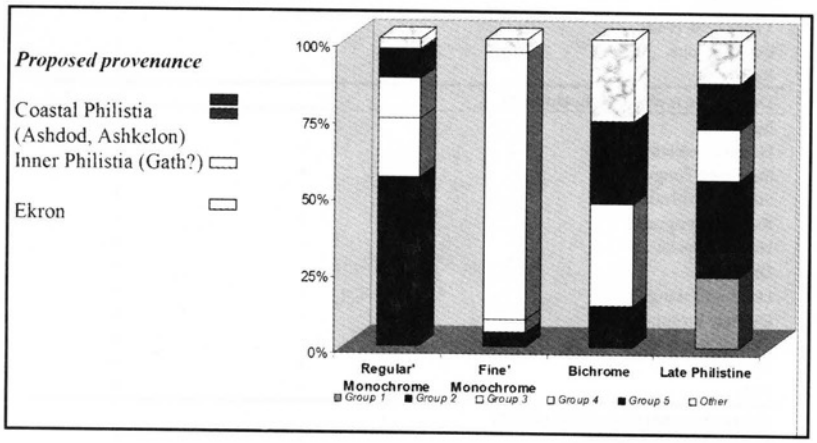

Fig. 4. Proposed provenance of Philistine pottery from Philistia according to chemical analysis by ICP.

Another important pottery form is the so called Philistine cooking jug. These jugs, which find many parallels from the Aegean and Cyprus, appear throughout the Iron I at all Philistine sites (Killebrew 1999; Dothan and Zukerman 2004: 28–31, figs. 36–37, Type P, and references therein; Yasur-Landau 2005; Ben-Shlomo 2005: 47–48; Ben-Shlomo et al. in press). Yet, at Ekron they almost completely replace the traditional Late Bronze Age Canaanite cooking pot type in the initial Stratum VII settlement, dated to the early 12th century BCE, while at Ashdod both forms appear together throughout the Iron I (Dothan and Zukerman 2004: 37). This difference may indicate that cooking habits at early Iron Age Ekron were more influenced by Aegean traditions.

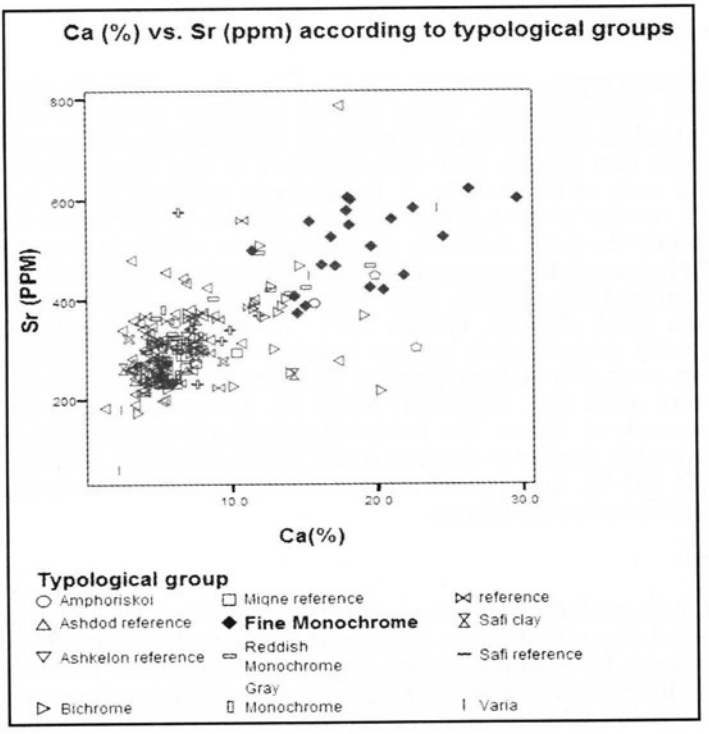

Fig. 5. Bivariate plot showing high Calcium (and Sr) values of 'Fine' Monochrome Philistine pottery (Chemical Group 4).

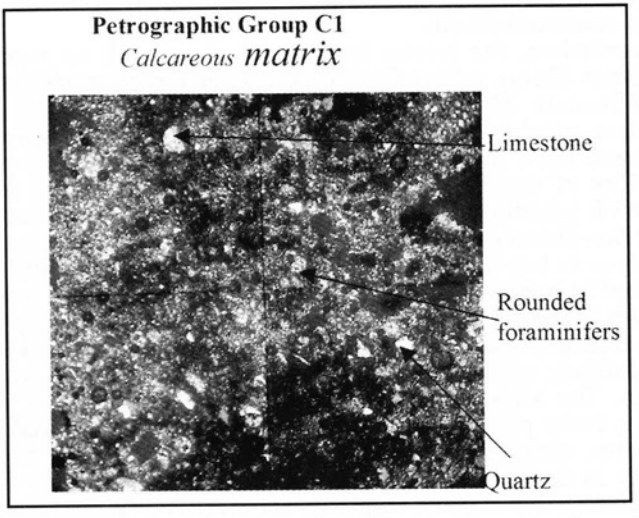

Fig. 6. Thin section of fine Philistine Monochrome pottery, showing calcareous matrix and inclusions (XPL, field width 1.7 mm).

Terracottas

Several types of terracottas that are unique to Philistia also show Aegean characteristics. These objects probably relate to domestic cult practices (Ben-Shlomo in press 1). Aegean-style Psi-type female figurines (see French 1971: 128–42) made of fine Monochrome clay appear only at Ekron (Fig. 7; Ben-Shlomo in press 2). At Ashdod, only a coarser variant of this figurine appears in the initial Stratum XII, while the later Ashdoda seated figurine, which is decorated in the Bichrome style, appears in Stratum XI, and similarly at other sites (Dothan and Ben-Shlomo 2005: 122, figs. 3.36:2–3, 3.62:1–4, 3.80:1–4; Dothan 1982: 234–37; French 1971: 167–72; Yasur-Landau 2001). Decorated Aegean-style bovine figurines (Fig. 8) and zoomorphic vessels, such as a hedgehog vessel (Bierling 1998: 23–25, pls. 4:1, 10a) and bird askoi (Fig. 9; Dothan 2003a: fig. 4; Ben-Shlomo in press 1), appear only at Ekron. The bovine figurines are decorated in linear/spine motifs similar to Aegean and Cypriot examples (French 1971: 151–52, 155–57, fig. 11), and include examples made of both fine and coarse Monochrome fabrics.

Ivories

Other small finds, such as ivories, suggest ethnic influence in their form and iconography (Ben-Shlomo and Dothan 2006). Several ivories from Ekron, for example, exhibit Aegean characteristics. These include a large lid with a mythological scene (Dothan 2003b) and pommel ring knife handles (Dothan 2002: 14–22, figs. 12–18). At the same time, no incised scapulae, objects assumed to reflect Cypriot influence, have been found at Iron I Ashdod, even though they have been found at Ekron (Dothan 1998: 155), Ashkelon (Stager 1991) and Gath (Maeir personal communication).

Nevertheless, the ivories from Ashdod, as well as most of the ivories from Ekron, reflect Canaanite and/or Egyptian influence (for Ashdod Stratum XII, see Dothan and Ben-Shlomo 2005: 127–30, fig. 3.39). Most notable are several inlays that depict Egyptian scenes which have been found in well-stratified 12th century contexts at Ekron. One of these consists of a large inlay from a box found in Stratum VI, which depicts two female swimmers in a Nilotic scene (Fig. 10; Ben-Shlomo and Dothan 2006: fig. 4). The right figure holds a lotus flower in her right hand and has two or three bracelets. A band is depicted in her hair, which flows backwards freely. Papyrus plants are shown in the background. The figure on the left is empty-handed and has a shorter hairstyle. Both figures are adorned with a belt and upper clothing; which consists of a girdle and blouse with a dotted X design. The wide empty space between the figures is peculiar. Either the ivory piece is not finished or the artist intentionally chose a less dense composition. The two women are depicted differently, especially in their facial details and hairstyle, and arguably could be of a different social class or ethnicity. The right figure, with jewelry on her arms and ears and carrying a lotus flower, appears to be a lady of

some standing, while the left figure may be her maid. The left figure also appears to be of African descent (on account of her hairstyle), and the right figure an Egyptian or Canaanite girl. Although the carving technique is distinctively Canaanite, a continuation of the LB II style, the motif is clearly Egyptian (for a nearly identical scene, see the silver and gold plate from Psusennes I tomb [Dynasty XXI, 1039–991 BCE] at Tanis [Keimer 1952: 64]).

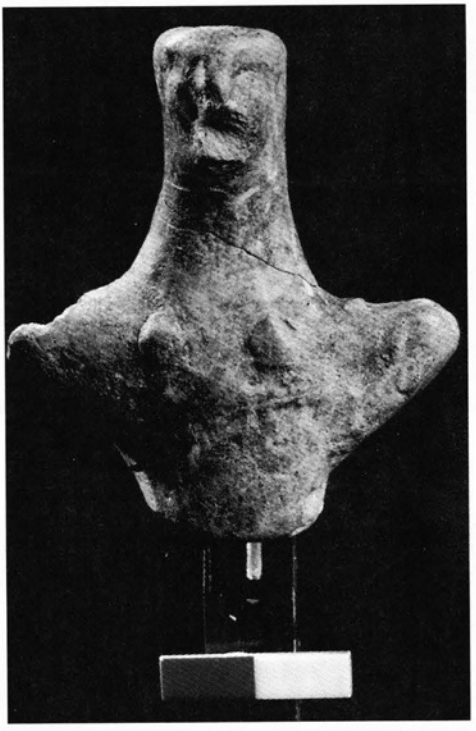

Fig. 7. Psi type female figurine from Ekron.

Other ivory fragments from Ekron show a striding man in a Nilotic scene (similar to a large inlay from Tell Farah South; cf. Petrie 1930: pl. LV; Ben-Shlomo and Dothan 2006: figs. 6–8), and a Nilotic bush in carved high relief (Fig. 11). Another object, probably in secondary use (Fig. 12; Ben-Shlomo and Dothan 2006: figs. 6:3, 8:1), has a partial hieroglyphic inscription that reads *Ra* or *Her Akhty* (a seated falcon-headed deity); the right two signs are *em-heb*, meaning *Ra* (the sun god) or "Horus of the two horizons in feast" (reading by Daphna Ben-Tor). The inscription, a typical phrase used on votives dedicated to gods in New Kingdom Egyptian temples, or alternatively a personal name, is located on the rear side of a box inlay. Parallels for ivory inlays with hieroglyph signs come from Tell el-Ajjul (Petrie 1933: 11,

Fig. 8. Decorated bovine figurines from Ekron.

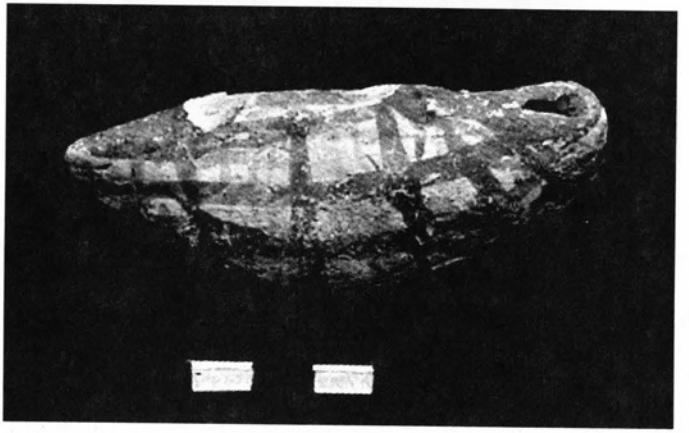

Fig. 9. Monochrome bird-askos from Ekron.

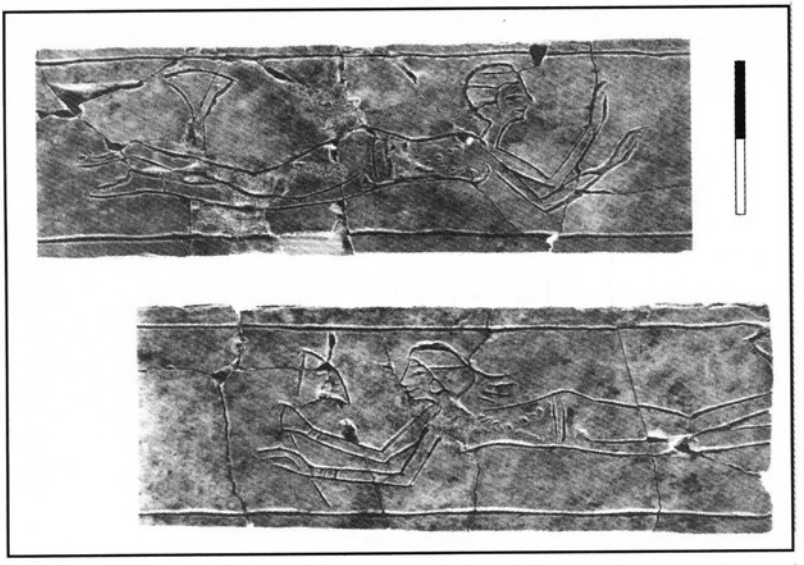

Fig. 10. Ivory inlay from Ekron.

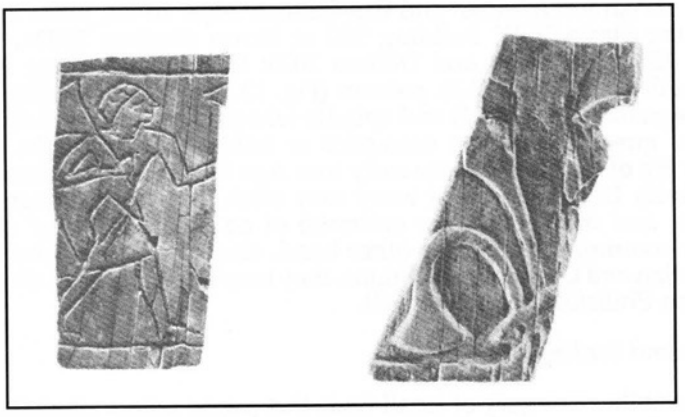

Fig. 11. Ivory inlays from Ekron.

pl. XXVIII:8), on the back of an animal procession scene displayed on a wand, Megiddo Stratum VIIA, which has produced inscribed boxes, either pencil cases or writing palettes, (Loud 1939: 11–13, 21, pls. 62–63), and New Kingdom Egypt (e.g., Hayes 1959 [1990]: 296, fig. 183). However, no parallel has been found for such an inlay inscribed on its rear side.

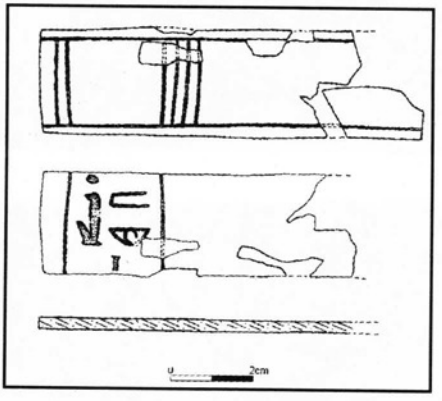

Fig. 12. Ivory inlay with hieroglyphic signs from Ekron.

Additional inlays and other ivory objects from Ashdod and Ekron show a continuation of Canaanite traditions (see Ben-Shlomo and Dothan 2006: 27–31 for a detailed discussion). Some of these have been found in elite or public buildings, as in the Stratum XII Building 5337 at Ashdod (Dothan and Ben-Shlomo 2005: 26–28, plans 2.6–2.7), and the Strata V–IV Building 350 at Ekron (Dothan 2003a, 2003b) (Fig. 13; Ben-Shlomo and Dothan 2006: figs. 11–14). These include cosmetic boxes (Fig. 13.3), palettes (Fig. 13.2), pins, combs (Fig. 13.1), pomegranates (Fig. 13.4) and spindle whorls. This group of domestic items, mostly related to cosmetics or toiletries, sheds light on the daily life of the elite in these early Iron Age Philistine settlements. The relatively large amount of ivory may stem from their owners' high status, and may reflect the existence of an elite 'Philistine' class in these communities. On the other hand, since the ivories also reflect Egyptian and Canaanite traditions, they may also have been displayed by non-Philistine groups as well.

Seals and Sealings

Another category of small finds that might reflect ethnicity more explicitly are stamp and cylinder seals and their impressions. Several seals from Ashdod Strata XII–XI (Dothan and Porath 1993: 81, fig. 36:9; Dothan and Ben-Shlomo 2005: 165–67, figs. 3.66–67) are carved in a linear style that resembles Cypriot seals from Maa-Palaeokastro (Porada 1988: 305, pl. G:4, No. 560) and Kition (Porada 1985: 251, pl. A:2; Karageorghis 1974: pl. XCII:293). In fact this is the only element

of Aegean or Cypriot character that is uniquely found at Ashdod. It has been suggested that these represent cypro-linear signs, or some type of Philistine-Aegean script (Stieglitz 1977; Keel 1994: 21), and that their presence at Ashdod might indicate that the site was inhabited by immigrants from Cyprus, perhaps from Enkomi, as Na'aman has suggested (1997). However, these signs can also be interpreted as iconographic symbols (Dothan and Ben-Shlomo 2005: 166), and the direct Cypriot connection is not supported by any other material evidence.

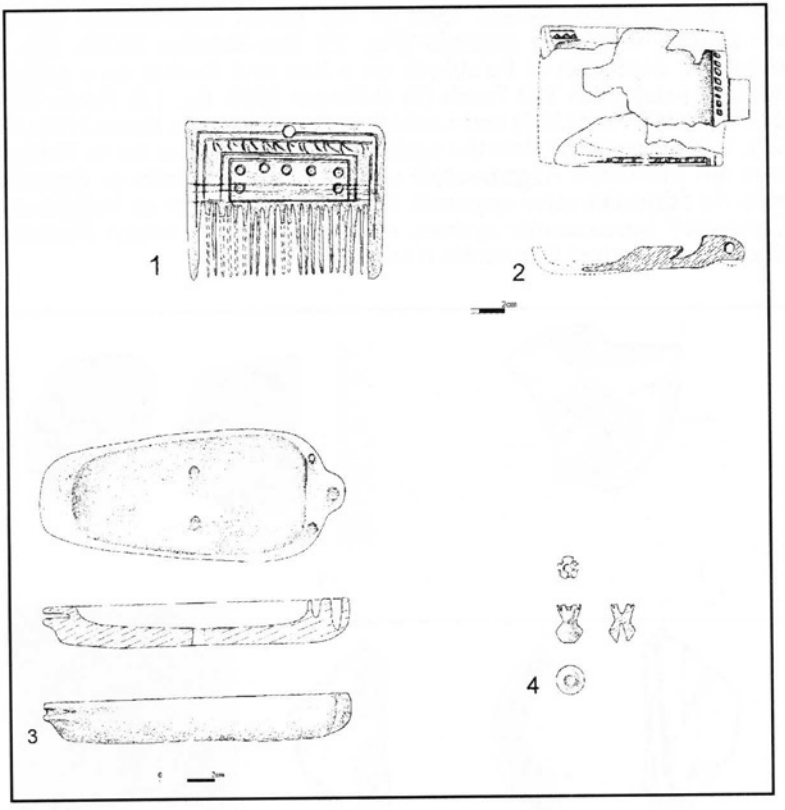

Fig. 13. Various ivory objects from Ekron.

Anchor seals have also been identified as a distinctively Philistine phenomenon (Keel 1994), even though they appear all over the southern Levant during the Iron I and early Iron II, reflecting a general trend towards a more intensive use of stamp seals. At the same time, new iconographic representations, involving combinations of animal and human motifs, appear on the seals. However, this could also be interpreted as a Canaanite or Israelite development, related to the

rise of new and independent cultures and political groups during this period. It should be noted that the stamp seals are better suited technologically for sealing sacks, boxes, vessels and papyri than are cylinder seals.

A few impressed clay sealings from Ashdod and a larger number from Ekron were found in Iron I contexts (Fig. 14; Ben-Shlomo 2006b). All of the sealings preserved impressions of scarab style seals engraved with typical Iron I Canaanite (Figs. 14.1–2) or Egyptian (Fig. 14.3) motifs, mostly consisting of figures combined with animals. Several Ekron and Ashdod sealings produced at least two identical impressions. One of the Ekron impressions depicts two figures riding on animals (Fig. 15; Ben-Shlomo 2006b: fig. 1), perhaps a depiction of Ba'al/Seth on a lion and Reshef on a gazelle. Parallels exist from Tell Farah (S) (Münger 2003: fig. 1:8; Petrie 1930: pls. XXXI:287, XLIII:534) and Lachish (winged figures, Rowe 1936: No. 575). It is noteworthy that the sealings uncovered thus far in Philistia have not produced Aegean-style motifs, only Canaanite or Egyptian ones. As administrative apparati, the sealings suggest an indigenous, 'Canaanite' bureaucratic system, or at least one in which Philistine officials maintained Canaanite traditions.

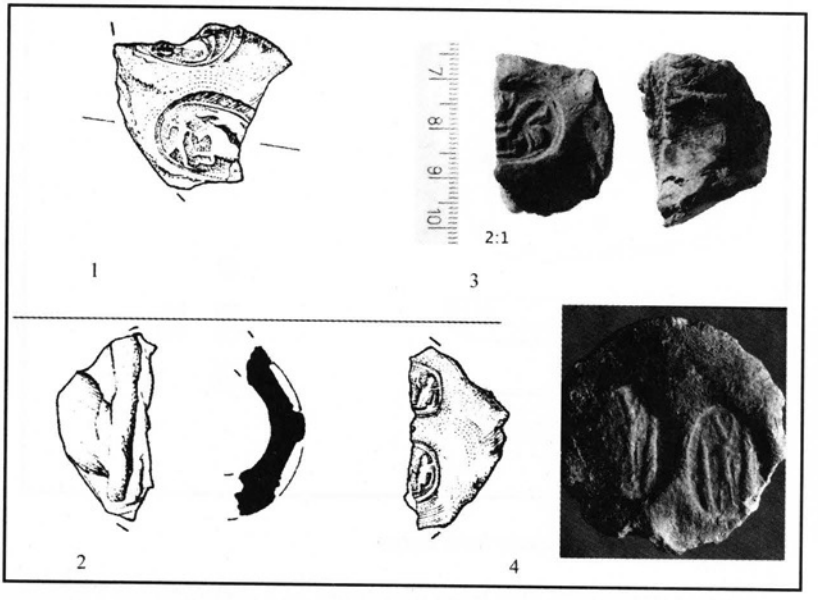

Fig. 14. Impressed clay sealings from Ekron.

The differences in site size and settlement history of the Philistine pentapolis cities have caused some scholars to challenge the 'five city culture' model of Philistia (Finkelstein and Singer-Avitz 2001: 239). However, despite their differences, these sites nevertheless also shared

many cultural attributes, including large proportions of the distinctive Aegean-style Monochrome pottery (Ben-Shlomo 2003), architectural features such as the 'megaron' type building, with its long-room, twin pillars and hearth, as found at Ekron, Ashdod and Ashkelon (Dothan 1992: 96; 2003a: 200–2, 204, fig. 15; Dothan and Ben-Shlomo 2005: 26–29, plans 2.5–2.7; Stager 2006: 12; see also at Tell Qasile, Mazar 1986), and various types of hearths and tubs (Dothan 2003a: 202–6; Dothan and Ben-Shlomo 2005: 29–30, plan 2.5; Karageorghis 2000: 266–74). The homogeneity of this material culture and its relative dominance at these four excavated sites stands out as a distinctive cultural identity when compared to other contemporary sites and regions in the southern Levant. The differences that I have noted occurred on a smaller, more local scale, and are more pronounced in the initial settlement phase. Ekron appears to have experienced more direct Aegean contact than did Ashdod in this initial phase (early 12th century BCE), while Ashdod underwent a more graduate development, with its 'Philistine' identity becoming more pronounced over the Iron I period.

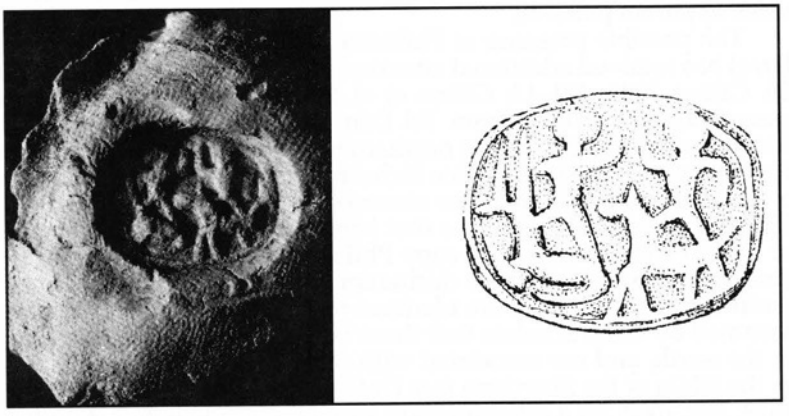

Fig. 15. Sealing from Ekron depicting two mounted figures.

The 'Expansion' to the North

During the later part of the Iron I, the distribution of Philistine material culture expanded to the north as far as the Yarkon Basin, appearing at such sites as Tell Qasile, Azor, Tel Gerisa and possibly Aphek and Izbet Sartah. This expansion is best exemplified by the appearance of the so called 'degenerate' Philistine Bichrome pottery. In addition to Philistine Bichrome, at Azor, cremation burials and a figurine bearing krater may provide further evidence of an Aegean or Philistine cultural identity. These kraters could have carried Aegean-style female mourning figurines, as similarly found in the Aegean (Dothan 1961, 1989; Dothan 1982: fig. 14:2, pl. 32; Ben-Shlomo forthcoming). The spread of Philistine Bichrome pottery to the Yarkon Basin, or 'Greater Philistia', or even to the northern inner valleys

of Israel has been seen as evidence for the expansion of Philistine political power in the late Iron Age I (Wright 1966: 74–78; Dothan 1982: 217–18; Raban 1991). However, these concentrations of Philistine pottery may also be attributable to isolated groups of Philistines, or an increase in the popularity of Philistine tableware among the Canaanite population.

Petrographic analysis has demonstrated that inscribed clay tablets and Ashdoda style figurines from Aphek did come from southern Philistia (Yasur-Landau 2002: 230). However, petrographic analysis has also shown that the Philistine Bichrome pottery found in the Azor burials was locally made. This pottery was made, similarly to the non-Philistine pottery, from the *hamric rendzina*-derived soil typical of the central coastal plain, which does not occur in Philistia to the south (Fig. 16; Ben-Shlomo forthcoming). At least some of the Philistine Bichrome from Tell Qasile and Aphek was probably also locally produced. Thus, either Philistine potters did settle in this region and then developed their own local style, or indigenous, non-Philistine potters copied their work. Further archaeometric analysis will be needed to clarify these apparent patterns.

The possible presence of Philistine Bichrome pottery in northern Israel has received additional attention recently (Ilan 1999: 93–95, 208–10; Gilboa 2001: 401–13; Gilboa et al. 2006), particularly concerning assemblages recovered from Tel Dan, Tel Dor and Tel Keisan. The Bichrome pottery from these northern sites appears to be divided into two groups: 1) classic Philistine Bichrome vessels, mostly closed forms or bell-shaped bowls, that are assumed to have been imported from Philistia, and 2) related forms that sometimes also exhibit Canaanite or hybrid characteristics, or copy Philistine vessel types. These latter vessels display a variety of decorations (such as birds or geometric motifs) that resemble or are identical to Philistine motifs. It has been assumed by some scholars that these vessels are mostly made locally in the north, and are associated with other Sea Peoples groups, such as the Sikila or the Shardanu (see Dothan and Dothan 1992: 105; Stern 1998: 349; 2000; for a different view, see Gilboa and Sharon 2003: 9, 31; Gilboa et al. 2006). Archaeometric analysis should also help to clarify the source(s) of these assemblages.

Discussion

Yasur-Landau (2002: 207–11, 244, 256) has proposed that groups of Aegean immigrants from different regions in the Aegean settled at the different Philistine cities, thus explaining the subtle cultural differences reflected at Ashdod and Ekron. He has also noted a difference in settlement hierarchy, with a greater ranking of sites within inland Philistia, such as in the territory of Ekron, which also had urban satellite settlements such as Batash and Gezer (cf. Finkelstein 2000). Alternatively, Yasur-Landau proposes that each city might have been settled by immigrants at slightly different times, with the settlement at Ekron predating Ashdod. Nevertheless, he acknowledges that the characteristics of Philistine material culture are not identical to any

specific sub-region in the Aegean, and therefore probably involve some sort of blend and/or local development. The debate concerning

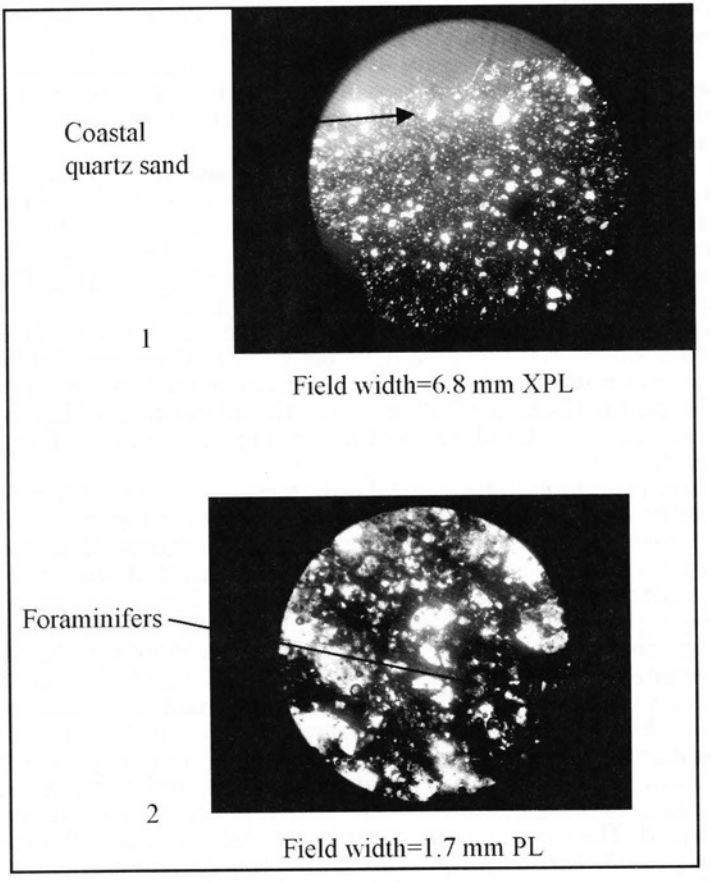

Fig. 16. Thin section of Philistine Bichrome vessel from Azor showing calcareous soil rich in foraminifers and coastal quartz sand.

the origin of the Philistines, and the Sea Peoples more broadly, is a long and unresolved one (for reviews see Singer 1988; Yasur-Landau 2002: 207–11). Many suggestions have been proposed, ranging from the Aegean (T. Dothan and others), to Crete (Macalister 1914: 1–28), Cyprus (Killebrew 1998b: 401–2; 2000), western Anatolia (Singer 1988, relying on the etymology of Philistine/Sea Peoples names), and the Dodecanase (Yasur-Landau 2002). Some scholars have also suggested that the Sherden originated from the island of Sardinia (Dothan 1986; Zertal 2001).

The ethnic explanation for the variability in material culture in Philistia should be examined according to the archaeological evidence. If there were different Aegean elements in the material cultures of Ashdod and Ekron in the earliest Philistine settlements this would better fit an ethnic demarcation. However, there seems to be a difference in the intensity of the Aegean influence, as well as in the settlement sizes of these two sites, and it therefore seems more appropriate to attribute these differences to local developments within Philistia.

I believe that the differences documented in this paper can be explained by two primary dynamics. The first dynamic was the interaction that occurred between Philistine newcomers and the local Canaanite (and Egyptian) inhabitants resident at these sites when they arrived. The 13th century remains at Ashdod suggest that the site continued to have a stronger Egyptian, and possibly even stronger Canaanite, presence during the transition from the LB II to the Iron IA. A similar situation might also have occurred at Gaza and Ashkelon, given their importance as ports and outposts on the Via Maris during the 13th century BCE (see Dothan 1992). The inland cities of Ekron and Gath, on the other hand, were of lesser importance to the Egyptian administration.

Thus, even though the coastal settlements were probably reached physically before those inland, the cultural record suggests these inland sites were the first to absorb sizable numbers of migrating settlers. As a result, the Philistine presence at Ashdod was relatively small, and therefore socially and politically weak, while other ethnic groups, representing the Egyptian and Canaanite population, were stronger and consequently more visible archaeologically. Although a Philistine presence was likely established at Ashdod at the very beginning of the Iron I, it became more dominant only later in the period, while at Ekron, the Philistine migrants were able to establish a dominant presence from the beginning, although, as we have seen, some elements of the material cultural record suggest that at least some existing administrative structures may have remained unchanged. The ongoing investigations at Ashkelon and Tell es-Safi should provide further insight concerning this dynamic.

The second dynamic that might explain the intra-regional cultural variation is the possibility of a shift in the balance of power between the different pentapolis cities over the course of the Iron I. This power balance continued to evolve during the Iron Age II, until their destruction by the Babylonians around 600 BCE. This mechanism is more evident during the Iron IIA and onwards, when the political structure of the Philistine pentapolis stabilized. This power imbalance is particularly evident between Ashdod, Gath and Ekron during the 10th through 7th centuries, both in historical sources (e.g., Tadmor 1966; Shai 2006) and the archaeological record (mainly in site size and fortifications). Thus, during the 9th century, Gath appears to have been the stronger, Ashdod during the 10th and 8th centuries, and Ekron (and possibly Ashkelon) during the 7th. This dynamic thus was very likely also operative during the earlier Iron Age as well, with Ekron

(and possibly Ashkelon) strongest during the initial settlement phase, and Ashdod becoming stronger later, during the 11th century BCE.

In summary, according to the available evidence, the cultural differences exhibited between the cities of Philistia appear to have been largely the result of internal dynamics. During the initial settlement phase, of which its exact origin cannot be defined, there is greater evidence for extensive Aegean contact at the inland site of Ekron, than there is at the coastal settlements of Ashdod (and possibly Ashkelon). Later, a power imbalance developed between these settlements. This imbalance continued down through the period, shifting from one site to another, such that during each sub-period of the Iron Age a different city dominated Philistia.

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THE INDUSTRIOUS SEA PEOPLES: THE EVIDENCE OF AEGEAN-STYLE TEXTILE PRODUCTION IN CYPRUS AND THE SOUTHERN LEVANT

Introduction

A distinctive group of installations found in Cyprus and the Levant in 12th century BCE contexts have traditionally been identified as 'bathtubs' used either for bathing (Courtois 1992; Karageorghis 1983a), described as an Aegean innovation (Karageorghis 2000: 473), or for purification rituals in cultic settings (T. Dothan 2003: 202–7; Karageorghis 1983a: 438; Steel 2004: 174–5). A review of their find-spots, however, demonstrates that these 'bathtubs' are often found in industrial locations. In this paper, I will argue for an alternative understanding that accounts for their presence in industrial contexts. The discovery of a 'bathtub' in association with a variety of weaving instruments at the Philistine site of Tel Miqne-Ekron suggests that some of these large tubs may have facilitated the manufacture and production of textiles, possibly as containers for fulling wool.

The textile industry has received little attention in reconstructions of Philistine culture despite the findings of loom weights at many Philistine sites. Discussion of weaving technologies has moved no further than recognizing the presence or absence of foreign style loom weights and associating them with gendered activities. The identification of fulling in the archaeological record of the Late Bronze and early Iron Ages corresponds with a number of other innovations in textile technologies that appear at this time on Cyprus and in the southern Levant that suggest changes in both textile manufacture and scale of production (Smith 2001). As documented in Mycenaean Linear B texts, the fuller's profession was one of high status, often associated with the royal court or other powerful institutions (Palaima 1997; Palmer 1963: 191–3; Ventris and Chadwick 1973: 123). The appearance of such a specialized craft in Philistia has significant implications for understanding the role of textile production within the economic underpinnings of Philistine society.

The bathtubs are generally described as large, "bath-shaped basins" constructed of either limestone or clay, often with a plaster lining or a rock- or gravel-lined base (Karageorghis 2000: 266). Some have a hole cut through the base or side wall, and some have attached handles or lugs. Bathtubs have been reported from a number of different contexts in both Cyprus and the Levant, including tombs, sanctuaries,

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and private homes or in the large 'official' rooms of elite residences, where they are often found in or near areas interpreted as bathrooms. Descriptions of these installations usually invoke an image of wealthy individuals luxuriating in private bathing facilities (cf. Courtois 1992; Karageorghis 1983b: 373). Karageorghis even describes an image of a bather "with water being poured over him, perhaps by an attendant," and he suggests identifying a small, protruding ledge as a 'soap dish' (Karageorghis 1983a: 435).

A second interpretation for bathtubs found in Cyprus posits a religious function, in which the tubs performed some unspecified cultic role usually assumed to have involved a purification ritual (Åström and Åström 1972: 605; Karageorghis 1983a: 437–38; Steel 2004: 174–75). This particular interpretation has resonated in discussions of bathtubs discovered in Levantine contexts (e.g., Biran 1994: 174; T. Dothan 2002: 202–6).

The literature on bathtubs generally assumes that both the installations and the activity of bathing are Aegean in origin, with the tradition arriving on Cyprus in the late 13th century BCE along with other Aegean practices and material culture (Karageorghis 2000: 273). However, the earliest cited bathtub (Karageorghis 2000: 266) comes from the Ayios Iakovos Sanctuary and dates to the 14th century BCE (cf. Gjerstad et al. 1934: 356–61). Described as a "large bath-shaped basin of terracotta," it was set into a shallow pit in the floor, with only its top edges protruding above the floor's surface. The bathtub was found filled with ashes and burnt bones (P. Åström 1972: 1), and was associated with an accumulation of artifacts described as "votive gifts" (Gjerstad et al. 1934: 359). Karageorghis dismisses the identification of this basin as a 'bathtub,' proclaiming that "It is not certain whether this basin was ever used as a bathtub, or whether it really resembled a bathtub," while pointing out that its identification was further compromised because it was not preserved and the field photographs, which depict it *in situ*, do not shed light on its function (2000: 266).

Karageorghis (2000: 266–74) and T. Dothan (2003: 202–7) provide the most recent overviews of these intriguing installations. In his catalogue, Karageorghis (2000: 272) notes in passing that a number were found in industrial areas (see Table 1). These find spots are generally assumed to represent secondary contexts. The recurrent discovery of similar installations in industrial areas, however, suggests that these contexts may not necessarily be secondary, but were areas associated with the primary function of these installations. The recent publication of a number of bathtubs from Philistia (T. Dothan 2003; Master 2005: 345; Stager 2006: 13) allows for an alternative understanding of some of these large basins as industrial installations, and compels us to reexamine the contexts of earlier finds in Cyprus and the Levant.

Cyprus

In Cyprus, bathtubs are often found on floors that are partially paved with stone slabs or have a hardened floor surface. Many

bathtubs are found smashed to pieces. Others are embedded in the floor surface. Some baths are found in contexts that suggest they were intentionally put out of use, as in the case of two examples from Enkomi, where one stood below a wall (Courtois 1992) and the other was found upside down (Courtois et al. 1986).

Rooms are often identified as either bathrooms in domestic settings (e.g., at Enkomi and Pyla-Kokkinokremos), or cultic shrines (e.g., at Kouklia), based primarily on the presence of a bathtub (see Table 1). The identification of Room B in Building II at Alassa-Paliotaverna as a "public building containing a cult place" was based on the presence of a pillar-flanked hearth and bathtub which, according to the excavators, "is yet another argument in favour of this [cult] suggestion, having in mind the ritualistic nature of these artifacts in the LBA" (Hadjisavvas 1996: 113). These arguments run the risk of circular reasoning, with the installations identified as bathtubs based on their context, while at the same time giving definition to that same context.

A number of bathtubs have been recovered from contexts that have been interpreted as secondary, or in which their function was unclear, but nevertheless seemed ill-suited for bathing. The terracotta bathtub from Kalavasos-Ayios Dhimitrios (South 1980: 36, fig. 4, 38–39) is a good example. It was found in the corner of a large one-room structure, set into a floor of hard white plaster, with only its rim protruding above floor level. Flat-lying stones paved the area flanking either end of the tub. South mentions that the tub had two loop handles and a relief-decorated exterior, but it is not clear from her report whether these features were visible above the ground surface, though they do not appear to have been, based on her description that the tub was "sunk below floor level in such a way that its rim project[ed] a short distance above the floor surface" (1980: 39). An outlet hole was pierced in the tub's lower wall, but was not connected to a drainage channel, as is typical of these installations. This suggests that whatever drained from the tub was not meant to be collected. Other features in the room included several variously sized pits and sherds of large pithoi, leading South to conclude that "It appears extremely unlikely that this large room was a bathroom, and the bath must have been set here for some other purpose" (1980: 39). Based on architectural similarities with Building X, a monumental complex located in an area to the north of the building in which the tub was found, South identified the tub room as having a public or administrative function (1983: 101).

Similar installations have also been found in contexts that have been identified as industrial, such as the tubs at Kition and Maa-Palaeokastro and some of the examples from Enkomi (Karageorghis 2000: 270–72). The functional nature of these areas was identified as industrial by the excavators based on the presence of production waste and industrial tools, including evidence of copper working and textile production, and/or by concentrations of tubs and tub fragments in close proximity (Karageorghis 2000: 270–72).

Perhaps the best evidence for bathtubs in industrial contexts comes from the site of Maa-Palaeokastro, where more than twelve clay

bathtubs and bathtub fragments were found (Karageorghis and Demas 1988). The majority of the fragments and the most complete examples all derive from the floors and fills in the rooms along the southern half of Building III, a building interpreted as largely for storage, with some "specialized use of its south sector" (Karageorghis and Demas 1988: 63). Although many of the finds from Building III were linked to bathing activities, including a pithos for water storage, soot-covered pottery for water heating, and personal items such as a bronze fibula, pin and a beaded necklace (presumably lost by the bather), the large number of bathtubs found in the complex forced Karageorghis and Demas to suggest other possible interpretations, including the washing or dyeing of cloth or wool, or other undetermined industrial activity (Karageorghis and Demas 1988: 34). It is interesting to note that their discussion of the functional use of the Maa-Palaeokastro tubs was preceded by a similar discussion when they excavated the "bathroom" at Kition in Area I, Floor IV (1985b: 9–10), where they found a bathtub fragment in a later phase (see Table 1). One of their initial suggestions was that the room was used "for the dyeing and manufacture (?) of cloth," but they rejected this idea in favor of identifying the room as a bathroom, a functional space which they felt could be considered "an appropriate appendage to a small foundry" (1985b: 10).

Southern Levant

In the southern Levant, bathtubs have been found at a number of Philistine settlements, but they also appear at sites which are considered outside of the Philistine enclave (e.g., Megiddo and Tel Dan; see Karageorghis 2000: 266–74). The contexts in which they are found exhibit similar patterns to the bathtubs from Cyprus. In the sacred enclosure at Tel Dan, smashed fragments of a restorable bathtub were found in a stone-paved alleyway (Biran 1994: 165–83). Rooms alongside this alley contained an olive press and a large plastered bin, indicating that this part of the sacred area was set aside for industrial activity (Stager and Wolff 1981).

A photograph of a clay bathtub found *in situ* in Stratum VIA at Megiddo (Karageorghis 2000: 274; Loud 1948: 45, fig 87, 386: 6; Paice 2004: 59, pl. 21:1) shows it as a built-in, plastered feature, embedded in the room's floor, with an associated bowl at floor level into which the contents of the tub may have drained. This installation was identified by Loud as a wine or oil press (Loud 1948: 45, fig. 87). It was probably only recognized as a "bath" once it was removed from its context (Loud 1948: fig. 386: 6). The published photograph clearly indicates that one of the handles, preserved on the back wall of the tub, was at least partially concealed by the surrounding plaster construction, and therefore does not appear to have been associated with the tub's function in the context in which it was found.

At Philistine sites, T. Dothan differentiates between bathtubs found in 'bathrooms' and those which come from contexts that do not have the 'appearance' of a bathroom (2003: 202). Dothan notes that bathtubs are often discovered in association with rectangular mudbrick platform

hearths, and are commonly found in large, communal assembly rooms where they "fulfill[ed] a role in purification and/or other rituals" (2003: 203–4). Mention is also made of a possible clay 'bathtub' fragment found at Tell Qasile (T. Dothan 2003: 203; Karageorghis 1983a: 274). However, purification rituals do not seem to be a central focus of the cultic activities in the Philistine temple complex at this site (Zevit 2001: 125–32), nor in what we know of Philistine cultic activities in general (Mazar 2000).

The two clearest examples of Philistine bathtubs come from Area G at Ashdod and Building 353 at Tel Miqne-Ekron. The buildings in which these bathtubs were found shared a similar architectural plan, consisting of a large front room with two smaller rooms at the rear. The Area G building at Ashdod has been redefined recently as an elite residence (T. Dothan 2003: 202), although the excavators initially described it as a workshop (Dothan and Porath 1993: 72). Building 353 at Tel Miqne has been identified as domestic (Mazow 2005). A third bathtub has been discovered in the Philistine levels at Ashkelon (T. Dothan 2003: 204–7, fig. 15; Master 2005: 344–45, figs. 20.7 and 20.8; Stager 2006: 13; forthcoming). Although not fully published, it too presents interesting parallels and will be discussed further below.

Ashdod

In Area G at Ashdod, Dothan and Porath (1993: 70–73, plan 11) uncovered remains of both a terracotta (1993: 266–67, basin 4141 in pl. 22: 2–3, pl. 23:1) and a possible limestone (1993: 267, pl. 24:1 and 3) bathtub. The clay tub was originally described as "a well-fired pottery basin...with a blackened hole in the base at one of its ends" (1993: 72). According to their reconstruction, the bathtub was located in the "courtyard" of a "workshop", which contained, among other things, "a large quantity of ashes, several grinding stones...and a stone bench or worktable..." (1993: 72). The bathtub was discovered set into the courtyard's surface. A small fire installation, initially called a kiln in the excavation report (1993: 72), but more recently described as a hearth (T. Dothan 2003: 202), also stood near the bathtub. Fragments of worked limestone, identified as part of another possible bathtub or basin (Dothan and Porath 1993: 72–3; T. Dothan 2003: 204), were found in "secondary use" embedded in the floor of a Stratum XII complex to the north of this workshop.

Tel Miqne-Ekron

Two Aegean-style limestone bathtubs were identified at Tel Miqne-Ekron. The first, discovered in Field I, dates to the initial phase of Philistine settlement at Tel Miqne in the 12th century (T. Dothan 2003: 204–5, fig. 13; Meehl et al. 2006). This bathtub was located in one room of a multi-room complex. Other features in the room included a freestanding hearth and a mudbrick bench. A flagstone pavement was laid around the tub's base. No other details or associated artifacts have yet been published pertaining to this example, but its location in Field I indicates that it must have been somewhere near the Field

I industrial area and pottery kiln complex (Killebrew 1996: 145–49, 151).

The second limestone bathtub was located in Field IV Lower, and dated approximately to the end of the 12th/beginning of the 11th centuries BCE (T. Dothan 2003: 204–6, fig. 14; Garfinkel et al. forthcoming; Mazow 2005: 78–80). It sat in Room A, the front room of Building 353, a multi-room complex built along the eastern side of Building 350, a temple or wealthy residential structure. Oval in shape, the tub had plastered sides and a cobble-lined floor, with a drainage hole equipped with a stone plug at one end of its sloping base. Other features in the room included a rectangular mudbrick platform hearth, flanked by two pillars, and a partially paved surface. The tub was filled with pea-sized gravel, interpreted by the excavators as evidence that this installation had fallen into disuse (Garfinkel et al. forthcoming).

Rooms B and C, two smaller rooms at the back, contained an assortment of artifacts attesting to craft production and, in particular, textile manufacture. The space in Room C was occupied almost entirely by three shallow, interconnected, plaster-lined basins set into the floor. In Room B, two spinning/plying bowls were found and a cluster of loom weights, indicating the possible location of a warp-weighted loom. Although individual loom weights were found scattered throughout the excavation area, this find is one of only two loom weight caches, and the only one which may indicate a use-context. The second loom weight cache was found together with an assortment of artifacts that suggest a storage area, including ivory, jewelry, zoomorphic objects, pottery, grinding stones and flint tools (Barber 1991: 102–3).

Both caches contained a mixture of loom weight types (Mazow 2005: 165–67; Garfinkel et al. forthcoming), including the pierced pyramidal and doughnut styles, and non-perforated clay cylinders often identified as Aegean-style loom weights. The identification of these latter objects as loom weights has been proposed based in part on their discovery at Ashkelon, where large numbers have been found aligned in rows as if dropped from warp weighted looms (Stager 1995: 346). Additional hypotheses posit that these clay weights, or reels as they are sometimes called, were used to twine belts or strips of cloth which were then sewn together (Barber 1997: 516; 1999: 54–60). Either way, these clay cylinders were clearly associated with textile production.

Additional evidence of textile manufacture includes a number of large ceramic basins (cf. Dothan and Zukerman 2004: 23, fig 25: 2 and 26), which Sherratt has suggested may be connected with weaving (1998: 304–5), and a collection of spindle whorls. Worked ceramic sherds were also found concentrated in this area. These sherds, often referred to as stoppers, may have functioned as bobbins or spools around which thread could be wound, as initially proposed by Petrie (1917: 53) and Cartland (1918).

Adjacent to Building 353 was a second building, Building 354, which exhibited a similar spatial organization. Although no bathtub or

hearth platform was found in this building, it contained an assortment of small pillar bases, postholes and pits, and the area could easily have functioned as a place for warping yarn or for drying finished fabrics. A large number of sunken store jar installations were also concentrated in these two buildings. Sunken store jar installations, found at Tel Miqne (Garfinkel et al. forthcoming) and at Ashkelon (Stager 2006: 14; forthcoming), consisted of the lower part of a store jar embedded in the floor and encircled by a pavement made of small pebbles, sherds and/or shell. I have argued elsewhere that these installations were used for craft production (Mazow 2005: 236–45). The concentration of weaving and industrial equipment in these two buildings provides strong evidence for the existence of a textile workshop, with permanent installations and separate activity areas.

Ashkelon

A limestone bathtub has been recovered from the Philistine city of Ashkelon. Although not yet fully published, some interesting features concerning the context of the bathtub can be noted. It was found in a secondary use context (Master 2005: 345), with a proposed "initial use belong[ing] to the early stages of Philistine settlement at Ashkelon" (T. Dothan 2003: 204). Interpolating from information provided by Stager, Dothan (2003: 205–7, fig. 15) has reconstructed the Ashkelon bathtub as situated in the corner of a large room, in the center of which was a mudbrick platform hearth. The published plans illustrate a number of built-in features, including a hearth (Stager 2006: 13), that might have been associated with the original function of the bathtub (Master 2005: 344, fig. 20.7; Stager 2006: 12). However, the bathtub was actually found embedded within a plastered construction that has been identified as a winepress (Master 2005: 345, fig. 20.8), suggesting an alternative function.

The larger context of the Ashkelon bathtub is difficult to define. Based on the very limited data published thus far, the room in which it was found was located in Grid 38, the excavation area with the largest exposure of the Philistine settlement (Master 2005: 344–45). Preliminary reports describe a large public building, dated to both the Philistine Monochrome and Bichrome phases (Stager 1995: 346), and associated with an area that "appears to have been primarily an open area, in part devoted to the production of wine and possibly also grappa..." (Barako 2001: 83). Based on the presence of large stone pillar bases, Stager has drawn architectural comparisons with Philistine palaces and temples, and has assigned it an administrative or cultic function (1995: 346). More recent architectural plans (Master 2005: Phases 20, 19 and 18a; Stager 2006: Phases 20 and 19; forthcoming) illustrate isolated blocks of single- and multi-room complexes dated to Phase 18a, which is contemporary with the use of the bathtub as a winepress. These structures are described as "industrial" (Master 2005: 345).

In addition to this wine distillery, more than 150 Aegean-style loom weights were recovered from this area along with concentrations of textile fibers, attesting to a large-scale textile industry (Master 2005:

342; Stager 1995: 346). Some of these loom weights were found aligned in rows along the walls, clearly indicating they were part of warp-weighted looms (Stager 1995: 346), and arguing against the use of this area as a storage facility (Barber 1991: 102–3).

Both the spatial and chronological relationships between these loom weights and the bathtub remain elusive, but the co-occurrence of these features in light of the parallel examples at Tel Miqne and Ashdod argues strongly for a link between the bathtub installation and textile production.

Although there have been a number of recent studies on weaving in the southern Levant, in terms of Philistine textile technologies, the discussion has not moved beyond a recognition of the presence of these foreign style loom weights at Philistine sites, and the assumption that they reflect the presence of Philistine women (e.g., Bunimovitz and Yasur-Landau 2002: 214–16). The evidence of a textile workshop at Tel Miqne and the large number of loom weights found at Ashkelon indicate active textile production at these Philistine settlements. Moreover, the parallel contexts of weaving tools with bathtubs, at both Tel Miqne-Ekron and Ashkelon, support the view that these bathtubs played a significant role in craft production, and particularly weaving.

Textile Production and Fulling

However, what specific role did these bathtubs play in the production of textiles? I propose that they were used either for scouring or fulling wool. Scouring is the process of cleaning wool and removing the natural lanolin and other greases. Fulling, or felting as it is sometimes called, is the stage of textile production associated with finishing a textile, and involves matting the woven textile to form the finished fabric. Both scouring and fulling require hot water and a detergent to keep the lanolin in suspension. Descriptions of fulleries from the Roman period record that the detergent of choice consisted of a mixture of ashes and urine (Beltrán de Heredia Bercero and Jordi y Tresserras 2000: 242). The latter ingredient was collected in large public urinals (Moeller 1976: 20).

Fulling also requires some form of agitation, such as kneading, stomping or pounding the wet wool (Barber 1991: 216). Descriptions of fulling, illustrated in Roman period funerary stelae, portray men standing in large basins and treading on woolen textiles (Lovén 2000: 237, fig. 4). Roman sources also preserve information regarding both small- and large-scale fulleries (De Ruyt 2001; Pietrogrande 1976; Ward-Perkins and Amanda 1978: 61). A reconstruction of an industrial fullery from Roman Ostia depicts rows of men treading on wool, while standing in large sunken basins and leaning for support on small partition walls (De Ruyt 2001: fig. 4; Pietrogrande 1976: fig. 26). Although no evidence of fulled textiles has yet been found in the pre-classical Mediterranean world, both a fuller and the activity of fulling are described in Linear B texts (Ventris and Chadwick 1973: 123, 322). These documents indicate that fulling was a specialized craft, and

traditionally a male occupation (Barber 1991: 274, 284; Palmer 1963: 191–98; Ventris and Chadwick 1973: 123; Ward-Perkins and Amanda 1978: 59–61). According to Barber (1991: 274), weavers would send their woven cloth to a fuller for finishing.

Fullers also appear to have held relatively high status (Palaima 1997; Palmer 1963: 191–98; Shelmerdine 1999; Ward-Perkins and Amanda 1978: 59–61), and are listed along with potters on Linear B tablets from Pylos as specialists associated with the wanax, a term usually understood to mean king or ruler (Shelmerdine 1999). Palaima (1997) has proposed that the relationship between fuller and wanax was that of an attached royal craftsman. Ventris and Chadwick (1973: 123) have also recognized references to royal fullers in the Linear B documents, and the role of these royal craftsmen as attached specialists has been further examined by Shelmerdine (1999).

A symbiotic relationship might also have existed between fullers and the cosmetics industry. Lanolin, used as a moisturizer in cosmetics, could theoretically have been strained from the heated scouring water once the wool was removed from the tub. This relationship might be symbolized by a miniature bathtub-shaped ivory pyxis found in a large tomb at Kition (Karageorghis 1974: 42–43, 62–94, pls. LXXXVII, CLXX), and a second example of soapstone found at Enkomi (Dikaios 1971: 768, pls. 147:8, 176:55).

Maa-palaeokastro – A Late Bronze Age Fullery

The strongest evidence for the use of bathtubs in a large-scale fullery comes from Building III at Maa Palaeokastro on Cyprus. When compared to reconstructions of a Roman fullery (De Ruyt 2001: fig. 4; Pietrogrande 1976: fig. 26), striking parallels can be observed. These include rows of small, individual cells, with semi-partition walls between them, with each cell containing its own basin- or bathtub-like installation embedded in the floor.

The plan of Building III at Maa-Palaekastro includes a long narrow corridor backed by a series of rooms separated from each other by low partition walls. These partitioned cubicles, which lacked any apparent structural function, puzzled the excavators, and prompted them to posit the existence of a possible staircase or light and ventilation access. Most of the bathtubs and bathtub fragments came from the floors and fills in these small rooms (Karageorghis and Demas 1988: 63). One of the most complete tubs was found in the corner of one of the cubicles, its smashed fragments found lying above a pithos- and pebble-paved surface in the corner of the room.

The northern part of the building at Maa-Palaeokastro is similar in plan to rooms along the southern end of the building. A wide hall that stretches the length of the building separates these two sections, and it is not clear whether access between them was possible. Objects of note found in this building include a large number of Aegean-style loom weights (n>30), which appear to have been concentrated in the central and northern parts of the building (Karageorghis and Demas 1988: 27–33, 227, 239, 251). Large numbers of pierced terracotta loom

weights, which have been traditionally recognized as weights for warp weighted looms, were also found throughout the site, although none were associated with Building III (1988: 227). This spatial distribution of artifacts suggests a segregation of tasks, with fulling occurring in the southern sections of Building III, weaving or twining with Aegean-style loom weights in the north, and weaving with pierced loom weights in other building complexes at the site. This distribution also provides compelling evidence in support of a functional link between Aegean-style loom weights and bathtubs.

Conclusions

Sherratt (2003: 44) has questioned the widespread assumption that trade ceased with the collapse of Late Bronze Age society, pointing to the increasing evidence of a flourishing urban economy in the Early Iron Age. She has argued instead that trade continued between Cyprus and the Levant, fueling the economy of the eastern Mediterranean, albeit involving different mechanisms than those that had proceeded it during the Late Bronze Age (1998; 2003). Although Sherratt cites evidence for contemporary industrial-scale production systems on both Cyprus and in the southern Levant (1998: 302–5; 2003: 46–48), her emphasis is on trade as the economic catalyst. Thus, in her view, it was the development of decentralized, direct commercial exchanges that fostered the growth of a new urban settlement pattern, seen particularly along the coastal areas of the Levant, and resulted in a large, pan-eastern Mediterranean "economic and cultural community" (1998: 294). Bauer (1998) has proposed similarly that the Sea Peoples, or Philistines more specifically, were mercantilists who, through decentralized trade networks, established trading colonies along the southern Levantine coast. Alternatively, I propose that the Philistines were not only distributors, as suggested by Bauer's model, but also active producers.

By re-examining a selected number of contexts that have produced remains associated with Philistine material culture, this paper has identified clear evidence for an active textile industry that has gone relatively unrecognized in previous reconstructions of Philistine society. My review of the contexts in which 'bathtubs' have been found suggests that some of these installations were not used for purification rituals or Aegean-style elite bathing etiquette. An industrial interpretation fits better with the find spots of many of these tubs. In particular, I have noted the link between a number of bathtubs and Aegean-style loom weights, and I have argued that those bathtubs found in contexts associated with textile manufacture might have been used for fulling wool. Although preliminary, the evidence points to the existence of at least two large-scale, specialized industries associated with Philistine society: pottery (cf. Killebrew 1998) and textile production.

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Table 1. Bathtubs in the Levant and Cyprus

Levant

Site	Location	Date	Construction	Dimensions (m)	Associated Finds	Published
Tell Abu Hawam	Grid D4, Bldg 24?	Str. III 10th-late 8th c. (Balensi, *et al.* 1993)	Terracotta, "broken but in position" (Hamilton 1935: 24)		• 4 exterior handles, two on a side. • at north end of multi-room building	Hamilton 1935: 24, Plate III and XXXVI; also cited in Karageorghis 2000: 273
Acco, The Persian Garden	Tomb C2	14th c.[1]	Terracotta, upside down, missing base	1.15 long, 0.55 wide, 0.64 deep	• 4 loop handles, 4 horizontal parallel ridges below handles • Karageorghis remarked on its similarity to the tub from Kalavasos-Ayios Dhimitrios (2000: 273)	Ben-Arieh 1993: 28; Ben-Arieh and Edelstein 1977: 9, 19 fig. 6 and Plates II: 2,3, XV: 10; also cited in Karageorghis 2000: 273
Ashdod	Area G, courtyard of work-shop	XII, 12th century (Dothan and Ben-Shlomo 2005: 9, table 1.1)[2]	Terracotta, immersed in floor		• hole in base, stood next to platform hearth, other finds in room include grinding stones and a large quantity of ash • building defined by excavators as "workshop" in residential area (Dothan and Porath 1993: 72) or "elite...communal..." with cultic associations (T. Dothan 2003: 202-203)	Dothan and Porath 1993: 70-73 plan 11, 266-267, basin 4141 in pl. 22: 2,3, pl. 23: 1; T. Dothan 2003: 202-203, fig. 12; also cited in Karageorghis 2000: 273

[1] Based on published photographs of the Cypriot pottery associated with the tomb, Karageorghis (2000: 273) suggests that this date "may be too high".
[2] Ashdod Stratum XII-XI in Area G is contemporary with Tel Miqne-Ekron Stratum VIA-VA according to Dothan and Zukerman (2004: 6, table 2).

Site	Location	Date	Construction	Dimensions (m)	Associated Finds	Published
Ashdod	Area G	XII, 12th century BCE (Dothan and Ben-Shlomo 2005: 9, table 1.1)[3]	Limestone, found in secondary use, embedded in floor	1.05 long x 0.27-0.18 wide x 0.10 thick	• long ends end in raised projections • doesn't seem to resemble other bathtub examples • located in building immediately north of residential area (Dothan and Porath 1993: 72)	Dothan and Porath 1993: 70-73 plan 11, 266-267, basin 4141 in pl. 22: 2,3, pl. 23: 1; T. Dothan 2003: 202-203, fig. 12; also cited in Karageorghis 2000: 273
Ashkelon	Grid 38	Phase 18a,[4] approx. 1050 BCE (Master 2005)	Limestone, found in secondary use as "winepress"		• located in corner of room • near large caches of loomweights but exact spatial and chronological relationships are not known • associated with a platform hearth (T. Dothan 2003: 204; Stager 2006: 13)	T. Dothan 2003: 204, 207 fig. 15; Master 2005: 344, fig. 20.7, 345, fig. 20.8; Stager 2006: 13; forthcoming
Dan	Sacred Precinct	10th-beg. 9th c. BCE	Terracotta, smashed above cobbled surface	1.41 long x 0.82 wide x 0.65 high	• raised shelf or "seat" at end of tub • located in alley outside olive press installation, in "sacred precinct"	Biran 1994: 176, fig. 137 and 182, fig. 143; also cited in Karageorghis 2000: 274
Miqne-Ekron	Field IVLower Bldg. 353a	VIA, 4th quarter 12th/beg. 11th c. BCE (T. Dothan and Gitin 2005)	Limestone w/plastered sides and cobbles in base, set into floor	1.09 long x 0.70 wide x 0.38-.028 deep	• oval in shape, "plug" in base; located next to platform (hearth) with 2 columns; tub filled with pebble debris.	T. Dothan 2003: 204, 206 fig. 14; Garfinkel, *et al.* forthcoming; Mazow 2005: 78-80

[3] See note 2.

[4] The bathtub was found in a Phase 18a context, but the excavators' assume that it had a prior use in Phase 19, dated to approximately 1150 and contemporary with Tel Miqne-Ekron VI (Master 2005).

Site	Location	Date	Construction	Dimensions (m)	Associated Finds	Published
					• other finds include: loomweights, spinning bowl, lg. ceramic basins • located in multiuse front room of crafts workshop/residence (Mazow 2005: 349-354)	
Miqne-Ekron	Field INE (sondage)	VII, 2nd-3rd quarter 12th c. BCE (T. Dothan and Gitin 2005)	Limestone, burnt, set into cobblestone surface		• located in room corner, hearth platform in center(?), bench along wall	T. Dothan 2003: 204, 205 fig. 13; Meehl, *et al.* 2006[5]
Megiddo	Area AA, Room 2022[6]	Str. VI, 1150-1100 (Harrison 2004b: 13)	Terracotta, cemented into floor, identified as wine or oil press	0.58 long x 0.54 wide x 0.52 high	• four small handles at rim; shallow bowl at one end. "remains of three wood posts" in room (Loud 1948: 45). • area defined by excavators as "domestic" with many grinding stones, ovens and stone tubs throughout.	Harrison 2004a; Loud 1948: 45, fig 87, 386: 6; Paice 2004: 59, plate 21: 1; also cited in Karageorghis 2000: 274

[5] Note corrections to the drawing published in T. Dothan (2003: 205, Fig. 13), which include 1. the direction of the north arrow should point from the upper left corner of the drawing down toward the lower right corner (north), adjusting the orientation of the building so that its entrance is in the south, 2. the location of the bathtub should be moved to the southeast corner of the room (to the left of its present location), set into a flagstone surface, and 3. entrance into the building is through a doorway in the south wall of the smaller, southern room. For a more detailed drawing of this installation, reference should be made to Meehl, T. Dothan and Gitin (2006).

[6] The "wine or oil press," which appears *in situ* in Fig. 87 (Loud 1948) most likely includes the clay "bath" that is pictured in Fig. 386: 6 in its reconstructed state (note the similarity in the handle, which appears in the foreground of Fig. 87, and the shape of the vessel's rim). Confusion over Loud's original description, where he also mentions the spatial distribution of a number of stone tubs in the vicinity of Room 2022, and the fact that in his text he does not associate the installation in Fig. 87 with the "bath" in Fig. 386: 6, led to Karageorghis' (2000: 274) cataloguing of these figures as portraying two separate bathtubs, one of clay and a possible second one of stone. Numerous stone tubs have been discovered in Stratum VI at Megiddo (Harrison 2004a), but, as they were not initially included in either Karageorghis' (2000) or Dothan's (2003) catalogues, they will be dealt with in a future publication.

Site	Location	Date	Construction	Dimensions (m)	Associated Finds	Published
Megiddo	Bldg. 1060[7]	Str. III-II, 780-600 BCE (Harrison 2004b: 13)	Terracotta, set into floor	0.62 long x 0.37 wide x 0.32 high[8]	• raised double band below rim • located in corner of central room with steps leading into this room and 2 side rooms • area defined by excavators as "domestic" but building noted as unusual (Lamon and Shipton 1939: 63)	Lamon and Shipton 1939: 63-64, fig. 74, plates 18.19 and 54; also cited in Karageorghis 2000: 274
Qasile			Terracotta, fragment			cited in T. Dothan 2003: 203; and Karageorghis 1983a: 274 as personal communication from A. Mazar

Cyprus

Site	Building	Date	Construction	Dimensions (m)	Associated Finds	Published
Alassa-Paliotaverna	Room B, Bldg. II, south wing of large ashlar building	LCIIIA	Terracotta, crushed on top of "well-head"		• two handles visible in photo (Hadjisavvas 1996: XIX: 2) • located in one of two rear rooms off of courtyard; parallel room complex at west end of south wing with "hearth room" and "sunken construction" between them. • tub described as "almost identical" to one from sanctuary at Palaepaphos; assoc. with hearth	Hadjisavvas 1994; 1996: 109, 112, 113, fig. 2, plates XIV: 2, XV: 2, XIX: 2; Hadjisavvas and Hadjisavvas 1997; also cited in Karageorghis 2000: 270

[7] Plates 18 and 54 note that this bathtub, Jar 91, was from locus 850, which appears in square O9 in Fig. 117 on the Stratum II plan. Although, as labeled in the air photograph, this locus does not seem to appear in building 1060, it seems logical to suggest that this clay bath is the one referred to in the text as coming from Building 1060, and the one which appears in the photograph in fig. 74.

[8] Measured off drawing. Measurements from exterior walls.

Site	Building	Date	Construction	Dimensions (m)	Associated Finds	Published
					• building function identified by excavators as "public building containing a cult place" (Hadjisavvas 1996: 113); also referred to as a "bathroom" (Hadjisavvas and Hadjisavvas 1997: 145)	
Ayios Iakovos	Sanctuary	14th c.	Terracotta, with base formed by flat, sawn conglomerate piece; set into shallow pit in the rock	1.28 long x 0.63 x 0.47 (exterior dimensions)	• Inv. No. 52 • small pits on either side of tub • located in center of "sanctuary" court, most of "votive gifts" found in and around basin (Gjerstad, *et al.* 1934: 359). Åström (1972: 1) described the tub as filled with ashes and associated with burnt bones.	P. Åström 1972; Gjerstad, *et al.* 1934: 356-361; also cited in Karageorghis 2000: 266
Enkomi	Quarter 5W, NE of Bâtiment 18	LCIIIA	Carved limestone	1.23 long x 0.68 wide x 0.64 high	• 4 small, vertically oriented, rectangular projections on exterior below rim • found *in situ*, in a "private house" (Courtois 1992: 51) but with a wall built across it essentially putting it out of use; next room to east had a flagstone paved surface and "latrines" (Courtois 1992: 51); • interpreted by excavators as a bathroom complex	Courtois 1984: 104, inv. 929, fig. 39/17; 1992: fig. 2; also cited in Karageorghis 1983a: 435 note 1, 436 fig. 3; and in Karageorghis 2000: 266

Site	Building	Date	Construction	Dimensions (m)	Associated Finds	Published
Enkomi	East of Bâtiment 18, domestic		Terracotta	1.40 long x 0.58 wide	• one projection on exterior of each long side, found near well • described by excavators as domestic	Schaeffer 1952: Plan LXXXVII; also cited in Courtois 1992: 151; and in Karageorghis 2000: 266, 270
Enkomi	West of Bâtiment 18, domestic		Terracotta	1.75 long x 0.70 wide	• 2 exterior projections along one long side[9] • built along wall in corner of room • described by excavators as domestic	Schaeffer 1952: Plan LXXXVII; also cited in Courtois 1992: 151; and in Karageorghis 2000: 266, 270
Enkomi	Quartier 6W	LCIIIB	Terracotta	1.10 long x 0.54 wide x .635 high	• drainage hole in base • found broken but almost complete within collapsed debris • other finds in the room include ceramic and stone loomweights, a bone tool, a round pottery slice (possibly a "stopper"), a miniature bathtub, and various utensils made from pebbles. Additional finds in the building include 3 or 4 large basins with drainage holes, and a large number of terracotta "reels" • described by excavators as domestic and industrial (Courtois, *et al.* 1986: 51-53)	Courtois, *et al.* 1986: 52[10]

[9] Courtois (1992: 151) describes this tub with handles along one side only, but it is not clear whether this description is based only on Schaeffer's plan, where the tub is set against a wall and therefore only one side is clearly visible, or if Courtois' description is based on seeing the tub itself. Karageorghis noted that neither this tub nor the tub from east of Bâtiment 18 can now be located (2000: 270).

[10] Based on its location, this may be the same vessel as mentioned by Schaeffer (1952: 28, plate LXII) and cited in Åström (1972: 519), discovered in the *Chantier dit des Ateliers*. If so, then the bone tool mentioned by Courtois *et al* is probably the bone stylus/weaving tool described by Schaeffer (see also the objects found with the Enkomi tub found in Area I, Ashlar Building, Room 2), and one should also note the large amount of evidence for copper working in this area.

Site	Building	Date	Construction	Dimensions (m)	Associated Finds	Published
Enkomi	Quartier 4E		Terracotta		• one handle visible in photograph • found upside-down (next to silver bowl with Cypro-Minoan inscription) • described by excavators as domestic and industrial area/crafts (Courtois, *et al.* 1986: 26-27)	Courtois, *et al.* 1986: plate XIV.4; also cited in Courtois 1992: 151-152; and in Karageorghis 2000: 270
Enkomi	Area I, Ashlar Building, Room 2	Level IIIA	Terracotta, fragments in pit fill		• room 2 has 2 wells and slab-paved floor • pit sealed by floor V surface in Room 2, although mention also made that stone slabs of surface showed disturbance • finds in the wells include a wooden comb and 2 bone beaters/weaving tools (cf. Smith 2001: 89)[11] • described by excavators as "service" rooms for the residence on the upper floors (Dikaios 1969a: 182)	Dikaios 1969a: 181-182; 1969b: plan 273; also cited in Karageorghis 2000: 270[12]
Enkomi	Area I, Ashlar Building (reconstructed), courtyard	Level IIIB	Terracotta		• inv. 473, fragments • other finds in courtyard include grinders, pestle, spindle whorl, terracotta loomweight • Dikaios suggested domestic	Dikaios 1969a: 205; 1969b: plan 276

[11] Joanna Smith (2001) has recently argued that what had been formerly called 'bone stylae' are actually weaving tools.

[12] In Area I, Level IIIA of the Ashlar Building, Dikaios (1969a: 181-182) describes fragments of a clay bathtub found amongst other things sealed in a pit. The room, Room 2, in which the pit was found, had a stone-paved flooring and two dug wells. Finds from this room include a "bone stylus"/weaving tool, INV.6336/2 (see note 11).

Site	Building	Date	Construction	Dimensions (m)	Associated Finds	Published
Enkomi	Ashlar Building (reconstructed), Rooms 39/39B	Level IIIB	Terracotta, partially paved floor	0.80 x 0.45	• rectangular in shape • well in room • Dikaios described room function as bathroom in domestic context	Dikaios 1969a: 205; 1969b: plan 276; also cited in Karageorghis 2000: 270
Enkomi	Area III, Sector B (plan)	Level IIIA late (floors IV and III) and IIIB, floor II	Limestone, on slab-paved area (floor IV), concrete or red mortar (floor III)	0.76 x 0.50	• near well and cemented sherd surface which was "probably for bathing" (Dikaios 1969a: 107) • "bathroom" built above Level II copper industry and megaron-like hall with hearth	Dikaios 1969a: 107, 141; 1969b: plan 256; also cited in Karageorghis 2000: 270[13,14]
Enkomi	Room 44 (Ashlar Building?)		Terracotta	0.80 high x 0.57 diameter	• inv. 388, round, basin shaped, with outlet hole • although not a typical bathtub shape, according to Karageorghis, "It was certainly used as a bathtub".	Karageorghis 1983a: 434, note 1, 435 fig. 2[15]

[13] All examples of bathtubs in Dikaios' report are marked as "larnax" where noted on plans, except for the fragmentary one from the courtyard in Level IIIB, where its inventory number is noted.

[14] Although Karageorghis (2000: 270) mentions two bathtubs associated with Dikaios' (1969a) excavations in Area III, a rereading of the text suggests that there may only have been one, which was in use in both late Level IIIA (floors IV and III) and B (floor II) (1969a: 107 and 141). Dikaios' description of this area is difficult to follow, but he initially appears to be describing one room in Sector B, Room 77 (plan 254), where, at the beginning of Level IIIA, a long, pillared hall is built with associated hearth, above what in Level II had been the location of a copper workshop. In a second and/or third phase of use, associated with floors IV and III but still dated to Level IIIA, "the room was changed into a bathroom" (1969a: 107). Although Dikaios' text seems to continue to point the reader to the Level IIIA plan (plan 254), his description of the redesigned bathroom area, with slab paved area around the tub, a stone-lined well to the north of the tub and a low walled area, resemble more the illustration of this room as depicted in the Level IIIB plan (Room 9 on plan 256), and it is probably this latter spatial organization that should be considered when describing the Area III bathtub.

A second feature found in Room 8, just to the north of Room 77 of the Level IIIA building (plan 254), described as "a sandstone trough (L .070 m, W .065 m, H .044 m) with a perforation in the side at the level of the bottom" (1969a: 107), seems similar in size and shape to the other 'bathtubs' and may have performed a similar function. Found on its side in a depression, it was assumed to have fallen from an upper storey and therefore not associated with the room in which it was found, where there were remains of a sherd paved area.

[15] Cited in Karageorghis but I could find no further description of it in the Enkomi reports.

Site	Building	Date	Construction	Dimensions (m)	Associated Finds	Published
Kalavasos-Ayios Dhimitrios[16]	Area 24, East Area	LCIIC	Terracotta, sunk into plaster floor, with flagstones placed at ends even with rim of tub	1.00 long x 0.65 wide x 0.63 high[17]	• NE corner of room, sunk into floor with rim of tub just above floor surface; floor surface composed of hard plaster floor with flagstones placed at either end of tub. • low placement of "outlet" hole through side of tub, 2 opposing handles (on exterior?); and 4 parallel relief bands on exterior • large room, not a bathroom according to South (1980: 39), possibly "public or administrative" (South 1983: 101).	South 1980: 38-39, 36 fig. 4; also cited in Karageorghis 2000: 270[18]
Kition	Area I, Room 30, floor IIII	LCIIIA	Terracotta	(base only) 0.35 long x 0.405 wide x 0.138 high	• fragments of base. • also in room were "well" and square pit, in room 31 was "unsuccessful" "well" with footholds, end of hall in room 32 was hearth. • Karageorghis (2000: 272) associated the tub room (Room 30, floor III) with a "bathroom" from the previous phase (Room 30D of floor IV) with a cement paving. One should also note from this same area	Karageorghis 1985: 30,34; Karageorghis and Demas 1985a: plates XX, XLV; 1985b: 5-23, plates 5-8; also cited in Karageorghis 2000: 272

[16] A number of large open vessels described as "tubs with rectangular mouths and relatively straight sides" (Keswani 1989: 19, see in particular fig. 20: 31, 32) have also been recovered from the site. At this time, it is not possible to determine whether or not these vessels are a similar type of bathtub, but it is interesting to note the mention of a spatial distribution pattern, where, at least at the time of Keswani's report, these large tubs were only found in the South-East, East and West areas of the site (Keswani 1989: 19).

[17] These measurements appear in Karageorghis (2000: 270).

[18] Photograph of bathtub in Karageorghis (2000: 270, fig. 13.16) is identified in the caption as from *Kalavasos-Ayios* Dhimitrios,but it is probably the bathtub from Kourion illustrated in Christou (1994: 187, fig. 9).

Site	Building	Date	Construction	Dimensions (m)	Associated Finds	Published
					in floor II a large pithos, set into a deep pit with its rim at surface level (Karageorghis and Demas 1985b: 19). • area identified by excavators as residential, associated with stone and bronze tools and "weaving implements," including terracotta reels, in all floor phases (Karageorghis 1985: 35; Karageorghis and Demas 1985b: 5-23). Karageorghis later defined this area as "residential-industrial" (2000: 272), probably based on the earlier, floor IV, workshops and "bathroom".	
Kouklia-Palaepaphos[19]	Sanctuary I	LCIII/12th century	Terracotta, broken, found in a rock-cut trench	0.72 long	• Karageorghis (1983a: 437; 2000: 272) noted the presence of an outlet hole and compared it in size to those at Pyla-*Kokkinokremos* • located in southwest part of hall (large room); other features include a number of rock-cut pits; also in northwest part of hall, a large pithos was set into a deep pit, with its rim at surface level; large rectangular rock-cut basin east of pithos • excavators suggested parallels with tubs in Minoan and Mycenaean contexts, and their use in rituals,	Maier 1976: 95-97, plate XIX : 4; Maier and Karageorghis 1984: 91-102, figs. 74, 78; also cited in Karageorghis 2000: 272[20]

[19] Karageorghis (1980, cited in Courtois 1992: 153, note 5) also mentions a limestone bathtub from a tomb in Kouklia-Palaepaphos.
[20] Maier's (1976: 97) reference to plate XVI should read XIX.

Site	Building	Date	Construction	Dimensions (m)	Associated Finds	Published
					possibly purification. Also possibly for burials (Maier and Karageorghis 1984: 97) • area defined by excavators as sanctuary/ shrine	
Kourion-Bamboula	Trench 4, Room 39	LCIII	Terracotta		• located in one room, with crushed limestone flooring, of multi-room domestic complex. No other information recorded	Daniel 1938: 263, fig. 2, 270
Kourion-Bamboula	Trench 4, Room 37	LCIII	Terracotta		• found upside down, standing next to possible stone tub • other objects in room include an amphora sunk into the floor • located in one room of multi-room domestic complex. No other information recorded	Daniel 1938: 263, fig. 2, 270-271, fig. 12; also cited in L. Åström and Åström 1972: 519
Kourion-Bamboula	Trench 4, Room 37	LCIII	Limestone		• possible bathtub, L. Åström described it as "rectangular basin with outlet channel on one of the long sides" (L. Åström and Åström 1972: 544) • found standing next to upside down clay tub (see above). Other objects in room include an amphora sunk into the floor • located in one room of multi-room domestic complex. No other information recorded • according to P. Åström, it "must have been used for bathing since it has an outlet channel" (L. Åström and Åström 1972: 605).	Daniel 1938: 263, fig. 2, 270-271, fig. 12; also cited in L. Åström and Åström 1972: 544, 605

Site	Building	Date	Construction	Dimensions (m)	Associated Finds	Published
Kourion-Bamboula	Tomb 35	LCIIIB-beg. Of CG I	Terracotta	0.92 long x 0.62 wide x 0.63 high	• 2 sets of opposing vertical loop handles (4 handles *in toto*); "tomb gifts" found inside	Christou 1994: 180-183, 187, figs. 6, 9; also cited in Karageorghis 2000: 272
Maa-Palaeokastro	Bldg. III, Room 79, Floor II	LCIII	Terracotta, smashed, above pithos- and pebble-paved surface	0.995 long x 0.51 wide x 0.567 high[21]	• obj. no. 588, almost complete example, straight sided, 2 sets of opposing handles, hole in base through one of short sides[22]	Karageorghis and Demas 1988: 29, 226, plates LXI, CLXXXIV; also cited in Karageorghis 2000: 270
Maa-Palaeokastro	Bldg. III, Room 79D, Floor II	LCIII	Terracotta		• fragments	Karageorghis and Demas 1988: 29, 226
Maa-Palaeokastro	Bldg. III, Room 79E, Floor II	LCIII	Terracota		• fragments	Karageorghis and Demas 1988: 29, 226
Maa-Palaeokastro	Bldg. III, Room 79F (pit in Room 79C)	LCIII?	Terracotta		• obj. No. 393, one of long sides preserved with 2 handles[23] • found within fill of pit 2 from Room 79C which cut into floor II of this room and is "likely to derive from the use of this room" (Karageorghis and Demas 1988: 30)	Karageorghis and Demas 1988: 30, 226, 251, plates CXLIV, CCXXXVI
Maa-Palaeokastro	Area 99, Floor II	LCIII	Terracotta		• obj. No. 616 rim fragment with handle • possibly roofed space • only other feature in area is U-shaped hearth	Karageorghis and Demas 1988: 43-44, 229-230, plates LXXXII, CXCVI

[21] These measurements appear in Karageorghis (2000: 270).
[22] This description of the tub appears only in Karageorghis (2000: 270).
[23] Karageorghis and Demas describe only rim and base fragments (1988: 30) or "restorable" (1988: 226), but the photograph and illustration of obj. 393 on plates CXLIV and CCXXXVI depict a larger piece.

Site	Building	Date	Construction	Dimensions (m)	Associated Finds	Published
Maa-Palaeokastro	Bldg. I, Area 24/4, btwn. Floors I/II	LCIII	Terracotta		• rim and base frags, described as similar in shape to no. 588	Karageorghis and Demas 1988: 235
Maa-Palaeokastro	Bldg. I, Area 24B/1, btwn. Floors I/II	LCIII	Terracotta		• fragment	Karageorghis and Demas 1988: 236
Maa-Palaeokastro	Building IV, Room 77A, Floor I	LCIII	Terracotta		• obj. No. 253, bathtub or basin fragment, with outlet hole	Karageorghis and Demas 1988: 84-85, 250, plates CLIII, CCXLV
Maa-Palaeokastro	Building IV, Room 75B/2, Floor I	LCIII	Terracotta		• fragment	Karageorghis and Demas 1988: 249
Maa-Palaeokastro	north of Building II, west of Room 60/2, Floor II	LCIII	Terracotta		• fragment	Karageorghis and Demas 1988: 223
Maa-Palaeokastro	Bldg. III, Room 78, Floors I/II	LCIII	Terracota		• obj. no. 403, fragment of base with outlet hole	Karageorghis and Demas 1988: 239, plates CIX, CCXI
Maa-Palaeokastro	Bldg. III, Pit 5 (Room 83)	LCIII	Terracota		• small fragments with outlet hole	Karageorghis and Demas 1988: 251
Maa-Palaeokastro	Bldg. III, Pit 1A (Room 88A)	LCIII	Terracota		• obj. no. 279, rim sherd with handle	Karageorghis and Demas 1988: 251, plates CXLIV, CCXXXVI
Maa-Palaeokastro	Bldg. III, Room 59 and Area 100A	LCIII	Terracota		• obj. no. 214, base fragment	Karageorghis and Demas 1988: 251, plates CXXXIV, CCXXX
Palaepaphos-*Skales*	Tomb T.49	11th c.	Limestone	1.53 long x 0.74 wide x 0.73 deep	• elliptical shape, sloping bottom, horizontal band of 'half-reel shaped' projections on exterior below rim with one 'protruding half bowl'	Karageorghis 1983a: 435-438; 1983b: 59-76, Plate LXIV, Fig. XC; also cited in Karageorghis 2000: 272

Site	Building	Date	Construction	Dimensions (m)	Associated Finds	Published
					• filled with gravel almost up to the rim, with 12 bowls and cups on top of the gravel (Karageorghis 1983b: 60)	
Pyla-Kokkinokremos	Area II, Complex d, room 24	LCIIC/LCIII (ca. 1230-1200)	Terracotta	0.74 long x 0.46 wide x 0.575 high	• obj. no. 30, almost whole, rectangular with rounded corners, 4 handles (1 near each corner), and outlet hole through side near base • found broken, together with tub base no. 30A, near large square pit cut into bedrock; patches of ash to south of pit suggested possible hearth. Also a lot of pithos sherds • located in one room of multi-room complex with large front courtyard; part of a row of complexes of standardized design identified as domestic space.	Karageorghis and Demas 1984: 16-18, 26-28, 35, 52, plates XXI, XLII, plan I, see also fig. 4 for block architectural plan; also cited in Karageorghis 2000: 272
Pyla-Kokkinokremos	Area II, Complex d, room 24	LCIIC/LCIII (ca. 1230-1200)	Terracotta	0.57 long x 0.38 wide x 0.128 high	• obj. no. 30A, lower part of tub with an outlet hole in short side near bottom[24] • see obj. no. 30 from Pyla-Kokkinokremos for description of location	Karageorghis and Demas 1984: 16-18, 26-28, 35, 52, plates XXI, XLII, plan I, see also fig. 4 for block architectural plan; also cited in Karageorghis 2000: 272

[24] Although there is no mention of an outlet hole in the description (Karageorghis and Demas 1984: 35), one is visible in the photograph and drawing of this bathtub (Karageorghis and Demas 1984: plates XXI, XLII)

Site	Building	Date	Construction	Dimensions (m)	Associated Finds	Published
Pyla-Kokkinokremos	Provenience not given[25]	LCIIC/LCIII	Terracotta	0.453 long x 0.228 high	• obj. no. 117, lower part of tub, outlet hole near base in center of short side	Karageorghis and Demas 1984: 42, 52, plates XXI, XLII; also cited in Karageorghis 2000: 272
Pyla-Kokkinokremos	Trial A, in entrance between room 5 and 6		Limestone	(base only) 0.88 x 0.47 x 0.15	• obj. no. 1, lower part/ tub base, nearly rectangular in shape, flat base, perforation at bottom in center of short side, smoothed interior, upper part "chipped away"	Karageorghis and Demas 1984: 19-20, 43-44, 59, 91, plates XXI, XLIX, plan II; also cited in Karageorghis 2000: 272

Miniature Bathtubs

Site	Building	Date	Construction	Dimensions (m)	Associated Finds	Published
Enkomi	Area III, room 73	end of LCIIIC	Soapstone	0.092 long	• No. 3269, miniature bathtub, moulding and a pair of projections on long sides, band of hatched triangles and incised lines on exterior	Dikaios 1971: 768, Plates 147: 8, 176: 55; also cited in Courtois 1992: 153, note 3[26]
Enkomi	East Building Site	LCIII	Steatite	0.054 long x 0.032 wide x 0.03 high	• No. 904 (Enkomi 1958, Inv. No. 153), miniature bathtub, pair of small projections on long sides	Courtois 1984: 101, fig. 35/1; also cited in Courtois 1992: 153, note 3
Kition	Tomb 9, upper burial, Area I	LCII	Ivory	0.117 long x 0.045 wide and 0.033 high	• pyxis in form of miniature bathtub, with two sets of opposing handles (4 *in toto*), originally probably had a lid • Karageorghis suggested its function as a cosmetics box	Karageorghis 1974: 83, 91, plates LXXXVII, CLXX; Karageorghis and Demas 1985b: plate 5

[25] This bathtub, object number 117, is listed in the finds catalogue with those from Area II, complexes B,C and D, and therefore can be assumed to have been found in one of these complexes.

[26] Courtois describes both of the miniature bathtubs from Enkomi as "steatite" and dates them to the LCIIIB (level IIIC)

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Edward F. Maher

IMMINENT INVASION: THE ABANDONMENT OF PHILISTINE EKRON

> For Gaza shall be forsaken,
> and Ashkelon a desolation:
> they shall drive out Ashdod at the noon day,
> and Ekron shall be rooted up. (Zephaniah 2:4)

Introduction

Determining the cause of societal collapse is of great interest to social historians (Kurjack 1974: 96) and anthropologists alike. Attempts to explain such collapse have relied on a number of influential factors which include environmental degradation, failed economic systems, internal revolt, plague and military conquest. Regarding the latter, evidence demonstrating a centre's fall to invaders is sometimes documented in the annals of the victor, and archaeologically the event may be recognized by contemporary levels of destruction debris at the site in question. No doubt the conflagration of a city was devastating, resulting in great loss of human life, possessions and property. Despite this, in many cases, survivors of invaded territories eventually revived their community and their way of life continued. But in other instances a city's destruction had a much more profound impact, as the event not only represented urban destruction, but also signaled the end of the culture.

Such was the case with the Philistines residing at Ekron in the late Iron Age. The Neo-Babylonian destruction of the city near the end of the 7th century BCE did not simply mark the final Philistine occupation there (a locality at which they had settled for the previous six centuries). The conflagration of Ekron was the final link in a chain of events that, combined with the integration of the Philistines into Neo-Assyrian and Egyptian spheres of influence (Gitin 1998a: 179–80), contributed to their complete dissolution as a distinct cultural group. After Nebuchadnezzar's campaign in the region, regarded as one of the central events during his first regnal year (Malamat 1956: 251), the Philistines lost their cultural core, and eventually were unable to maintain their own distinct group identity (Gitin 1998a: 163). Shortly thereafter their mention in the historical record disappears altogether (Gitin 1995: 74). Thus, Ekron's destruction is significant because its fall heralded the final phase of Philistine culture.

Ekron's inhabitants were aware of the coming invasion, and the evidence illustrates that they took measures to evacuate the city. Ekron's abandonment has been indicated through epigraphic and

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archaeological evidence (Gitin 1989a: 29; Gitin 1998a: 180; Gitin and Golani 2001: 38; Golani and Sass 1998: 61; Porten 1981). The evacuation of a city the size that Ekron had become in the 7th century BCE would have been a formidable organizational feat. That its inhabitants responded quickly to a rapidly developing crisis illustrates the efficacy of the administrators operating under such conditions (see Crumley 2001: 26), and attests to the cooperative and coordinative efforts that would have cross-cut many social divisions (e.g., class, occupation, age and gender).

Ekron's desertion may also be recognized through another component of the archaeological evidence unearthed during the excavations conducted at Tel Miqne-Ekron, led by T. Dothan of The Hebrew University and S. Gitin, Director of the Albright Institute of Archaeological Research. Zooarchaeological analysis often addresses topics relating to animal acquisition and associated exploitation strategies, yet this analytical approach can also focus on site formation processes and the identification of those agents responsible for the accumulation of a faunal assemblage. Attributes of the 7th century BCE faunal material from Tel Miqne indicate that it was abandoned prior to the arrival of the Neo-Babylonian invasion. The fauna also demonstrates a brief time lapse between Ekron's desertion and Nebuchadnezzar's arrival. This is significant because it corroborates other evidence for abandonment, and expands the range of archaeological evidence by which Ekron's evacuation can be recognized. The goal of this paper, therefore, is to demonstrate the integrative advantage gained by merging zooarchaeological analysis with archaeological and historical evidence to investigate the final days of Philistine occupation at Tel Miqne-Ekron.

The Archaeology of 7th Century Tel Miqne-Ekron

Tel Miqne-Ekron is located 35 kilometers southwest of Jerusalem and lies on the eastern edge of the inner coastal plain, which served as a frontier zone separating Philistia and the Kingdom of Judah. Fourteen seasons of excavation (1981–1996) at Tel Miqne have demonstrated the changing role of the city. In the 12th century BCE Ekron was a 20 ha metropolis, representing the largest of the five capital cities of the Philistine Pentapolis (Gitin 1987: 206–7). Very little is known of the political inner workings of these Philistine city-states, but both biblical and Assyrian sources indicate that on occasion they did not operate in harmony (Singer 1993: 133). After its destruction in the 10th century BCE, Ekron's ability to defend the northeastern frontiers of Philistia diminished, and for two centuries it was reduced to a 4 ha semi-independent fortified town (Gitin 1987: 206–8). During this period, the Philistines were not a major force in the historical or cultural development of the region and came under foreign influence many times (Aharoni 1979: 307–45).

In 701 BCE, Sennacherib had to reassert Neo-Assyrian control over Philistia and Ekron, just over a decade after the city had been conquered by Sargon II (Gitin 1995: 62). It was only after the end of

the 8th century BCE, when Ekron (as well as the rest of Philistia) had come under Neo-Assyrian rule, that the city expanded to more than 34 ha and enjoyed great commercial success (Gitin 1989a: 26–45). Neo-Assyrian texts demonstrate Assyria's relationship with Philistia, as well as their aggressive march toward a new political order that emphasized international exchange and commerce (Gitin 1997: 77–84; Tadmor 1966: 98–100).

Gitin (1987: 216) has identified a number of reasons why the Neo-Assyrians chose Ekron as a major olive oil production center: clear access to routes leading to olive groves and market places, site topography, surplus labor force, available nearby rich alluvial plain, and the empowerment of puppet Philistine rulers loyal to Assyrian kings and their interests. Alternatively, Na'aman (2003: 87) has asserted that Ekron was not singled out by the Neo-Assyrians nor awarded preferential status among their western vassals. Rather, Ekron's prosperity at the time was merely a consequence of the new socio-political and economic conditions prevalent in the region. Assyria withdrew from the area around 630 BCE (Tadmor 1966: 86–87), creating a power vacuum that was opportunistically filled by Egypt (Malamat 1979: 205; Porten 1981: 48).

The last days of Philistine Ekron came to pass at the end of the 7th century BCE. When Nebuchadnezzar razed Ekron to the ground in 604 BCE (Gitin 1998b: 276, n. 2), he left evidence of devastation in most areas of the city. Whereas Neo-Assyrian interests were focused on exploiting the economic potential of their vassal city-states, Babylonian interest in Philistia (and the region) was limited to controlling the terrestrial routes to Egypt. In doing so, they squandered a rich source of tribute and tax payments (Gitin 1992: 30). Nebuchadnezzar's destruction of Ekron had a crushing affect on the Philistines from which they would never recover.

Philistine Cultural Assimilation

After their conquest and subsequent exile, the Philistine inhabitants of Ekron were unable to retain the key elements of their cultural heritage. Why they failed to do so can be explained in part by their increasing consumption and adoption of foreign cultural elements and practices. Evidence for this is reflected in a variety of classes of material culture, including ceramics, architecture, cultic objects, jewelry and art, and texts.

Early Philistine monochrome pottery, for example, demonstrates similar wares, shapes, and decorations to forms simultaneously produced in Cyprus, yet some Canaanite elements are also present (Dothan 1987: 202). Traces of Egyptian and Canaanite influences are also apparent in the later Philistine bichrome ceramics (Dothan 1982: chp. 3). Pottery of the 7th century BCE also demonstrates a variety of cultural influences, including Phoenician, Judean, Assyrian, East Greek and Transjordanian elements/characteristics (Gitin 1998a: 167).

Cultural orientations and influences are also inferred architecturally. One key feature of an Iron Age I (Stratum VI) building at Tel Miqne is a

large circular hearth (Dothan and Gitin 1997: 31) associated with large amounts of burnt ash and bones (Dothan 1998: 156). In a subsequent phase of this complex (Stratum IV) the hearth is completely absent. Circular hearths were a regular feature in Mycenaean palaces, and their appearance in Philistia therefore suggests a similar function. That this central feature disappeared from this cult complex suggests a community whose collective memory of their Aegean heritage had faded with time (Dothan and Dothan 1992: 245). Foreign influence is also evident in the architecture of Temple Complex 650 (Gitin et al. 1997). This complex dates to the 7th century BCE (Stratum IB/IC) and does not include a hearth or any other Aegean cultural influence. Recognized as one of the largest structures ever discovered in the southern Levant, its schematic is reminiscent of Neo-Assyrian palatial, religious and elite residential buildings (Gitin et al. 1997).

Foreign influence is also evident in small cultic objects that were used by Ekron's population. Egyptian style artifacts dating to the 10th century BCE include a carved ivory head, a painted limestone zoomorphic (baboon) figurine, faience and ivory earrings, and a faience pendant depicting the Egyptian goddess Hathor (Dothan and Dothan 1992: 252), while a ring displays the Egyptian goddess Sekhmet (Dothan and Gitin 1997: 31). Four-horned altars found in the later 7th century BCE city imply a northern Israelite influence. Gitin (1989b: 61) believes their appearance can be explained by the population migration policies of the Neo-Assyrians. Altars may have been introduced into Philistia by Israelite craftsmen who, having been uprooted from their own territories, were then forced to resettle at Ekron.

Jewelry caches found at Ekron (Gitin and Golani 2001; Golani and Sass 1998) demonstrate that the Philistines adorned themselves with objects inspired by Phoenician stylistic traditions, including a silver lotus pendant, basket earring pendants, finger rings with an attached cartouche, multi-stranded rings with knots, granule beads, and a bracelet centerpiece. Egyptian elements were also found in these caches, such as a composite earring with a human face below the petals of the lotus flower, rings with a lotus decoration in relief, and an Eye of Horus made of sheet silver.

Philistine fashion and art also demonstrates external influence. Three small grooved discs (probably decorative ear lobe plugs) from one of Ekron's Iron I structures (Building 350) were made in an Egyptian style (Dothan 2003a). Culturally modified ivory objects from the Iron Age I, such as inlays, are clearly inspired by Egyptian traditions, whereas cosmetic boxes and duck heads exhibit Canaanite affinities (Ben-Shlomo and Dothan 2006: 27–28). The ivory lid of a pyxis also displays Canaanite traits (Dothan 2003b).

By the 7th century BCE, Philistine texts betray foreign influence. For example, when establishing Kar-Ashshur-ahu-iddina (the "Port of Esarhaddon"), a commercial colony near Sidon designed to further the commercial interests of the Assyrian empire, Esarhaddon did so with the aid of Philistine kings possessing Canaanite or Assyrian names (Tadmor 1966: 98). At Ekron, fifteen small dedicatory inscriptions

dating to the same period, located south of Temple Complex 650, invoke the Canaanite deity Asherat (Gitin 1993: 252–54). Another dedicatory inscription reads 'for Ba'al and for Padi,' and is written in a Phoenician/Aramaic cursive script (Gitin and Cogan 1999: 199). By the 7th century BCE, the Philistines clearly had adopted elements of these languages and created a text or dialect distinctly their own (Gitin et al. 1997: 13; Rainey 1998: 244).

In summary, the material evidence clearly demonstrates the semi-permeability of the Philistine culture. From their urban architecture to items of personal adornment and self-expression, the affects and influences of foreign cultural contact reverberated throughout the cultural matrix of the Philistines. Including foreign cultural elements was probably a useful adaptive trait, and demonstrates their degree of cultural flexibility rather than cultural rigidity. Flexible community social organization allows populations to adjust to new situations (Crumley 2001: 24) that may have otherwise caused detrimental economic and political climates. Integrating these foreign cultural attributes implies some level of flexibility in the internal organization of the recipient community, since their utilization would have incorporated perceptual and attitudinal shifts by the active members. However, all cultures have their adaptive limitations (Webb 1973: 368). The Neo-Babylonian campaign of the late 7th century BCE represented a defining moment in Near Eastern history that contributed significantly to the discontinuance of Philistine culture which, despite their adaptive abilities, they were unable to overcome.

Archaeological Evidence of Abandonment at Tel Miqne-Ekron

Ekron's inhabitants were acutely aware of the impending Neo-Babylonian invasion, and made preparations to deal with the situation. Their options ranged from fighting to fleeing, and the evidence attests to their pursuit of the latter option. A letter written to the Egyptian pharaoh from Adon, possibly a king from Ekron, pleads for deliverance from the approaching Neo-Babylonian forces (Porten 1981). Given the widespread devastation discovered at Ekron, it seems unlikely that help was received from Egypt or any other neighboring kingdom.

Silver hoards found at Tel Miqne represent the largest collection of their kind in Israel (Gitin 1998a: 180). A total of six caches were found, consisting of more than 300 pieces of silver. The source of the silver is thought to be Greece (Gitin and Golani 2001: 38). At least four of the six hoards were hidden. One was placed in a jug found buried below a floor. Another was put inside a small juglet which was set inside a larger vessel and then sealed under a floor. A third hoard was stashed inside a stone weight originally used for pressing olives, but which had then been hewn down for reuse, and may even have served as an early form of wall safe. This hoard included a silver medallion with an Assyrian cultic motif depicting Ishtar standing on the back of lion (Gitin 1995: 69; Gitin and Golani 2001: 30–33, 41). The final hidden hoard was found in association with the threshold of one of the side rooms in Temple Complex 650 (Gitin and Golani 2001: 36).

These valuables were most likely hidden by their owners, who did so with intentions of future retrieval (Golani and Sass 1998: 61).

Examining the condition of the city's fortification system provides another clue that Ekron knew of the Neo-Babylonian approach. Nevertheless, fortifications near the city gate in the southern sector of the city showed no signs of destruction, even though all of the structures comprising the industrial zone in that area were razed to the ground (Gitin 1989a: 29), suggesting that the Babylonian attackers did not encounter any resistance upon their arrival, and therefore simply laid waste to the city. Fourteen seasons of excavation have also failed to uncover any human skeletons belonging to this phase, suggesting that there was no one left in the city when the Babylonians arrived.

Faunal Evidence of Abandonment

Although well-suited to evaluating the economics and ecologies of a settlement, the study of animal bones can also assist in identifying site formation processes, which in turn can influence the interpretation of an archeological faunal assemblage (Gautier 1987: 50). A consideration of the factors that contributed to the accumulation of animal bones in an archaeological context can be used to identify whether their deposition was a result of cultural (human) or natural (non-human) activity. Differentiating between these two activities is critical, because deposition by non-human agents can reflect the occupational status (active or abandoned) of the site or an area of the site.

In some instances, the remains of animals in an archaeological bone assemblage include species whose economic importance to humans is doubtful. Since some animals were probably not exploited as a human food resource, the presence of small rodents and similar sized animals not typically consumed by people may be the result of their own attempts at colonization, or through introduction by birds of prey or other wild or domestic carnivores (Redding 1978: 64–65). Such remains have been termed penecontemporaneous intrusives (Gautier 1987: 49).

Scientific study has established how the scavenging and predatory nature of different species can be documented. The role of animals such as dogs and hyaenas as bone accumulators, as well the scavenging patterns of domestic chickens, vultures, and even crows, has been ethnographically recorded (Brain 1981: 15; LaBianca 1995: 27–29). Zoological studies have demonstrated how birds of prey kill and eat a range of species that include small mammals and birds (e.g., Bocheński et al. 1998; Bramwell et al. 1987; Davis 1987: 25; Saavedra and Simonetti 1998; Schmitt 1995; Tores and Yom-Tov 2003). Carnivores leave recognizable traces on bones due to their gnawing, crushing, and chewing (Brain 1981). Raptors tend to return to their roost with their prey, where they let pass the undigested parts of their prey (which are swallowed whole), such as hair, skin and bones (Wapnish and Hesse 2000: 444).

Both avian and terrestrial bone accumulators leave evidence of their partial digestion of animal bones. When exposed to acids and

enzymes, the fauna are eroded into fragments with small holes, altered edges, pitted and polished surfaces, and thinned shafts (e.g., Bocheński et al. 1998: 428; Davis 1987: 27; Horwitz 1990; Reitz and Wing 1999; Schmitt and Juell 1994: 252–54). Bone modification caused by the consumption patterns of carnivores and birds of prey has previously been identified in archaeological contexts. Some of these accumulations have occurred in areas thought to have been abandoned (e.g., West and Milne 1993; Hesse and Wapnish 1985: 20), in spaces that were deserted or at least assumed to have hosted limited cultural interaction (Wapnish and Hesse 2000: 444), or in 'exterior' rather than 'interior' areas, suggesting activity-specific spatial units (Meadow 1975: 270).

The 7th century Faunal Assemblage from Tel Miqne

The 7th century BCE levels at Tel Miqne yielded the remains of hundreds of small animals, most of which were small bodied mammals. A few were identified as rodents, and it is likely that most, if not all, of the small mammal faunal assemblage was derived from rodent species (see Table 1). In addition to the microfauna, thousands of unidentified bone fragments were also found, of which a portion undoubtedly belong to small animal species. It is important to note that the skeletal remains of small animals are subject to greater fragmentation and taphonomic loss than those of larger-bodied specimens. Since the bones of small animals are less dense and not as likely to have survived, their original abundance was probably greater than the sample recovered. None of these species would ever have been economically important to Ekron's human population.

Table 1. Faunal categories and associated modifications via consumption from Tel Miqne-Ekron (7th century BCE).

Faunal Classification	*NISP #	NISP %	NISP digested	NISP gnawed
Taxonomically Identified **	5767	32.47%	4	12
Small Amphibian	1	0.01%	0	0
Small Bird	31	0.17%	8	0
Small Reptile	1	0.01%	0	0
Small Mammal ***	209	1.18%	34	0
Medium Mammal	6159	34.68%	44	11
Large Mammal	1142	6.43%	12	16
Unidentified species	4449	25.05%	36	23
Total	**17759**	**100.00%**	**138**	**62**

* Number of Identified Specimens.
** Reflects those animals most closely linked to human acquisition and use.
*** Includes rodent remains.

An examination of the small mammal remains has revealed that some were eroded and pitted (Table 1), modifications which are consistent with those associated with the meal remnants of birds of prey. Not all of the bones were altered, and it is possible that some of these animals simply died of natural causes in levels dating to the 7th century BCE. However, since digested bones from small mammals

were noted across different body part categories (cranial, limb, and trunk), indicating that their predators had access to a variety of anatomical parts (see Table 2), it seems reasonable to assume that most of these animals were consumed and deposited by birds of prey. Not all small animal body parts will necessarily be consumed by raptors (e.g., Bengston 1971). Thus, even when a small animal was brought to an area by a bird of prey, some of its bones might appear unaltered. Since their presence cannot be attributed to human collection, the introduction of many of the small animals in the stratified 7th century BCE levels at Tel Miqne-Ekron are best explained as a consequence of the consumption practices and preferences of owls, hawks or other birds of prey.

Table 2. Body part categories of small mammal remains and digested proportion from Tel Miqne-Ekron (7th century BCE).

Body Part	NISP #	NISP %	NISP digested
Cranial	31	14.83%	4
Limb	43	20.57%	11
Axial	135	64.59%	19
Total	209	100.00%	34

Certain attributes of the 7th century BCE faunal assemblage at Ekron also indicate the activities of terrestrial carnivores. Payne and Munson (1985) have shown experimentally how the digestive tract of a dog can affect the bones of the animal it has consumed. Particularly notable are the relatively small sizes of the digested fragments. Data based on hyena scats from a den in the Negev Desert, in Israel, have shown that digestion erodes, polishes, pits and thins the consumed bones (Maher and Peterhans-Kerbis n.d.). A small number of bones from Tel Miqne displayed the same patterns of modification (Table 1). The surface of these bones were pitted and polished, whereas others were eroded and etched, resulting in thinned shaft walls, sometimes to the point of producing holes. All of the partially digested bones and bone fragments were less than 2.2 cm in length, further confirming Payne and Munson's observations. These modifications were only noted on certain bones, rather than the entire faunal assemblage, eliminating soil chemistry as the modifying agent.

These distinctive faunal patterns were found in many areas of the site, including Temple Complex 650, which is highly significant. Attributes of the remains of larger bodied domestic animals recovered from the temple complex, when compared to other contemporary areas of the site, have indicated a distinctive use pattern reflective of ritual activity. Sacrificial animals, generally younger, male, and probably of good health, were brought to the temple complex where they were killed and butchered in a specific manner for presentation to the deity as a burnt offering (Maher 2004). Over forty ceramic vessels, mainly bowls, either contained or were closely associated with these animal

bones. Moreover, of particular significance, both burned and unburned bone and tooth fragments were found together in or associated with these vessels, indicating that these remains originated from different areas of the temple complex. Similar observations have been made by Wapnish and Hesse (2000: 444) regarding faunal assemblages at Tel Dan, and by Zeuner (1960: 29) at Qumran. The animal parts collected in these bowls were likely intended for disposal.

Since the sacrificial victim was a holy offering, it may have been subject to strictly prescribed methods of discard once the ceremony had concluded. The bones of a sacrificial animal were probably not simply destroyed or even randomly discarded. Rather, they were likely treated with respect and disposed in religiously prescribed rituals (Hubert and Mauss 1964: 35, 41), and it is reasonable to speculate that Philistine cultic practice also observed similarly sanctioned methods of disposal. In any event, given the time and care that was invested in collecting the scraps of bone found in these ceramic bowls, it is unlikely that canids or other scavengers would have had access to the faunal remains consumed in these rituals.

Wapnish and Hesse (2000: 444) have suggested that the microfaunal assemblage at Megiddo was deposited in areas that experienced limited human activity. However, the same reduced level of human activity cannot be assumed for Ekron's temple complex. It was located directly in the heart of the city in a highly active area, and with a heavy traffic flow that probably discouraged the visitation of scavenging animals. It seems more likely that the occurrence of canids and birds of prey took place after the city was deserted, yet prior to the Neo-Babylonian invasion. The duration of this window of opportunity is unclear, but it is assumed to have been short due to the relatively low number of bones from small animals compared to the overall size of the 7th century BCE faunal assemblage. Another reason for the small microfaunal assemblage is that most of the data presented here was collected by hand. There is little doubt that more bones from small animal species are associated with the various soil samples that were taken during excavation. Even a brief occupational hiatus would have provided the opportunity for carnivores and birds of prey to produce the assemblage recovered.

One detail that requires further consideration concerns the date of the small animal remains. The possibility exists that some of these animals are intrusive elements introduced from later or even modern levels. However, Davis (1987: 25–26) and Redding (1978: 65) have outlined useful approaches for distinguishing intrusive remains: variable discoloration, skeletal part representation, proximity of remains to disturbed (burrowed) areas, and stratigraphic position. Animals burrowing down from later levels into ancient deposits can be identified by the appearance of their bones. Their remains generally are of a brighter or lighter color than that seen on an assemblage subjected to the effects of soil chemistry over millennia. In the Tel Miqne assemblage, all the small fauna exhibit the same coloration as the rest of the 7th century BCE assemblage, indicating a similar, though not necessarily identical, date of deposition. Intrusive rodents are

sometimes also identified through skeletal completeness. However, complete small animal skeletons were not found in any 7th century BCE loci at Ekron. Intrusive animals often also leave behind traces of their route of travel (e.g., burrow holes, or rodent runs). Their routes of entry are often encountered on archaeological sites and in many cases are evident in profile, allowing one to view the vertical range of the bioturbator. Some burrow holes were recorded in the topsoil that covered the 7th century BCE occupation at Tel Miqne, but none of these appear to have penetrated the Iron Age levels.

However, perhaps the most convincing evidence that confirms the date of the small animal remains (as well as all chewed and digested bone fragments) is their stratigraphic position. Debris dated to the 604 destruction is evident in several areas at Ekron (Gitin 1987: 210; Gitin 1989a: 29, 40; Gitin et al. 1997: 7). Most of the animal bones were found sealed below this layer of destruction debris, and therefore cannot post-date the event. Their stratigraphic context, considered with the other evidence cited above, thus confirms their penecontemporaneous deposition (in relation to the rest of the securely dated fauna in these levels), prior to Ekron's conflagration at the hands of Nebuchadnezzar.

Since the microfaunal remains probably represent meal remnants left by raptors, another reason for dating their deposition prior to the Babylonian destruction should also be considered. Bird pellets collect in places situated beneath their roosts (Hesse and Wapnish 1985: 20). Birds of prey would not have stayed at ground level, as they prefer higher perch locations. Cave or rock shelters are often used in this manner, but wild predators are adaptable and are also known to inhabit deserted buildings (Hesse and Wapnish 1985: 21) and abandoned vehicles (Tores and Yom-Tov 2003: 233). The birds of prey responsible for depositing the small animal bone accumulation at Ekron would have required higher-location perches, presumably in the structures (houses, temple complex, industrial buildings, animal stables, granaries, etc.) left behind by their fleeing owners. Given the level of destruction the city experienced once the Neo-Babylonian army arrived, it seems unlikely that many (if any) structures were left standing. A Neo-Babylonian source describes Ashkelon's destruction as a "mound and heap of ruins" (Malamat 1956: 251). It is not hard to imagine that Ekron would have been left in an equal state of devastation, and that such ruins would not have provided suitable or attractive roosting areas for birds of prey.

The 604 Babylonian Campaign and the Abandonment of Philistine Ekron

Regarding site formation processes in the Levant, O. Bar-Yosef once remarked that "...in the course of the debate concerning the origin of modern humans, the discussion centers on lithics and human fossils alone. In practice, many colleagues exploit these two data sets as the only sources for learning about past patterns of behavior" (1993: 21). Bar-Yosef's observation can also be extended to the study

of the Iron Age southern Levant, where pottery, architecture and texts have understandably drawn the primary focus of academic inquiry. However, zooarchaeological analyses also have much to contribute to the study of this period.

As I have demonstrated, some of the 7th century BCE fauna at Tel Miqne indicate modifications consistent with the feeding habits of raptors and canids. Since small bodied species would have held no economic importance to those living at Ekron, I have argued that their remains were deposited by birds of prey. These remains could not have been introduced during a time when Ekron teemed with human activity, since this would have discouraged birds of prey from roosting nearby. Moreover, the remains of small animals, as well as chewed and partially digested bones from larger species, were found inside Temple Complex 650. As a holy site protected by a patron deity, the temple precinct was the center of religious ritual in the city. The grand design of its construction, the royal dedicatory inscription found inside it, and the rich assemblage of artifacts, all attest to its prominence in the social and religious life of 7th century Ekron. Given these considerations, it is extremely unlikely that scavengers and birds of prey would have been allowed to invade the holy precinct and desecrate it through their bodily discharges. The interpretation that best accounts for this evidence, therefore, is that Ekron was abandoned at the end of the 7th century BCE to avoid a military confrontation with the Neo-Babylonian army.

In light of this, we might speculate about the final days of Philistine Ekron. Before fleeing, its inhabitants may have carried out rituals in their temple for a last attempt to secure divine assistance. Supplies were packed, provisions were secured, and valuables were left behind, hidden in secret locations that individuals noted and fully intended on revisiting for future reclamation. While many items were taken, other possessions were undoubtedly left behind. Not all of the foodstuffs in households, nor all of the sacks and baskets filled with harvest from the nearby fields, could have been taken with them due to considerations of space, weight, and perhaps even time. With a veritable bounty of food, the colonization of a now deserted Ekron by small animals would not have taken long. Rodents attracted to the area by food and shelter, in turn, would have represented food for birds of prey. Canids entering any precinct of the city would have fed on animal parts that were fresh enough to warrant their attention, including the remains of recently sacrificed animals in the temple complex.

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