

TELL ABU HAWAM: NEWS FROM THE LATE BRONZE AGE

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GENERAL INFORMATION AND HISTORY OF THE SITE

Tell Abu Hawam, a site on the estuary of the Qishon River north of the Carmel Ridge in the confines of Haifa, modern Israel, has been a constant companion to archaeologists in the quest of contacts and trade, especially between the Aegean and the Levant (Fig. 1). Its location underneath the Carmel Ridge, which guards it from the prevalent southwesterly winds, enhances its importance as an anchorage/harbor where the Maritime and the terrestrial routes meet. The favorable position of the site as an anchorage in antiquity was matched by its auspicious location in the modern industrial development of the area, already during the British mandate and later the state of Israel. There are however drawbacks which caused the area to be utilized as an anchorage/harbor only intermittently. These include its position on an active geological fault line, frequent swamps caused by the Qishon River and the proximity and the nature of the Carmel Ridge, which hampers sustaining a terrestrial route towards the east or the south.

The tell is now located ca. 1.5 km from the coast due to geomorphological and tectonic changes, silting caused by the Qishon River and industrial and urban development. The modern history of this important early harbor has not been good. Already in the early part of the 20th century, industrial development was planned for the area. The British Mandate Department of Antiquities carried out several salvage excavations on and around the site. In 1922, P.L.O. Guy and G.M. Fitzgerald excavated the Mt. Carmel necropolis and in 1929, L.A. Mayer and N. Makhoully excavated on the tell as did N. Makhoully in 1930 followed by D.C. Baramki and A. Vilensky and eventually in 1932–33 R.W. Hamilton and L. Sorial carried out a major excavation. Hamilton proceeded to publish the results of his, at times, harried project, which became the base of reference to the site (HAMILTON 1934; 1935). The Israel

Department of Antiquities and Museums continued salvage projects among which was a cemetery excavation carried out in 1952 by E. Anati and M. Prausnitz (ANATI 1959) and in 1963 on the edge of the site by E. Anati and Y. Olami (ANATI 1962).

J. Balensi, following her methodological study of material from the previous excavations by Hamilton held a tenacious belief that parts of the site remained and could be found. In 1985–86, an archaeological project on the tell was carried out by the Centre de Recherche Français de Jérusalem (J. Balensi and G. Finkielsztejn) in cooperation with the Casa de Santiago de Jerusalem (M. D. Herrera) and with the Center for Maritime Civilizations of Haifa University (M. Artzy). Work was supported by the Ecole Biblique et Archéologique Française de



Fig. 1 General Map

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Jérusalem and the Society for Preservation of Nature in Haifa. In coordination with the archaeological research, the then Center for Maritime Studies of Haifa University undertook geomorphological probes (1985–6, A. Raban, and I. Galanti). It was during this period that the surroundings of the site were formally re-declared as an antiquity site. Any construction or damage had to be reported to the Israel Antiquities Authority. Already in 1990, a small salvage excavations of the Department of Antiquities under the direction of S. Yankelevich took place in the eastern side of the site. Hamilton divided the layers to 5 *strata* from I to V:

Stratum I	Surface Material	
Stratum II	Graeco–Persian	Late 6 th to early 4 th cent. BCE
Stratum III	Iron I	c. 1100–925 (?) BCE
Stratum IVb	Iron I	1194–1100
Stratum IVa	Late Bronze	1230–1195
Stratum V	Late Bronze	1400–1230

Following the 1985–86 excavations, Balensi and Herrera reworked the stratigraphic relationships and proposed a new division of the layers (BALENSI *et al.* 1993):

Stratum I	Medieval, Byzantine, Roman, Hellenistic	Surface mixed debris	
Stratum IIB	Late Persian – Early Hellenistic?	Fortified city	
Stratum II A	Persian	Regional granary	5 th –4 th cent. BCE
	Assyrian, Babylonian	Gap in occupation	7 th –6 th cent. BCE
Stratum III B	Iron Age II (A–), B–C	Renewed planning	Late 10 th –8 th cent.
Stratum III A	Iron Age II A	Fortified city	10 th cent.
Stratum IV B	Iron Age I / II A	Public Buildings	11 th –10 th cent.
Stratum IV A	Iron Age I B	Three-room houses	11 th cent.
Stratum V C	Late Bronze II B / Iron Age I	New settlement	13 th –12 th cent.
Stratum V B	Late Bronze (I B / II A–B)	Cyclopean Fortifications	Mid 15 th cent.
Stratum V A	Late Bronze IB	Quarrying and terracing	15 th cent.
Stratum VI A	Middle Bronze II, Late Bronze I	Maritime Trade	16 th –15 th cent.

This table followed another one which Balensi and Herrera published a few years earlier in which they noted a possible abandonment of the site in what seems to be their Level V C (HERRERA and BALENSI

1985). This possible gap had been previously noted by others who have, in the past, tried to understand the transition of the Late Bronze and the early Iron Age at the site, B. Mazar (MAISLER 1951), ANATI (1962) and VAN BEEK (1951).

The date of the initial settlement has been addressed by several archaeologists and historians as well (Fig. 2). Balensi dates the original settlement of the site to as early as the 16th century BCE, in a not completely identifiable Level VI (BALENSI 1985), Gershuni seems uncertain, although she favors an early settlement (GERSHUNI 1981). Hamilton and Anati placed it at the end of the 15th, or the very first years of the 14th century BCE and Maisler (B. Mazar) places the original habitation to as late as ca. 1300 BCE as an Egyptian Naval Base (Maisler), which was in turn negated by WEINSTEIN (1980).

THE 2001 PROJECT

In 2001, with renewed public works in the area of Tell Abu Hawam, a salvage project centering on the northeastern outskirts of the site was carried out by the Recanati Institute for Maritime Studies at the University of Haifa and the Israel Antiquities

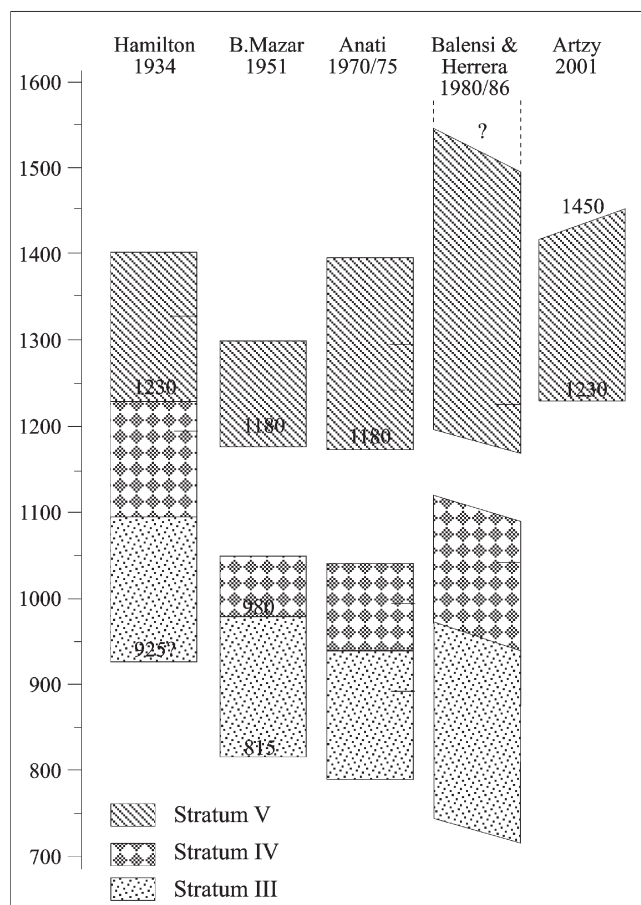


Fig. 2 Chronological Chart

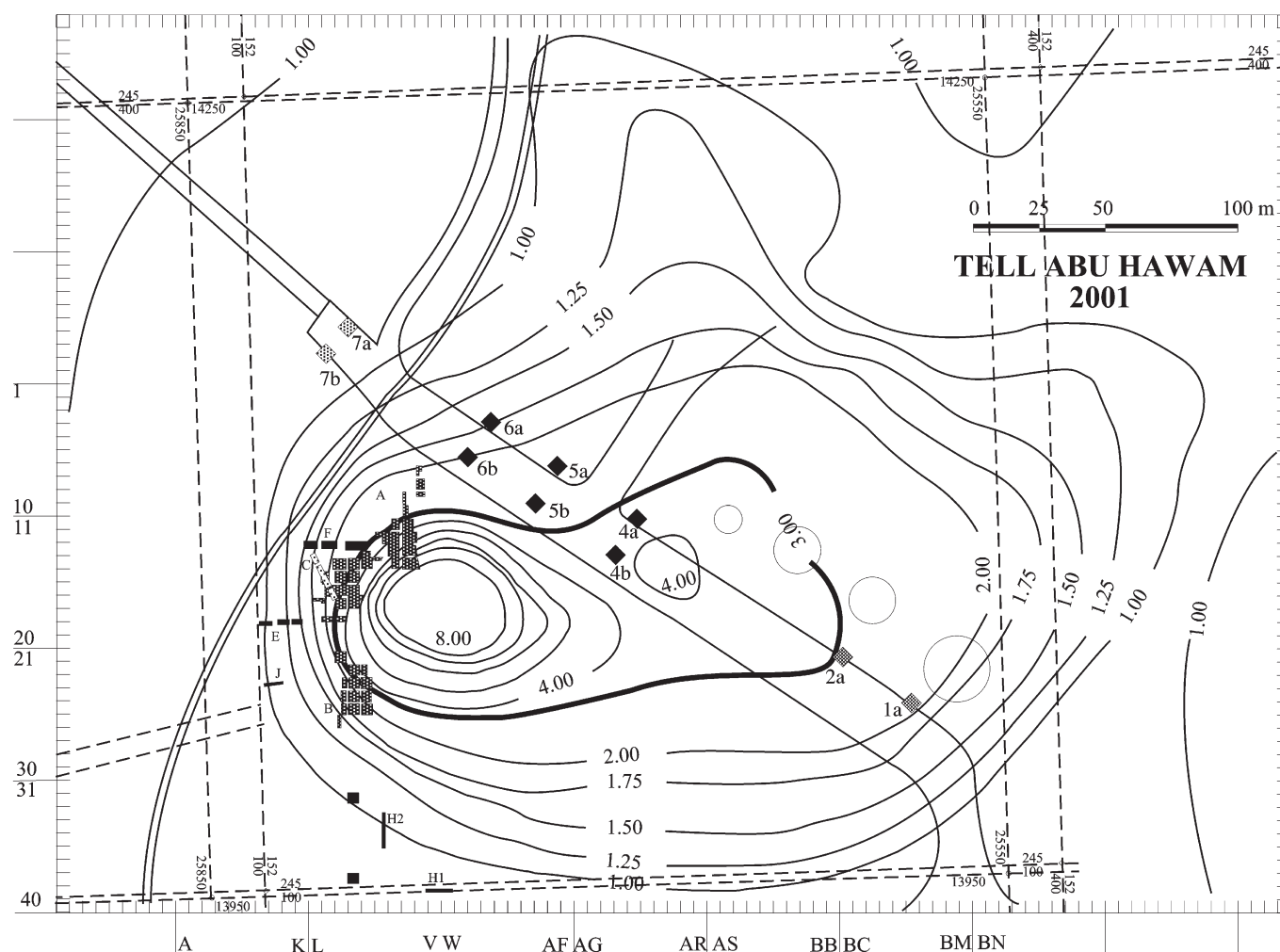


Fig. 3 Map of Excavated areas (Yossi Salmon)

Authority under the direction of M. Artzy with the participation of S. Yankelovich, U. Ad and A. Abu Hamid. Yossi Salmon surveyed and prepared the maps in agreement with the 1985–6 grids prepared for the Balensi excavations (Fig. 3). The project included a geomorphological study by E. Reinhardt and B. Goodman. This area was not excavated in any of the previous archaeological ventures and thus could contribute greatly to the further understanding of the geographical setting of the site. Balensi's concerted efforts to gain all the data available about the site, located a map prepared in the 1920's by Treidel. She compiled the data with later maps and her own ones and envisioned the area as being the 'lower city'. Her conclusions were based on the 1920 contours, which seemed to indicate such a possibility.

The proximity of the area excavated to the Qishon River and the Sea and a major geological fault necessitated an interdisciplinary project. In order to facilitate the archaeological task a few metal caissons were constructed to form 5 × 5 meter squares (Fig. 4).

The caissons were placed, when possible, to the depth of ca. –3.00 below sea level. This made it possible to excavate the squares properly well below modern sea level. Since there was no way to have sections where the metal sheets were, a bulk was kept in the middle of the square. Thus, each square was divided into two rectangles. Not all of the squares contained stratified archaeological material, although they provided information about the ancient ecology of the site. Two squares (1A and 2A) showed Ottoman interference, probably related to works associated with the Qishon River. In others, 7A and 7B, no archaeological finds were noted. In square 4B, little or no archaeological material was found. It might note the small hill (+4) noted in Treidel's map. Square 4A posed a problem. It is situated in close proximity to modern construction and past sewage installations made it hard to place the caisson and thus to excavate properly. This was unfortunate since there were clear remains of ancient constructions, which seemed to be of the Late Bronze Age although their height above



Fig. 4 Metal Caisson in Sq. B5 (Shalom Yankelevich)

sea level is problematic. We reserve judgement until further study, especially ecological, of the area. Thus squares 5A, 5B, 6A and 6B supplied the archaeological, especially ceramic, information. The strata, which could be discerned belonged to two periods, Persian, Stratum II with two different levels of which very little undisturbed architecture was noted

(square 6A) and Late Bronze II, Stratum V, in which the architectural remains were very limited. In square 5B architectural remains were found at the height of -0.50m . The stones, $60 \times 60 \times 45\text{cm}$, were covered by mollusks, especially oysters which indicate that, at some time in the past, the area was covered by water, a body of seawater at ca -0.50 to -1.50



Fig. 5 Clay mask (Michal Artzy)

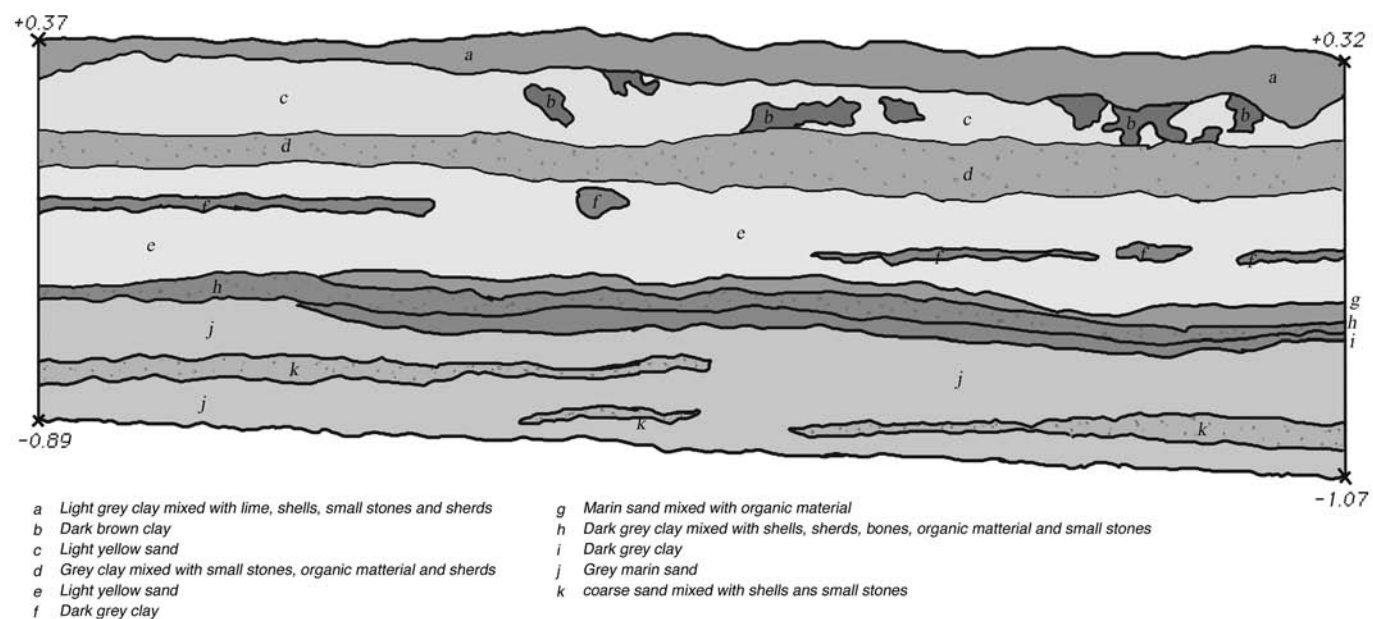


Fig. 6 Section of Sq. A5 (Amani Abu Hamid)



Fig. 7 Base Ring Shards



Fig. 8 White Slip Shards

meters. It is likely that this architectural remain was part of an anchorage installation. The archaeological layers are very rich and the material goods include oil lamps, pieces of tuyeres and a bellow as well as worn and corroded pieces of bronze and a mask the like of which was found in Hazor Area A (Fig. 5).

The distinction of the layers within the squares was based on the changes in soil substances attributable to river flooding, sand silting and human intervention (Fig. 6). One way to stabilize the area closest to the shore was by piling stones and heaving industrial waste such as murex shells from the purple industry (BARUCH *et al.* 2006). Yet, despite the lack of clear architectural remains, there were unusual quantities of ceramic assemblages, as well as the faunal remains, all attributable by type to Hamilton's general Level V in 4 squares, namely 5A, 5B, 6A and to a lesser extent 6B.

A large percentage of the ceramics are imports although provenance studies have yet to be carried out. It is likely that a good percentage of the pieces

were refuse, damaged wares, thrown from the boats during or following the arrival. When the boats were anchored and the goods were unloaded, damaged ceramics from either the journey or the treatment at the port were then thrown out and ended up in shallow water. It should be emphasized that very few shards showed any signs of water wear, probably because they ended in the silt soon after being disposed of.

Not surprisingly, although it should be emphasized, Cypriote imports are by far the majority of the foreign wares. They include a few samples of Base Ring I and numerous examples of Base Ring II (Fig. 7), White Slip II, mainly bowls, although a few shards of jugs were also noted (Fig. 8), Monochrome ware, White Shaved juglets and Red and White Lustrous pieces. There are also wall brackets, all likely from Cyprus. In addition there were numerous diagnostic shards of *pithoi* as well and although their provenience is still being tested, some are likely of Cypriote origin and possibly from other sites along

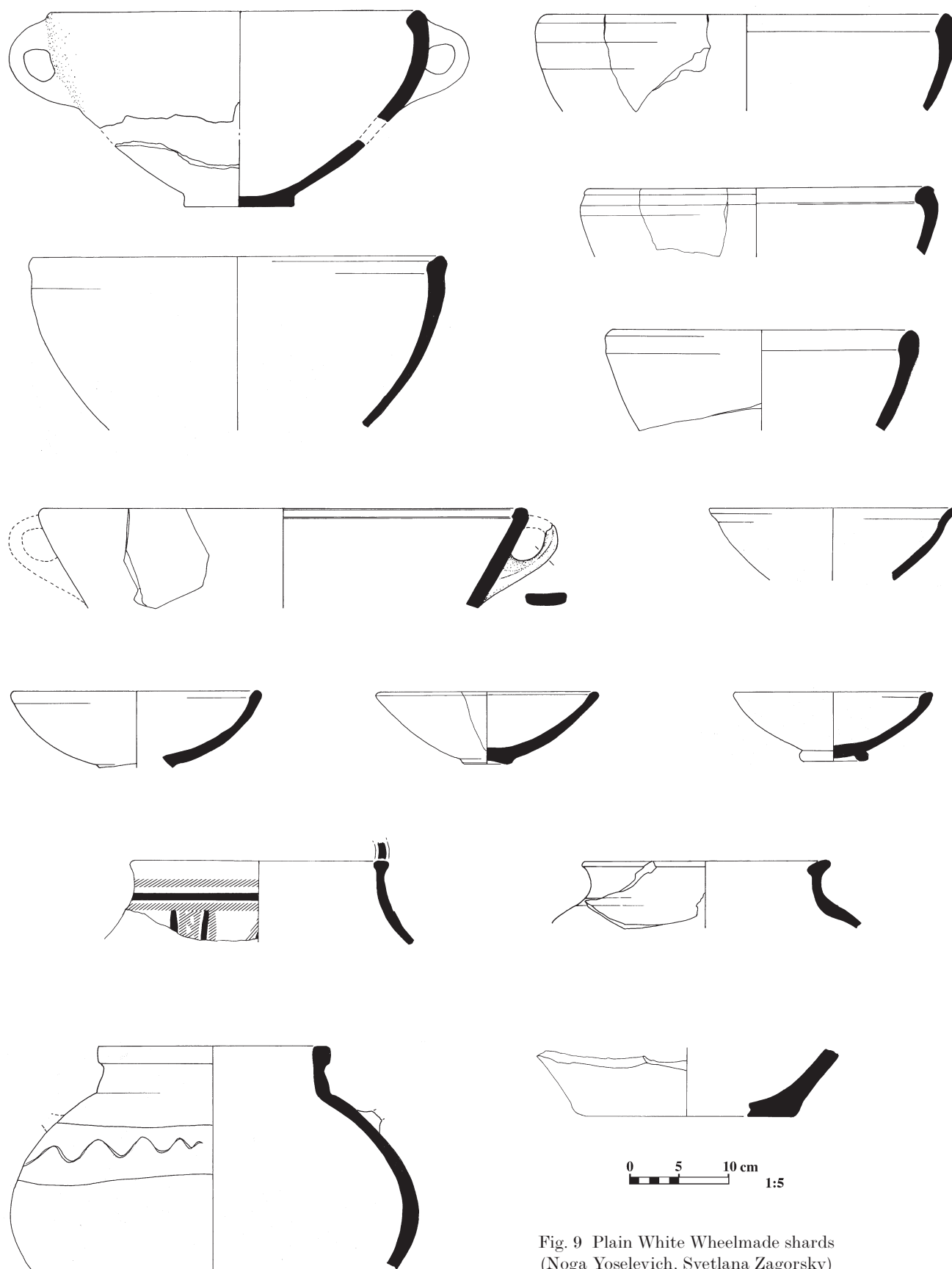


Fig. 9 Plain White Wheelmade shards
(Noga Yoselevich, Svetlana Zagorsky)

the eastern Mediterranean. We have noted in the past (ARTZY 1994) that *pithoi* were part of the usual ships' load as those on the Ulu Burun (PULAK 1997) and the Cape Iria shipwrecks (LOLOS 1999). Other ceramic types are, by sight, Late Bronze Cypriote Plain White Wheelmade Ware (Fig. 9), although, the conclusions must await an extensive provenance study.

Another group of imports, by far a smaller one is the Mycenaean Ware. While no comprehensive statistical study has been carried out by the time of the presentation, a guess might place the ratio between the two groups (Cypriote and Mycenaean) at 40:1, or even higher. The majority of the Mycenaean shards compare well with those from Hamilton's excavations, which have been analyzed in the past at the Lawrence Berkeley Laboratory (ASARO and PERLMAN 1973; FRENCH *et al.* 1993). They are of the Mycenaean IIIA2/B type and said to have originated in the Greek mainland, mainly the northeastern Peloponnese. There are some Minoan stirrup jars and parts of Oatmeal ware, which could be compared to sites in Crete.

Among the imports is a very small group of Egyptian wares, including, however, a storage jar handle bearing a cartouche of Ramses II (Fig. 10). Several pieces of Anatolian Grey Ware have also been noted, among which is an almost complete krater (Fig. 11). There is a group of mostly handmade, black-grey and reddish shards belonging mostly to small craters or even cook ware, whose origin, at this juncture, can not be established by style only. The variety of cook ware is staggering and might indicate the varied origin of the ships frequenting the international harbor of Tell Abu Hawam.



Fig. 10 Cartouche of Ramses II (Michal Artzy)

Faunal remains include mollusks, among which are numerous crushed *Murex* shells as well as imported shells from Egypt (BARUCH *et al.* 2006). Numerous fish and animal bones, as well as turtle shells, as befitting the marshy environment were found.

Our dating is necessarily based on the ceramics, which were locked by the geological layers. The excavation reached depths in which no signs of human activity were noted. The earliest ceramics should be dated at the earliest to the end of the 15th century BCE, likely post Tuthmosis III, or even later. The majority agrees well with the 14th century and the first half of the 13th century BCE (Fig. 2). Thus, for whatever reason, geo-political or geo-morphological, the anchorage ceased to exist. According to Hamilton's division, this is Level V and there are no remains, which could be attributed to his Stratum IVb. In this area there are no signs of Balensi's Stratum VI, Middle Bronze IIb and LB Ia. There are no White Painted Cypriote imports and what might be attributed to the Bichrome ware family is more likely of the Cypriote Wheel Made White Painted III Ware of the Late Bronze age. The end of the activity was sometime in the 13th century BCE and the subsequent human activity can only be dated to Hamilton's and Balensi's Level II, the Persian period.

CONCLUSIONS

The finds from the 2001 excavation could not substantiate the assumptions that a lower city existed in the northwestern extant of the site during the Late Bronze Age and thus the map drawn by Treidel in the 1920's was done following Ottoman works in the

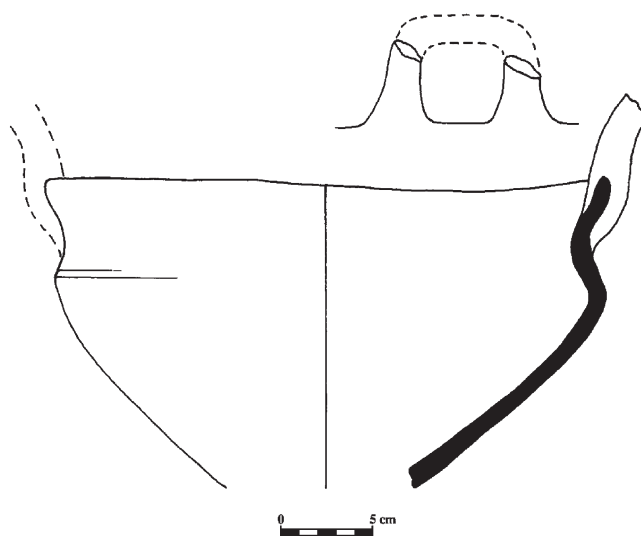


Fig. 11 Drawing of Anatolian Grey Ware Krater (Noga Yoselevich)

area and the lay of the land was not necessarily that of the more ancient past. Most of the area was at times covered by water in a part of the period and the changes in the relationship of coast and sea were most pronounced. From time to time sand covered the area followed by inundations of the river. The likely explanation as for the usage of the area in antiquity, especially that of the Late Bronze Age, is that of an anchorage or even harbor which served the inhabitants during a specific period, now assumed to have been the heyday of the site. There have been changes in the route of the Qishon River over the centuries. AVNIMELECH (1959) for instance, suggested that the river flowed northwest of the site. Balensi addressed the possibility that the site was an island. Renewed geomorphological studies would hopefully establish the ancient ecology.

The new data from the 2001 salvage excavation can be related to only a segment of the site's chronology. These two include the major part of Stratum V, which is assigned to the Late Bronze Age and a part of Level II, two levels which are assigned to the Persian period. The lack of any remains dated

to either Level IV and Level III (Hamilton's, Balensi and Herrera), is of interest. Obviously, the human activity assigned to Stratum II overlapped that of Level V with a complete absence of the intermediate periods, namely the last of the Late Bronze Age IIB, Iron I and Iron II. This left the Iron age site to have been limited in size, although its extent to the east is still not established. The ceramics agree well with those from the site excavated by Hamilton. As to the earliest habitation, the finds do not include any Bronze Age White Painted Ware from Cyprus and no Cypriote Bichrome Ware, although one painted piece could, to the untrained eye, seem like a member of the family, but is more likely of the Cypriote Late Bronze Wheelmade White Painted III family. No other styles which one might have assumed to belong to the end of the Middle Bronze II and Late Bronze I were noted. The latest pieces, chronologically, could well be attributed to the middle of the 13th century BCE and not much later. Again, certain transitional ceramics of the 13th–12th centuries BCE, which are to be attributed to that period seem, at this juncture, to be completely absent from the 2001 excavation.

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