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English front page: Coin of Herod Archelaus; Obv.: Anchor (Hecht Museum Collection)

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The Importance of the Anchorages of the Carmel Coast in the Trade Networks During the Late Bronze Period

Michal Artzy

University of Haifa

This study partially follows the lecture presented in the symposium (May 2011) dedicated to Elisha Linder and Avner Raban, my late colleagues. Akko, the tell and harbour were the first introduction to the archaeological work carried out in the realm of the Department of Maritime Civilizations at the University of Haifa when I joined its ranks quite a few years ago. It was Avner who introduced me to his ideas as to what constituted ‘coastal archaeology’, even if he did not refer to it by that name. We worked side-by-side at Tel Akko, directed by Moshe Dothan. Since 2010, I have returned to Akko, as a co-director of a renewed project with Ann Killebrew of Penn State University. Most of my work is centred on Tel Akko, its landscape and its anchorages and harbours.

I present here three coastal sites in the vicinity of the Carmel Ridge, which were active in the international trade networks of the Late Bronze (LB) Age. The three sites are: Tell Abu Hawam (TAH), Tel Akko, and Tel Nami (Fig. 1). In this part of the Mediterranean, there are few bays and coves usable as anchorages. The one good bay is Haifa Bay, also known as Akko Bay, north of the Carmel Ridge, and two of the sites, Akko and TAH, are actually located on it. Some of the data were published in the past in several papers, but in this presentation, changes in the position of international anchorages within very limited spatial and temporal parameters, namely the Carmel Coast, are considered. Archaeological remains from the three sites indicate that the active economic alliances were with the northern part of the eastern Mediterranean. While the prevalent idea is that these three sites were utilized as anchorages serving the east-to-west routes, from the Mediterranean Sea across Cis-Jordan to Transjordan, an idea should also be entertained that one of them, if not two, were actually harbours serving larger settlements, possibly at a walking distance of a day or so. It is also suggested that within the Late Bronze IIB period, possible geopolitical and geo-morphological changes brought about changes in the utilization of the anchorages. The area’s anchorages/harbours along its shores depended on the rivers and their estuaries, from which routes led to the hinterland.

The presentation was limited to the anchorages dated to the LB II period, especially LB IIB. The period extends from the end of the 14th century to the last quarter of the 13th century and the first years of the 12th century BCE. Changes in material goods noted between the sites mentioned in this study, encouraged us to name the last part of the period, as either LB IIC or even LB III. The sites chosen for discussion here are close together, and were inhabited at least in part of the period (Fig. 1).



Fig. 1: Sites mentioned in the text (Prepared by S. Zagorski).

The Carmel coast, at least during these periods, served as a focus of maritime and terrestrial routes. The maritime networks were dependent on the availability of coastal installations for successful commercial activities, as well as terrestrial routes to the economic hinterlands. This is what the Carmel coast could supply to the ancient traders (Artzy 1997; 1998). Even in more recent times, the 19th and 20th centuries, the Carmel coast, and especially the port of Haifa, fulfilled this role. Over the centuries, the two sides of the bay were utilized intermittently. The economic viability was measured by the possible contact with the hinterland via routes crossing the ridge and/or swamps. The three coastal sites I deal with, TAH, Tel Akko, and Tel Nami, are situated in the vicinity of the Carmel Ridge, where an active anchorage existed (Fig. 1). The archaeological evidence from them suggests that they were not just way-stations or 'kiosks' connecting the southeastern part of the Mediterranean, namely Egypt and the northern-eastern areas, such as Lebanon, Cyprus, the Aegean and Coastal Anatolia, but were actively part of the maritime and terrestrial routes. This does not preclude concurrent tramping activities among the coastal sites.

TAH is situated in or near the estuary of the Qishon River, in the confines of modern city of Haifa. Today the site is located some 1.5 km from the coast due to geo-morphological changes, silting caused by the Qishon River, sand transport, and industrial and urban development, which included land reclamation and river bed changes. It is located beneath the Carmel Ridge, which guards it from the southwesterly winds prevalent in the sailing season. Despite the location's advantages, there are also drawbacks, including an active geological fault line, the sharp elevation of the Carmel Ridge in its vicinity, and the swamps associated with the Qishon River, which hampered the land trade route and the movement of goods from the coastline to the hinterland, especially sites such as Yoqne'am and Megiddo. Industrial development in the early part of the 20th century provided the impetus for excavation at TAH. The British Mandate Department of Antiquities carried out several salvage excavations at and around the site. R. W. Hamilton and L. Sorial directed the most notable project, in 1932-1933, and Hamilton published the results of his (at times) hurried project (Hamilton 1934; 1935). The Israel Department of Antiquities and Museums continued salvage projects, among which was one at a cemetery 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 1963). By the 1970's and 80's, it was assumed that the site had been given a death-blow by the urban and industrial changes. J. Balensi, following her methodological study of the previous excavations by Hamilton (Balensi 1980), held a tenacious belief that parts of the site were still there to be studied (Balensi 1985; Herrera and Balensi 1985). In 1985-1986, she directed an excavation on the site (Balensi *et al.* 1993) with the help of the Society for the Preservation of Nature and the University of Haifa.

The initial dating of the site has been contested, and it has been assigned to periods ranging from the 16th century BCE (Balensi 1985), in what she termed, Level VI. Hamilton, the first major excavator of the site, attributed his lowest level, Level V, to be the initial settlement in the 14th century BCE (Hamilton 1934; 1935). Anati, following salvage work at the site, placed Level V at the end of the 15th, or the very first years of the 14th century (Anati 1963). Maizler (B. Mazar) placed the original settlement, one he considered to be an Egyptian naval base of the 19th Dynasty, as late as 1300 BCE (1951), an idea refuted by Weinstein (1980). Balensi and Herrera supported an Egyptian connection in the establishment of the site, but dated it to the earlier mid-18th Dynasty (Herrera and Balensi 1985: 40-41).

The end of Level V has also been debated. The coastal position of the site and the noteworthy amounts of imported wares from the Eastern Mediterranean encouraged those interested in the transition of the LB to the Iron Age and the enigmatic 'Sea Peoples' to utilize its finds for the benefit of their arguments. Hamilton (1935), felt that Level V ended around 1230 BCE, before the final phase of the LB Age. Hamilton placed the succeeding Level IV as following without interruption. Scholars differ on this point, for instance, Maisler (Mazar) (1951), Anati (1970) and Van Beek (1955) suggested that there was a gap in occupation between Levels V and IV. The disagreements had to do with the time of the abandonment of the site following Level V and the beginning of Level IV. Balensi, who had noticed the change, noted it in one of her publications (Herrera and Balensi 1985), but changed her mind and had her Level Vc fill in the gap between the two Levels (Balensi *et al.* 1993).

In 2001 and 2002, salvage excavations carried out by the Recanati Institute for Maritime Studies, the University of Haifa and the Israel Antiquities Authority, took place under the direction of M. Artzy, S. Yanklevitz and U. Ad (Artzy 2002/2003; 2005; 2007). The salvage excavations were located on the north-eastern periphery of the site, where Balensi had assumed the lower city was located. This particular area had not been excavated in any of the past projects, and presented chances of adding important data to our understanding of the site. Balensi's assumption was probably based on a mid-1920's map produced by Treidel. In the salvage excavation, 5x5 m metal caissons were placed in areas where supports of a bridge were to be located. They were dug to a depth of 3 m because of high ground water in the area, making it possible to excavate properly below sea level. Meagre architectural remains were found, and were attributed to two distinct periods. Directly below the surface, in one square, limited Persian Period architecture, and below a LB element covered with molluscs, among them oysters indicating that the wall was located under seawater in antiquity.

The distinction between the layers within the squares was based on the changes in soil substances attributable to flooding, sand silting, and human intervention. The dating is based on ceramics stratified between the layers of river clay and sand, and it is all dated to Hamilton's general Level V, from the second part of the 14th century to about 1230 BCE. Large numbers of the sherds were imports, with the vast majority from Cyprus, with some from the Syro-Lebanese coast, Western Anatolia (Troy), Mycenae (Berbati), and a handful from Crete. There are few Egyptian imports, of which one bears the cartouche of Ramses II on a jar handle originating in Egypt.

Tel Nami (Arabic: Jezirat en-Nami) is another anchorage site dating to the second part of the LB Period. It is located on the southern Carmel coast about 15 km south of Haifa. The tell is located on a hill, part of a sunken *kurkar* ridge. It is situated near the changing estuaries of the Me'arot (Caves) Stream. The site comprises several settlements, among which are the tell itself, with remains of the MB IIA, followed by a hiatus and resettlement in the last part of the LB II period (LB IIC/LB III) about 70 m east of the tell, where both MB II and LB IIB remains were noted (Nami East). Tel Nami and Nami East were initially inhabited during the MB IIA period (Marcus 1991; Artzy and Marcus 1991; Artzy 1995: 19-22; Marcus and Artzy 1995), after which the area was abandoned and resettled only at the very end of the LB IIB, especially LB IIC/LB III, the latter part of the 13th century BCE. Tel Nami was destroyed and abandoned not much later than the first years of the 12th century BCE, contemporaneously with the destruction of Ugarit, not to be settled again.

A necropolis was located in Nami East, and a sanctuary and its environs in which metal recycling took place were excavated on the peninsula. The international connections and wealth of the inhabitants of the Nami region can be deduced from the material goods found (Artzy 1994; 1995; 1997). The dating is based on the polymorphic finds found in both the cemetery and the cultic area, including local and imported wares. Cultic paraphernalia found include a seven-spouted lamp, a *kernos*, conical cups, and pumice, as well as a conch shell (Artzy 1991; 1995; Baruch 2002; Baruch *et al.* 2005). The imports from the lands of the sea are mainly of Cypriot wares, although there are Mycenaean-style wares, especially Mycenaean IIIb2 and 'Myc. Simple Style', which are

probably of Cypriote manufacture. In the cemetery, a ring bearing a Hittite hieroglyphic inscription and numerous metal objects, including incense burners, were found.

At the entrance to the rocks of the Carmel, less than 4 km east of the Nami area, on the Me'arot Stream route leading to the economic hinterland, there is a peculiar rock formation, which was and is still used as a benchmark for mariners approaching the area of Tel Nami. It has ship engravings comparable, among others, to those found on the Akko altar (Artzy 2004) and on the walls of Temple 1 in Kition (Basch and Artzy 1986), dated to the end of the 13th and early 12th centuries BCE, our LB IIC/LB III. Research is presently being carried out by Y. Salmon to establish the exact anchorage of the site in the different periods of its activity, using geomorphological and geophysical methods. It is likely that the anchorage dating to the LB period is not the same as the one from the early part of the 2nd millennium BCE. Coastal changes affected the Nami area greatly, including changes in sea levels, as well as sediment transport and the shifting Me'arot Stream, affecting the habitation patterns on and around the site.

The settlement history of Tel Akko, also named Tell el-Fukhar ('mound of potsherds' in Arabic), or more popularly Napoleon's Hill, is longer than that of the other two sites, and more complicated. It is situated north of the Na'aman River, 1 km east of the coastline. The earliest reference to the site is in the Egyptian Execration Texts of the early 2nd millennium, or possibly even earlier in the 3rd millennium BCE Ebla texts (Artzy and Beeri 2010). It is named in the el-Amarna archives of the 14th century BCE, although the clay origin of the three tablets from this archive that were written to the Egyptian Pharaoh seem to belong to the Egyptian centre at Beth Shan, as shown by petrographic analysis (Goren *et al.* 2004: 239). It is mentioned in Ugaritic and Akkadian texts from Ras Shamra (Heltzer 1978: 51). Akko is also mentioned among the cities conquered by Seti I and destroyed by Ramses II. Although it is mentioned only once in the Bible, it appears several times in the Assyrian annals (Dothan 1976: 1-2). It was an important centre during the Persian and Hellenistic periods, at which time the inhabitants started moving away from the tell toward the sea and near to the artificial harbour. Renewed excavations at the site indicated that it was abandoned during the first part of the 2nd century BCE.

Excavations on the tell were conducted intermittently from 1973 until 1985, with a short season in 1989, directed by M. Dothan, with the participation of faculty and students of the University of Haifa, and including D. Conrad of Marburg University. In 1999, a short educational season of excavations was undertaken on behalf of the University of Haifa, under the direction of M. Artzy of the University of Haifa and A. Killebrew of Penn State University; and a renewed project, named 'Total Archaeology' was started in 2010, directed by A. Killebrew and M. Artzy.

Architectural elements from the tell were mined for secondary and tertiary use, especially for Crusader and Ottoman Acre. These activities left the site with fewer architectural remains than one would have expected, especially those from the later periods (Iron Age to Hellenistic), but preserved numerous robber trenches, pits, and possibly fills, which contained large amounts of ceramics – hence its Arabic name. In addition, the 20th century witnessed destruction in the southern portion

of the tell, especially in the 1930's and 40's, when soil was removed from the tell to be used for draining the swamps associated with the River Na'aman.

In several areas of the tell, remains dating to the LB period were noted in association with architecture, although traces of the period were also found in Areas, AB, H, and PH. These three areas are situated on different parts of the site, but have one thing in common: namely that the LB IIC/LB III appears in the remains of the MB IIA rampart (Artzy 2006). Dothan's major project concentrated on the northern section of the tell, where the MBII rampart was highest. It was only in later seasons of excavations that some of the effort shifted to the southern portion of the tell, where the rampart's outline was problematic, and damage was caused by extensive modern quarrying of sediment. Raban undertook the excavation of Area P, an area he thought was likely to have had a connection to an anchorage based on the River Na'aman, and where a possible gate was located. The small Area PH, excavated by Artzy, is situated on the rampart west of Area P, where remains dating to the MBII, LB IIC/III and Persian/Hellenistic periods appeared. Graves associated with MB IIB and the transitional MB to LB period were noted in Areas AB and H, but little sign of habitation during these periods was discerned. Area PH, likewise, revealed no sign of habitation of MB IIA and IIB, or the transitional period between MB and LB periods. The habitation gap lasted for the major part of the LB, at least until LB II. This absence seems odd in view of Akko's appearance in the Egyptian written sources during the LB. The site was mentioned in both the Tuthmosis III list of conquered cities, as well as in the Amarna Letters, where Akko and its king are mentioned at least 13 times. Some letters might have originated in Akko, although others, if not written locally, were from the king of Akko (Goren *et al.* 2004: 237-239).

Area AB's location is well suited for industrial installations: on the summit of the tell, the prevailing wind is from the west (the sea), which would have fed the fires and blown the fumes away from the area. Parts of crucibles with metal remains were found in the vicinity of a furnace (Artzy 2006). Area H seems to have had some importance for cultic use: an altar with engraved ships was found there. The importance of the small Area PH is its proximity to Area P where, according to Raban, a gate was located close to what he envisioned was the river estuary. This is the area that Raban assumed to have been used as the harbour in the LB, and possibly the MB (Raban 1991: Fig. 19*, 31*). In Area PH there are signs of habitation: stone-lined pits, some containing Cypriote wares, and floors and possible walls were excavated (Zagorski 2004). Besides the imported Cypriote ceramics, there were Mycenaean-style wares (especially Mycenaean IIB), Egyptian imports, and even imports from Anatolia (Zagorski 2004; Artzy and Zagorski 2012).

The three sites mentioned are coastal anchorage sites, where material remains originating in lands beyond the sea mark them as part of the trade networks of the period under discussion. The three are situated near rivers: the Na'aman, Qishon and Me'arot. They are within about 40 km of each other, and two of them are situated on the same bay, with Akko on its northern and Tell Abu Hawam on its southern side. Among the three, maritime activities dating to the LB IIB and LB IIC/LB III, (14th to the very early 12th centuries BCE), can be discerned, although not necessarily concurrently. This

slight temporal difference is of importance in our quest to understand the reasons behind the location of three anchorages within the limited geographical space in the last part of the LB period. In the past it was proposed that they used the routes that transversed the area, via Megiddo and Beth Shan, and joined the north-south route that crossed Transjordan and connected Arabia with Syria and inner Anatolia (Artzy 1994; 2006b). This is a period with international contacts. Following, or even earlier than, the battle of Qadesh, the Hittites, Ugarit and Cyprus played an important role in the trade networks of the area. Whoever the traders might have been, their interest was not exclusively in the coastal segment of the Via Maris, or only in maritime routes. They must have had a vested economic interest in the routes leading to the hinterland, and sources of specialized goods. The distance from the sea (Carmel coast) to the River Jordan is barely 70 km in this area, encouraging association of maritime and terrestrial routes (Artzy 1994; 1998).

The geographical position, a peninsula or an actual island, of the site of TAH may have been favourable as an anchorage/port, but the routes leading from it to the economic hinterland were far from ideal. The routes along the Qishon River, its swamps, and the steep Carmel Ridge rendered the connections to the hinterland problematic. In addition, the site itself was very small, less than 20 dunams (2 ha), with no agricultural hinterland. What then was the reason for the flourishing site, especially in LB II, probably the 14th and the first three-quarters of the 13th centuries BCE? A likely route was based on coastal sites, such as Tel Nahal, Tel Idham, Tel Tzavat, Tel Zivda, Tell Keisan (Tel Kison) and Hination to reach the final destination: Hazor. This journey would have taken two days for a small caravan of traders and pack animals (Fig. 2). Hazor at the time was a prosperous city with international contacts. The proposed network is based on some similarities between the material goods found in the anchorage, especially imports, and those from the excavations in the comparable period at Hazor. An obvious question at this juncture is: was Hazor the patron of the small, but rich, anchorage site of TAH? Temporally, the destruction of Hazor coincides with the anchorage at TAH going out of use, which is also the time of the end in Maroni, and close to that of Ayios Dhimitrios, in Cyprus, Commos in Crete, and the beginning of the weakness noted in Ugarit, before its fall in the early 12th century BCE.

The period of activity of the anchorage excavated in 2001 at TAH (Artzy 2003/2004; Yankelevitz 2007) was short, and the end of its utilization was dated to before the end of the 13th century BCE. Tel Nami's major activity in the LB II, on the other hand, was limited to the end of the LB, namely from the end of the 13th century to the first years of the 12th century BCE, LB IIC/III. It is a small site, especially if one considers that habitation was noted only on the peninsula. Its connection to the economic hinterland was across the Carmel Ridge via the Me'arot Stream. This route went along the riverbed, which is rather wide, connecting the western coast of the Carmel Ridge to Tel Megiddo. A small caravan, including pack animals, could leave the coast in the Nami area in the early morning and eat an early dinner in Megiddo. There are few, if any, steep segments along this route, and water is plentiful, as is fodder for the animals. This route, coupled with another possible entrance to the ridge, should be considered as having served the inhabitants of Tel Dor, also at least



Fig. 2: Possible route from Tell Abu Hawam to Hazor (Prepared by S. Zagorski and R. Beeri).

during the early Iron Age, as might be gathered from the finds at 'En Hagit, along this route (Wolff 1998). Tel Nami's short life-span as a harbour might have been due to the problems associated with river and sand silting, and thus changes in the course of the river. In addition, the site did not have an abundant agricultural hinterland, and suffered from salinization. The material goods found in Nami are often very similar to those from Ugarit at that period. Who was its patron is hard to establish. Was it Ugarit, and is that why its demise was at about the same time as that of Ugarit? Who was responsible for the destruction? One does not have to search far. We cannot dismiss the possibility that Dor, situated but 5 km south of Nami, had a hand in Nami's final destruction. As noted by its excavators, Dor was not destroyed at the end of the LB; on the contrary, it has a very thick Iron I habitation layer (Gilboa and Sharon 2008).

The situation of Tel Akko, located barely 10 km north of TAH across the bay, is very different. It is a large site, in control of a major agricultural hinterland. From Akko one can proceed to the Jezreel

Valley, depending on the Qishon River and the swamp situation (Dorsey 1991: 78), and hence to Megiddo, and from there toward the Jordan Valley via several routes,. Where the anchorage of the site in the LB was located is still being studied, but Raban's suggestion that it might have been on the southern confines of the tell, on the Na'aman River outlet, is plausible. Recent studies have shown that Akko Bay extends to below the tell. It is proposed that an anchorage, based on the sea was used during the Bronze Age, although the question is whether it was based on the River Na'aman's outlet, or the bay as it was in antiquity, is being presently researched (Artzy 2012).

In a previous publication, I have noted the difference in the material cultures of the three anchorage sites (Artzy 2006), despite their proximity and their attributed comparable dates. This is especially true of the assemblages of the imported wares. We did consider varied and concurrent regional trade network differences, but the locally produced wares to which a comparison was made, accentuate the temporal variations within a limited time spanning the LB IIB and LB IIC/LB III. While slight divergences in the local ceramics could be attributed to regionalism, the changes in the imported ceramics could well mark geopolitical changes taking place in the origin. As the analysis of the material goods from the three sites progresses, a complex agenda may be suggested.

The majority of the Mycenaean-style sherds noted in the 2001 anchorage project at TAH are of the Mycenaean IIIA2/B1 sub-family (Fig. 3). These compare well with the Mycenaean ware from Hamilton's excavations, restudied by Balensi (1980). Neutron Activation Analysis (NAA) carried out in the 1970s established that they originated in the Argolid (Asaro and Perlman 1973: 215-16). These results were re-checked and published by French, Hoffmann and Robinson (1993: 7-10). 'Minoan' imports were also noted in both excavations (Fig. 3). Some of the 'Mycenaean'-type wares from Tel Nami, belonging to the Mycenaean IIIB2 or Simple style variety have been sampled and tested by NAA and thin section petrography, and clearly found to include pieces produced from Cypriot clay. Tel Akko shows a different picture, at least in the areas excavated with clear stratigraphy. The 'Mycenaean' wares from Area PH are, as shown by NAA and petrographic analyses, to be different as a group from those found at TAH (Artzy 2006b). Some of the ceramics are of Cypriot manufacture (Artzy and Zagorski 2012). It should be emphasized that they, possibly like others of



Fig. 3: Mycenaean and Minoan Ware from the Anchorage of Tell Abu Hawam (Photo: M. Artzy).

Cypriot provenance, were referred to as being Myc. IIIb ware, and assumed to have originated in the Argolid. This does not preclude the fact that Mycenaean imports, Myc. IIIA2/B1, did reach Akko. Such sherds were collected in the past, but so far none have been published from stratified excavations.

The Cypriot imports, which are the bulk of the imports, present a similar scenario as far as variations among the three sites are concerned. However, not all the different types of Cypriot imports were found in all of the three. One example is the wall brackets, which were found in the TAH anchorage, but so far not in Nami or in Akko. Pithoi, on the other hand, were found in all three sites. The pithoi were obviously a part of a normal ship's cargo, as already noted from shipwrecks (Artzy 1994; Pulak 1997, 2008; Vagnetti 1999; Lolos 1999). In addition, at the TAH anchorage numerous members of the Plain White Wheelmade (PWWM) family were found. However, some of the shapes originally thought to have been produced of Cypriot fabric, turned out to be of local TAH fabric, bearing techniques used in the production of the Plain White Wheel Made ware in Cyprus (Artzy *et al.* to be published).

The usual Cypriot imports of White Slip (WS), Base Ring (BR), Monochrome, and White Shaved (WSH) wares also appear in the three sites, but there are differences in the composition of the assemblages, and even differences in the fabrics. Information emerges from an evaluation of the comparable Cypriot imported assemblages from the three groups. For instance, all sub-groups of BR ware from TAH (Fig. 4) seem to have originated in one general area in Cyprus (Barkai 2003). While the BR ware from Tel Akko and Tel Nami has not been analyzed for its precise Cypriot origin, it seems to be of a different manufacture from the examples from TAH. Abundance of WS found at TAH is almost all of the 'classical' WS II family (Fig. 5), which can best be compared to WS found at Maroni in Cyprus (Cadogan *et al.* 2001). Those from Tel Nami are noticeably different, with thin, almost nonexistent, slip and a slightly different rim, probably from a different provenance in



Fig. 4: Base Ring Ware from Tell Abu Hawam (Photo: M. Artzy).

Cyprus from their TAH counterparts. The earliest WS at Nami originates from displaced burial, taken out of constructed graves (Fig. 5). Its clay differs from those mentioned above. It is brownish-red, and not as metallic as the later examples. The next type are bowls similar, both in type and ware, to ones (Fig. 6) originating in Kalavassos-Ayios Dhimitrios (South and Steel 2001) and Sanidha, where a workshop producing these wares, named WSII late, was excavated in the 1990's (Todd and Pilides 2001). The majority of the Nami's



Fig. 5: White Slip Ware from Tell Abu Hawam and Tel Nami (Photo: M. Artzy)

WS bowls are small, and tend to have a thicker rim, with a carinated effect at its base, which emphasizes the interruption in the curve. Their ware is grey and tends to have a micaceous slip (Fig. 7). At Nami they originated from LB IIC/III layers. These types have been found at Enkomi, in Cyprus, where they were classified as WSIII (Dikaios 1969-71: 832). In Akko, the assemblage found in the stratified area PH, is a mixture of the types found at TAH and at Tel Nami, although unlike TAH, there the Sanidha type does appear.

The White Shaved family is particularly helpful in establishing the similarities and differences in various wares found at the three sites. While at TAH the examples of the White Shaved ware seem to have originated in a similar area in Cyprus, if not in the same workshop (Rosenblum 2006), those from Tel Akko are Cypriot in origin, but might well be from a different provenance in Cyprus (Zagorski 2004). At Tel Nami more types were found than either from TAH and Akko (Fig. 8). While some of the juglets are of clear Cypriot origin, there are some for which the exact locale of production has not yet been conclusively determined. NAA did not give a definite answer, while thin section petrography points to the Cypriot coast (Fig. 9). Only a small minority of the WSH from Nami is of local manufacture.

The imports in the anchorage of TAH include Anatolian Grey and Tan wares comparable to examples from Troy VIg or VIh (Artzy 2006b). No Anatolian ware pieces have so far been noted from either Tel Akko or Tel Nami. Anatolian Grey ware has also been found at Tel Mique (Allen 1994) and Tel Lachish (Yannai 2004: 1273), but these are dated to the later Troy VIh-VIIa. A cartouche of Ramses II on a storage jar handle, the clay of which originates in Egypt, as shown by thin slide petrography analysis, was also found in the anchorage. Unlike Nami and Area PH at Akko, numerous sherds of cooking pots were found. While many could well be attributed to the Syro-Lebanese and the



Fig. 6: White Slip Ware II Late from Tel Nami (Photo: M. Artzy)



Fig. 7: White Slip Ware III from Tel Nami (Photo: M. Artzy; Drawing: S. Zagorski)



Fig. 8: White Shaved Juglets from Tel Akko (Photo: M. Artzy; Drawing: S. Zagorski)

northern Israeli coast (Golay 2005), there is a type, about which we are still in a quandary as to its provenance. While the general shape of these follows a pattern, some of the sherds are burnished, and some are wheelmade (Fig. 10). They range from almost black to tan and reddish brown. It is tempting to include them in the family of the 'Barbarian Ware'. We suspect that they originated in Cyprus. There may be one example from Area PH in Akko, but none from Tel Nami.

There is no question that we are dealing with temporal variations within a limited period in the LB period, namely from the last decades of the 14th to the early years of the 12th centuries BCE. The trade network of this part of the LB involved many participants: the great powers, militarily and economically, as well as lesser participants, along the Syro-Palestinian and Cypriot coasts, and as far as the Aegean and the Anatolian coast. Changes in the significance in a limited geographical area

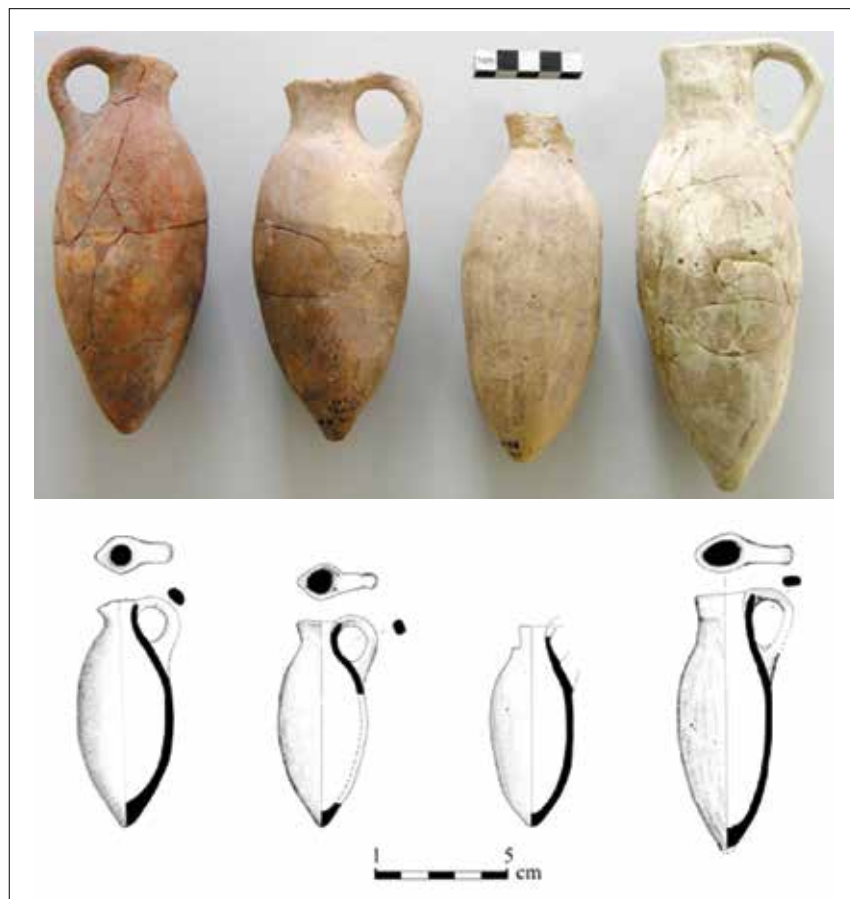


Fig. 9: White Shaved Juglets from Tel Nami (Photo: M. Artzy; Drawing: S. Zagorski)

have been dealt with in the study of the Amurru sites in Lebanon (Goren *et al.* 2003). Following the appearance and disappearance of given ceramics, especially those traded among members of the eastern Mediterranean trade network, could supply us with the knowledge of modification in the centres of production and exchange extending to the period's geopolitical alterations. This is probably the explanation of the existence of the two harbours in Akko Bay in close proximity. While Akko continued to serve Egyptian trade interests, hardly any Egyptian remains were found at TAH, yet the remains from the north extended to the Syro-Lebanese coast, Cyprus, Western Anatolia (Troy) and the Aegean, including the Greek mainland and Crete. The Carmel coastal anchorages at the last part of the LB mirror these transformations. Understanding the position of particular anchorage/harbour sites has to take into consideration not only their own position regarding the countries of the sea, as Akko was likely to have been in the periods under discussion, but also the more complicated scenario of trade-reliant relationships and transshipment anchorages, which was probably the role of TAH and Nami.

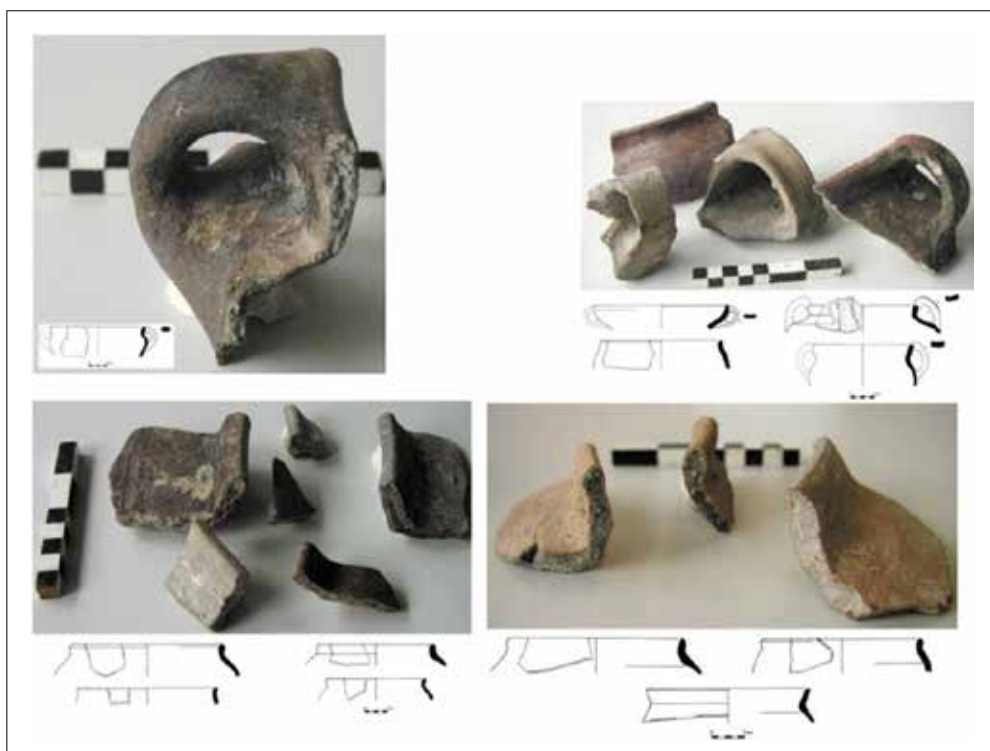


Fig. 10: Unusual Cook Ware from Tell Abu Hawam (Photo: M. Artzy; Drawing: S. Zagorski)

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