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The Lower Qishon Late Bronze Age Terrestrial and Maritime Network

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Abstract. During the Late Bronze Age, a complex network of economic interactions constituted of various semi-independent political entities, yet economically interdependent, existed in the Lower Qishon riverbed. We conducted a comparative analysis of plainwares from different sites along the Lower Qishon to identify how they interacted during the LBA. We also performed a comparative study of the maritime-imported ceramics to uncover the maritime connections of the network. We conclude that the Lower Qishon network linked the southern Akko/Haifa Bay with the northwestern Jezreel Valley. On land, the network was in contact with Tel Hazor and the Transjordan. At sea, it was directly connected with Syro-Lebanese and Cypriote coastal sites and indirectly with Egypt, coastal Anatolia, and the Aegean.
Keywords: Late Bronze Age; Akko/Haifa Bay; Jezreel Valley; plainware ceramics; imported ceramics; economic interactions.

[es] La red de interacciones marítimas y terrestres del bajo Qishon durante la Edad del Bronce Final

Resumen. Durante la Edad del Bronce Final, existía en el cauce bajo del rio Qishon una compleja red de interacciones económicas constituida por varias entidades políticas semiindependientes, pero económicamente interdependientes. Para identificar cómo los diferentes yacimientos arqueológicos situados a lo largo del bajo Qishon interactuaban entre ellos, realizamos un análisis comparativo de sus cerámicas de uso común. También realizamos un estudio comparativo de las cerámicas importadas de ultramar para descubrir las conexiones marítimas de los asentamientos del bajo Qishon. Concluimos que, la red comercial situada en el bajo Qishon conectaba el sur de la bahía de Akko/Haifa con el noroeste del valle de Jezreel. Por tierra, la red enlazaba con Tel Hazor y Transjordania. Vía el comercio marítimo, estaba conectada de forma directa con varios yacimientos costeros sirio-libaneses y chipriotas, y de forma indirecta con Egipto, la costa de Anatolia y el Egeo.
Palabras clave: Bronce Final; bahía de Akko/Haifa; valle de Jezreel; cerámicas de uso común; cerámicas de importación; interacciones económicas.

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1. Introduction

The Qishon River is located in northern Israel, on the Levantine coast. It springs from the Gilboa Mountains and flows northwest through the Jezreel Valley near Afula and Yoqne'am. The river empties into the Mediterranean Sea east of modern Haifa at the south of the Akko/Haifa Bay (Fig. 1). Surrounded by the hills of Lower Galilee to the east and the Carmel Ridge to the west, the river flows 70 kilometers, draining 1,100 square kilometers, being the longest and widest river in northern Israel. The modern river has been subject to industrial and agricultural runoff and is frequently diverted for agriculture purposes, narrowing the basin, and rendering the river unnavigable. But parts of the Qishon River might have been navigable during antiquity, if not by ships, then at least by barges. The river valley was a straight flat area with easy access to drinking water, making it a suitable communication artery.

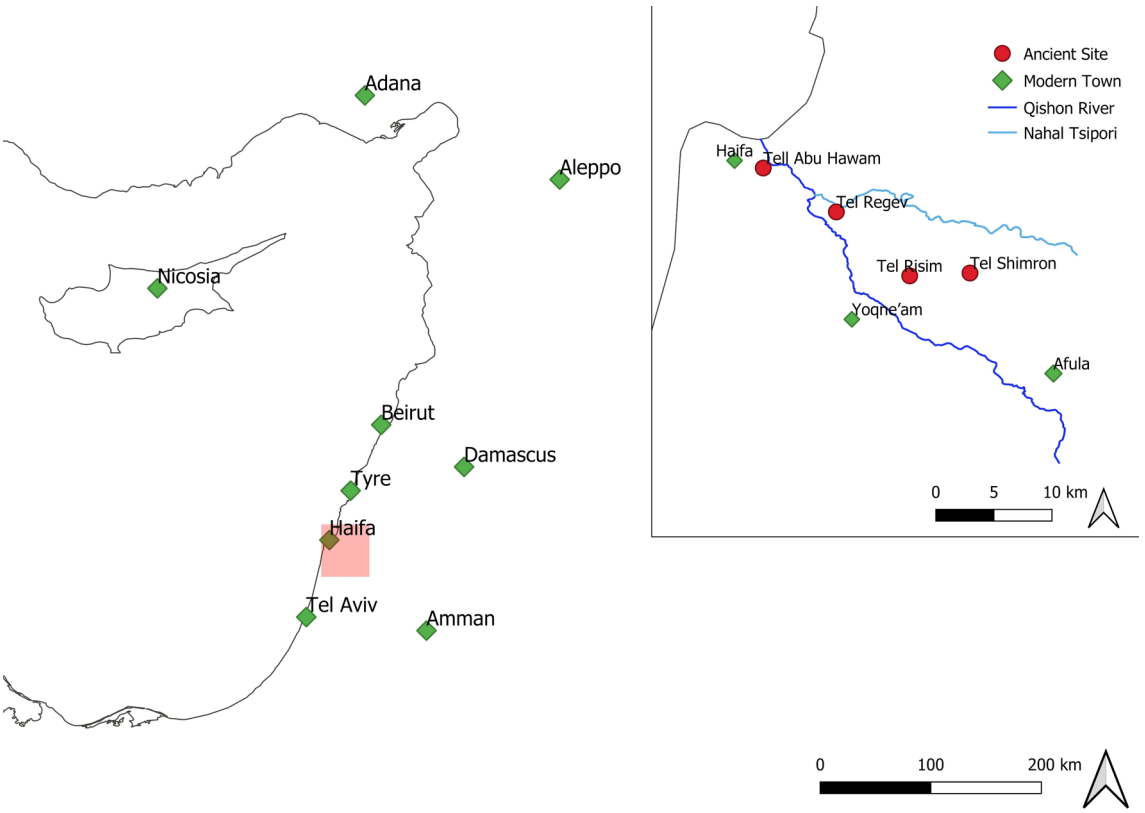

Figure 1. Location of the Qishon River in the Levant. The Qishon River (right panel) and its largest tributary, Nahal Tsipori, are shown in blue. The ancient sites are depicted as red circles and the modern as green diamonds.

In the Lower Qishon, a complex economic riverine system existed during the Late Bronze Age (LBA). However, we still know little about it: which sites were part of it, what was their economic function, how were they entangled with one another, and what were their connections with the terrestrial and maritime powers of the time. In this study, we perform a multi-scalar analysis, approached from the network theory, of three sites situated on the Lower Qishon: Tel Risim, a small agricultural village in the Jezreel Valley near Tel Shimron; Tel Regev, a medium-sized multilayered tell in the intersection between the Qishon River, and its tributary the Nahal Tsipori in the inland part of the southern Akko/Haifa Bay; and Tell Abu Hawam, a small anchorage site in the coastal section of the bay.

Using paste and typological analysis of the plainwares found at the three sites, we will define the interactions between them to characterize the economic system of the Lower Qishon during the LBA. We will also analyze the maritime-imported ceramics to reveal the con-

tacts across the Mediterranean Sea. Finally, we will examine the LBA written sources related to agricultural trade that point to interactions between the anchorage of TAH, Syria, Cyprus, and Hatti.

2. Theory and Methods

Along with Human History, rivers have been essential to secure water supply for drinking, agricultural production, and industrial manufacturing. During antiquity, rivers were important routes for mobility and trade. Humans thus settled along rivers, constructed urban settlements, and formed riverine economic systems (Brughams *et al.* 2021). In the Mediterranean, riverine systems were a common form of organization, present at, for example, the Famagusta Bay, in southeast Cyprus (Brown 2011: 28-40), the Eurotas River valley in Laconia, Greece (Hitchcock *et al.* 2020) or the city of Gerasa, in Jordan (Brughmans *et al.* 2021).

We propose that during the LBA, a riverine system existed at the Lower Qishon, which we will interpret as a network. Networks are economic systems in which settlements are economically complementary and interdependent, maintaining relatively horizontal relations (Meijers 2007). In archaeology, several scholars apply network theory to trace interconnections between sites, using proximal point analysis (Broodbank 1993 and Collar 2013) or geographical analysis (Steel 2018). Geography was crucial in ancient communication, and we will consider it while developing our network. Networks ought to be multiscalar as they operate in different periods and geographies, formed by settlements of diverse sizes, functions, and organizations. Therefore, we will analyze the Lower Qishon network from a multiscalar approach, focusing on sites with different sizes, purposes, economic capabilities, and geographical settings.

Methodologically, we will center on the plainware ceramics, as their provenance analysis supports attempts to trace regional connections between sites. Plainwares, even if not witnesses to direct interregional contact, can well be present in settlements within a given regional system. A method for deciphering the mode of plainware distribution pattern is performing a paste analysis and stylistic study.

Thus far, there is no sufficient provenance data bank from the sites on the Lower Qishon, such as thin-section petrography or neutron activation analysis. Fortunately, the Ceramic Petrography Laboratory at the University of Tel Aviv is currently righting these *lacunae*. Our study also attempts to fill the provenance gap by focusing on two different plainware traditions discovered at the settlements in the Lower Qishon: the plainwares in local tradition and the Plain White Wheel Made ware (PWWM). Typologically, both are almost identical, containing bowls, large bowls, basins, kraters, *pithoi*, storage jars, jugs, lamps, and wall brackets. They differ, however, in the production technique, which we will briefly describe below. The open kraters and basins are unique to the PWWM. The carinated and s-profiled bowls are more abundant in the PWWM, and so are the large *pithoi* (Artzy 2019: 345; Pl. 4.2.19-20). The bowls with convex walls and simple direct rims are more common in the local tradition.

The plainwares in local tradition generally have a buff, pink, brownish, or reddish fabric with a grey core. They have white grits, provoked by the high quantity of calcium in the area, and do not show slip, burnish, or tinge. Since this ceramic originated in different production centers situated in the Akko/Haifa Bay, the Jezreel Valley, and beyond, its fabric is highly variable, as demonstrated by the petrographic analysis of the Tel Risim ceramics (Shapiro personal communication 2018). Apart from the big *pithoi*, which are relatively rare in the Lower Qishon, the plainwares in local tradition are exclusively wheel made.

The PWWM is covered by a pale green, pale tan, grey, or white self-slip or scum, produced by the evaporation of soluble salts during the firing of a vessel (Artzy 2019: 345–46). Neutron activation and petrographic analyses of the TAH PWWM ceramics (Artzy 2006; 2013; 2016) suggest they were produced locally at the southern Akko/Haifa Bay and imported from the Syro-Lebanese Coast and Cyprus. Their provenance is also supported by the petrographic analysis of the Tel Risim ceramics (Shapiro personal communication 2018).The PWWM ceramics produced locally at the southern Akko/Haifa Bay are made from a brownish or reddish fabric with a grey core, have white grits, provoked by the high quantity of calcium in the area, and a slightly metallic sound. The local PWWM and the

plainwares in local tradition from the Akko/Haifa Bay have the same clay composition and hence a similar fabric but differ in the production technique. The PWWM is covered by a white or pale tan self-slip.

The imported PWWM is far less homogeneous than the local one, as it was produced in different areas along the Northern Levant and Cyprus. Among the various imported PWWM fabrics, Artzy (2019: 345–46) refers to two. The first one comes with a buff fabric and core, grey or green self-slip, and tiny dark inclusions and mica. The second has a pink to light brown fabric and core, pale tan, or whitish self-slip, and tiny mica inclusions. The PWWM technique is unusual for the Southern Levant but often associated with Cypriote workmanship, where these ceramics were first produced (Artzy *et al.* 1981). Hence, the PWWM was a coastal tradition influenced by the Cypriot, and its presence in inland sites suggests coastal and anchorage contacts. We will focus on the coastal and marine ceramic trade to trace these maritime connections. To understand the economic importance and function of the network within the broader Mediterranean context, we will also examine various written sources from the LBA II that pertain to agricultural trade.

3. Tel Risim

Tel Risim is first mentioned in the survey of the Palestine Exploration Fund published in the 19th century CE (Conder and Kitchener 1882: 352) and is assumed to be geographically and economically the most peripheral. It is located on the western fringes of the Ramat Yishay spur in the Jezreel Valley, an area known for its fertility and high agricultural production. Ramat Yishay, Jeida in Arabic, itself, is a medium size site (ca. 4–5 hectares), presently covered by road 75, leading from Haifa to Nazareth, and the modern town of the same name. Avner Raban, who surveyed the area, attributes his sites number 48, 41, and 42 to the same general site (Raban 1982). Victor Guérin (1868: 392) identified the site as Yadala in the Tribe of Zebulun (Joshua 19:19 **וידאלה** ובית לח וקטת ונהלל ושמרון). This identification, which Raban (1982) seems to agree with, depended on some LBA and Iron Age remains found in the small site, number 42 in Raban's survey, identified as Tel Risim. Raban's report shows that the sherds from site 48 date from the Roman to the Ottoman period. Site 41, a small settlement, which Raban felt might have been an extension to site 48, has sherds attributed from the Roman to the Arab period. Only site 42, Tel Risim, a small ca. half a hectare site, has remains from earlier periods: Early Bronze Age I and II, Middle Bronze Age I, or Intermediate Bronze Age, Middle Bronze Age IIB, LBA, and Iron Age (Raban 1982) (Fig. 2). Since the survey, all the archaeological excavations at Tel Risim and Ramat Yishay were salvage projects. A few of these projects have been published by the Israel Antiquities Authority, although they did not shed new light on the LBA of the site (Porat 2005; Porat 2007; Oshri 2009).

In 2007, Walid Atrash of the Israel Antiquities Authority excavated the only LBA remains from Tel Risim and Ramat Yishay in a salvage excavation (Atrash 2010). It was conducted in preparation for housing construction on the north-eastern slope of the tell (Atrash 2010). Intermediate Bronze Age, as well as Persian, Hellenistic, and Roman period remains, were noted. Remains of a building discovered at Tel Risim and attributed to LBA II by the local and imported ceramics are among the main focuses of this study.

The LBA plainwares unearthed at Tel Risim, and identified with the naked eye, belong to two different traditions: the local tradition and the PWWM (Fig. 3). The plainwares in the local style amount to 91% of the plainware ceramics; the PWWM, only 9%. A few imports from Cyprus, mostly White Slip II, Base Ring II, and Monochrome ware, were also found, including several PWWM vessels (Fig. 4).

The exact size of the LBA Tel Risim is hard to estimate since its remains originate from a salvage excavation. It might have been a small agricultural village, or a cottage dedicated to agricultural production. At least 11% of the site's ceramics originated in Cyprus, indicating it was in contact with a harbor and interested in overseas imports. Its nearest anchorage is Tell Abu Hawam. We believe that in exchange for imports, Tel Risim shipped primary goods for export, as TAH was most probably one of the anchorages embedded in the Egyptian agricultural trade with Cyprus suggested by El-Amarna letter 36 (Rainey 2015: 1381).

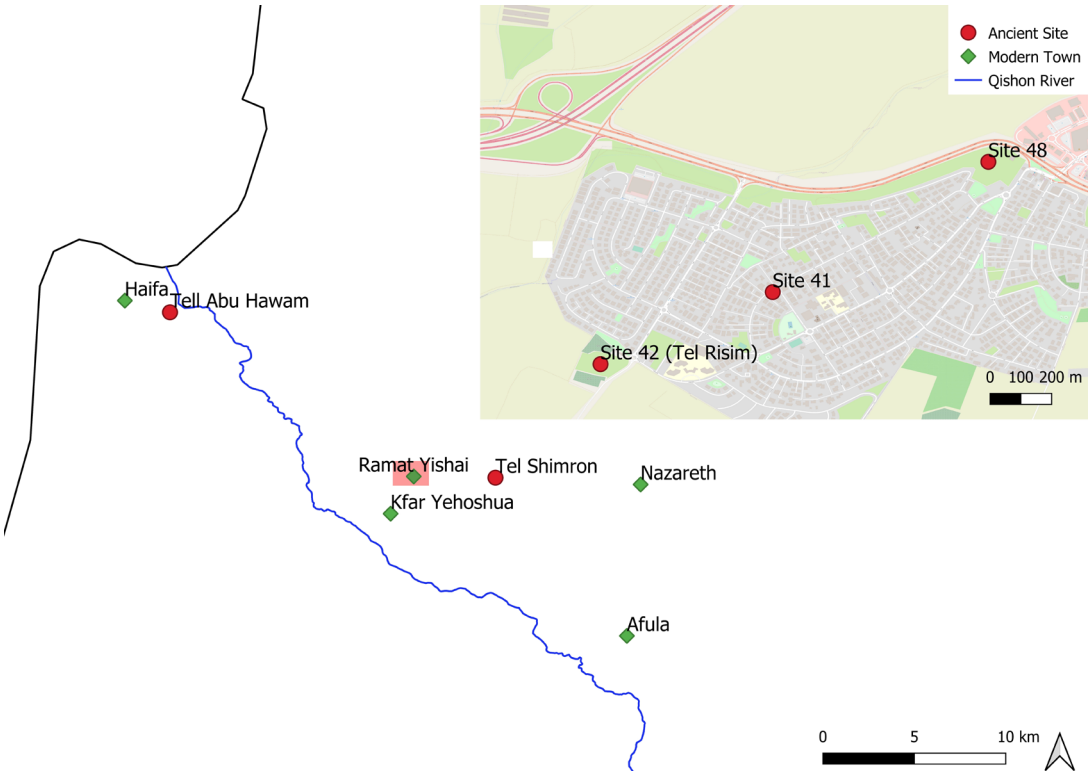

Figure 2. Ramat Yishai and its surroundings. Aerial map of the modern town (green diamond) is shown on the right. The ancient sites, including Tel Risim (site 42), are depicted as red circles.

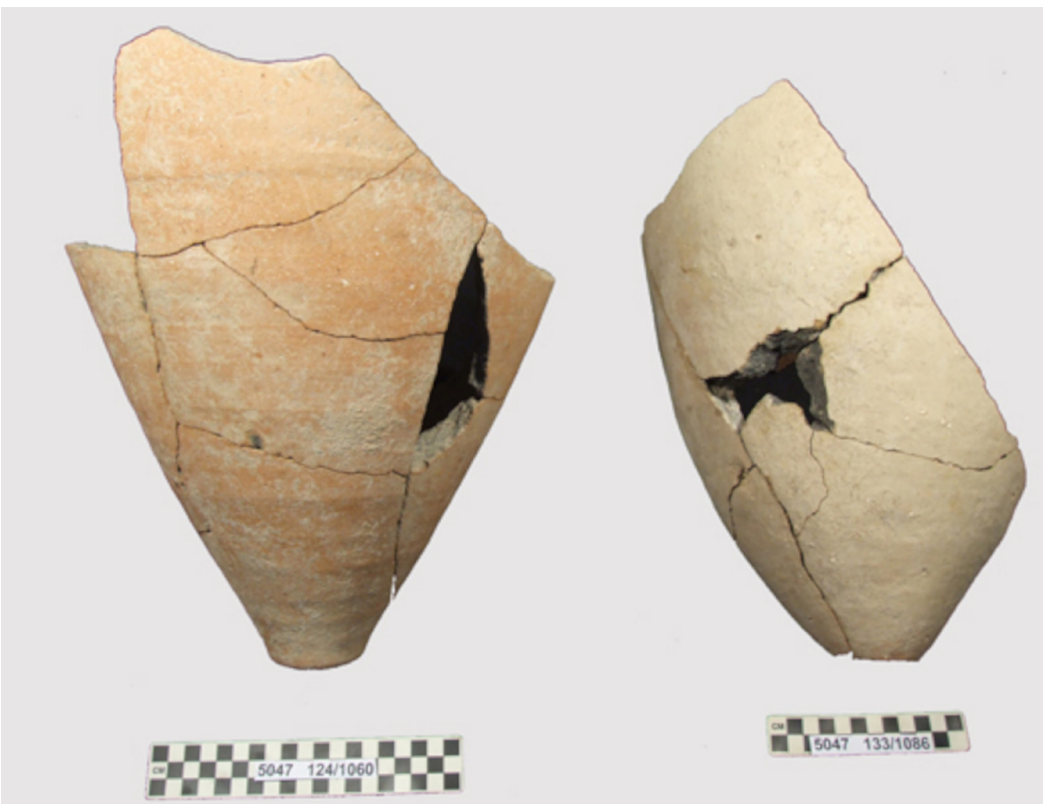

Figure 3. Plainware storage jars from Tel Risim. Local tradition storage jar (left) and Plain White Wheel Made storage jar (right).

Considering its LBA remains and the moderate storage capability, without *pithoi*, we believe that Tel Risim was not the only settlement in the northeastern Jezreel Valley involved in agricultural trade, nor its major hub. Tel Shimron, a large site of more than 15 hectares, situated just 5 kilometers east of Tel Risim (Fig. 1) is a much better candidate for a hub. Populated from the Chalcolithic to the Roman period (Feig 2007; 2009), Tel Shimron is identified as the biblical city of *Shim'on*, LBA *Shamhuna*, mentioned in the El-Amarna letters EA 224 and EA 225 that is considered to be the pivot on the routes from the coast to the Jordan River and beyond (Finkelstein 1996; Artzy 2018). It is presently excavated by Daniel Master of Wheaton College and Mario Martin of Tel Aviv University. So far, the LBA levels have not been reached, nonetheless, a survey done at the tell and its vicinity presented several sherds which by no doubt belong to the LBA (Raban 1982: 71–5). In addition, a few other small and possibly agricultural sites, such as 7, 11, 31, 33, 42, 49, and 50 in Raban's survey map, situated in the lush Jezreel Valley, were likely peripheral to the hub in Shimron (Raban 1982: Map 2).

4. Tel Regev

The second site, Tel Regev (Tell el Harbaj), is in the inland area of the southern Plain of Akko, between Nahal Zippori and the Qishon River, just north of the modern village of Kfar Hassidim, and ca. eight kilometers from the coast (Fig. 1). The first excavations at the site were led by William J. Pythian-Adams and John Garstang during the early 1920s (Garstang 1922; 1924). In 1993 and later in 2010, Zach Horovich and Doron Lipunsky conducted various salvage excavations at the foothills of the tell, discovering large Early Bronze Age III remains (Horovich and Lipunsky 2010). Tel Regev was recently excavated by Carolina Aznar Sánchez, Shalom Yanklevitz, and Michal Artzy from 2011 to 2014 (Aznar Sánchez 2016). Covering an area of ca. four hectares, it is among the largest sites in the plain and continuously populated from the Neolithic to the Hellenistic period and sporadically during the Early Islamic, Crusader/Ayyubid, and Ottoman period (Aznar Sánchez 2016). Aznar Sánchez *et al.* (2017) proposed the descriptions of *Akhshaph* (Joshua 11:1; 12:20; and 19:25) in the Bible match the location of Tel Regev, Tel Nahal, or Tel Me'amer. However, the petrographic analysis of the El-Amarna letters, which mention *Akshapa* twice, suggests that Tel Keisan is a better candidate for the ancient city of *Akshapa* (Goren *et al.* 2004). Although the last excavations at Tel Regev did not reach the LBA layers, a total of 118 LBA ceramic sherds were uncovered, not *in situ* but during cleaning and in the ensuing Iron Age levels (Martín *et al.* 2020).

The LBA plainwares belong to two distinct traditions: those produced in the local tradition, representing 72% of the plainwares, and those in the PWWM, representing 28%. Taking good-quality photographs of the Tel Regev plainwares was not possible since they were discovered fragmented by agricultural ploughing. The lower percentage of the PWWM found at Tel Regev suggests that they were not produced locally but imported from the coastal area. Contrary to Tel Risim, which has few overseas imports, the maritime-imported ceramics at Tel Regev from Cyprus and the Aegean represent 31% of the assemblage, where the 27 Cypriot-imported sherds outnumber the 8 Aegean-imported sherds. The most common Cypriot imports at the site are White Slip II bowls, Monochrome bowls, Base Ring II bowls, juglets, and White Shaved juglets, which all date to the LBA II. The Mycenaean imports belong to the Late Helladic III A2-B1, also dated to the LBA II (Fig. 5; Martín *et al.* 2020).

The abundance of overseas imports at Tel Regev suggests significant economic importance in the LBA II network; its proximity to the Qishon River and Nahal Zippori allowed for control over two routes connecting the Akko/Haifa Bay with the Jezreel Valley.

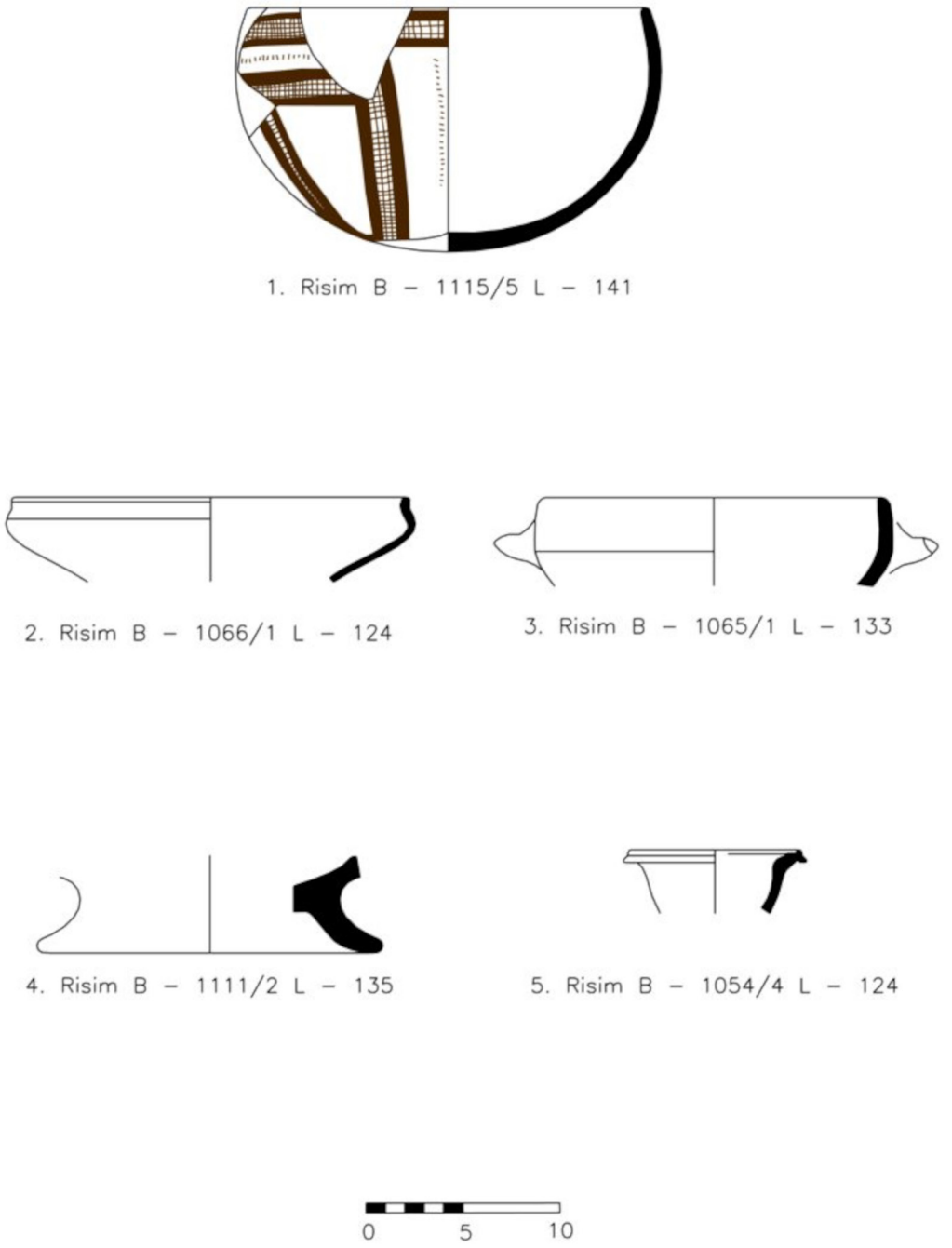

Figure 4. Cypriot imported ceramics from Tel Risim. White slip bowl (1; top), Monochrome bowls (2 and 3; middle), and Base Ring jugs (4 and 5; bottom).

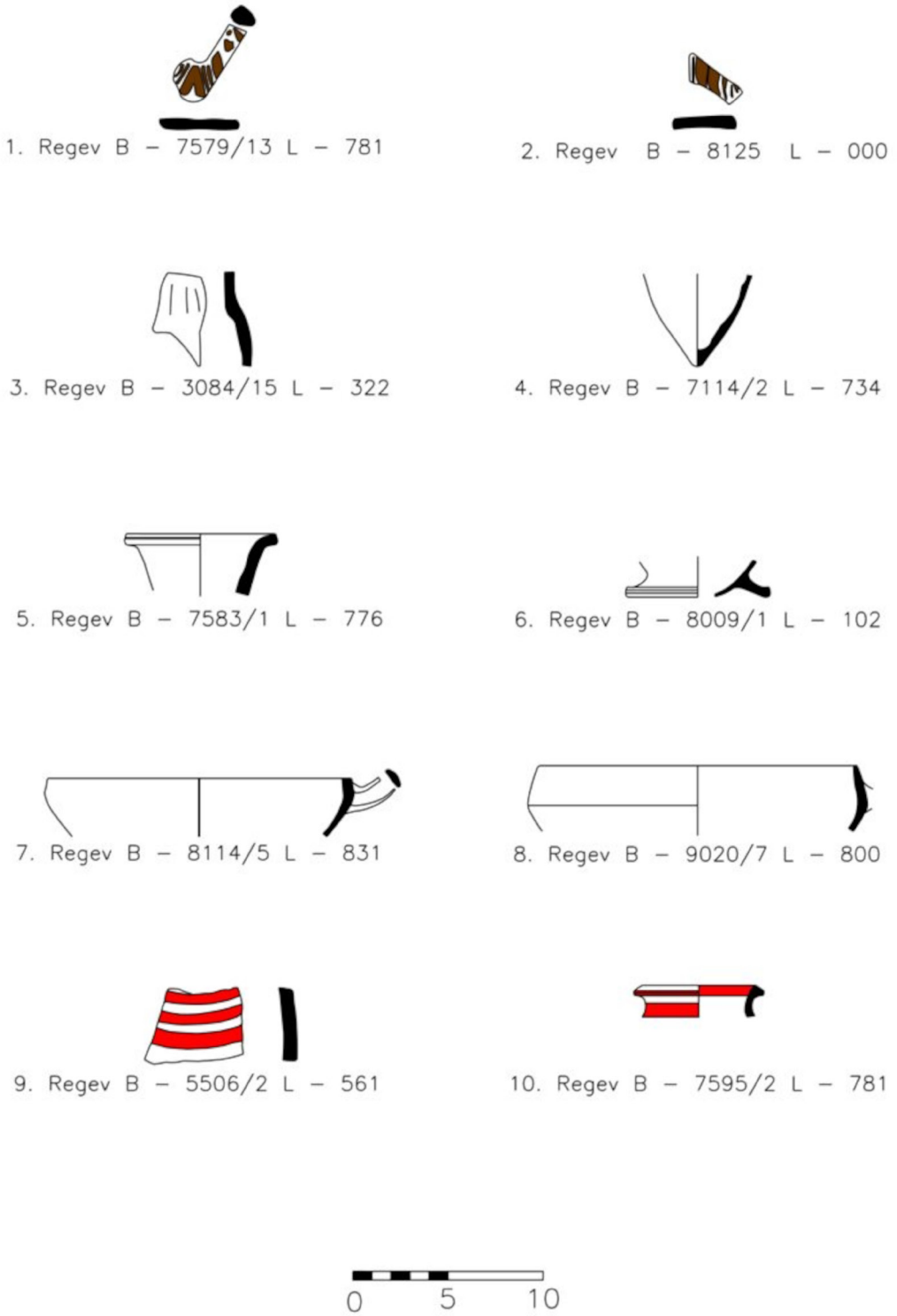

Figure 5. Cypriot imported and Mycenaean imported ceramics from Tel Regev. White Slip bowls (1 and 2), White Shaved juglets (3 and 4), Base Ring jugs (5 and 6), Monochrome bowls (7 and 8), and Mycenaean ceramics (9-10).

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5. Tell Abu Hawam

The third and the last site, Tell Abu Hawam (TAH), is in the southernmost part of the Akko/Haifa Bay, at approximately one kilometer west of the modern Qishon River estuary and one and a half kilometers from the sea, in an industrialized area near the modern port of Haifa (Fig 1; Balensi *et al.* 1985). During the LBA, it was a small island or peninsula surrounded by marshes in the estuary of the Qishon River (Artzy 2006).

The first major excavations at the site were conducted from 1932 to 1933 by Robert William Hamilton from the British Palestine Department of Antiquities. They were salvage excavations done during the construction of the Haifa port and in the interests of the Shell Oil Company in the area. In 1952, Emmanuel Anati and Moshe Prausnitz directed salvage excavation projects on behalf of the then Israel Department of Antiquities and Museums in the nearby cemetery (Anati 1959). Another salvage project at the edge of the tell took place in 1963 by Anati and Ya'acov Olami (Anati 1963).

Jaqueline Balensi revised the excavated materials from Hamilton's strata IV and V (Balensi 1980; 1985). She conducted an excavation at TAH from 1983 to 1984, as part of the École Biblique et Archéologique Française in Jerusalem, with María Dolores Herrera of the Instituto Español Bíblico y Arqueológico en Jerusalén and Shlomo Bunimovitz from the University of Tel Aviv. Michal Artzy from the then Center for Maritime Studies, the University of Haifa, joined the excavation in 1985 (Balensi *et al.* 1993). Based on her early 1980s excavations, Balensi initially defined TAH as a major Aegean trading center (Balensi 1985). But after reviewing the LBA materials, she redefined it as a center for Cypriot trade, which was settled by refugees from Cyprus and the Northern Levant at the end of the LBA (Balensi 2004).

Balensi proposed that the LBA settlement of TAH covered several hectares and encompassed an upper and lower city (1985). Her theory was challenged in 2001; however, following a salvage excavation project led by Artzy, when it was discovered that the area that Balensi believed was the lower city was, in fact, an LBA landlocked anchorage (Artzy 2006).

Hamilton established the first stratigraphic sequence of the site, which is used to this day, composed of five strata: Stratum I, from the Roman period to World War I, stratum II (ca. 500–300 BCE), stratum III (ca. 1100–925 BCE), stratum IV-b (ca. 1190–1100 BCE), stratum IV-a (ca. 1230–1190 BCE), and stratum V (ca. 1400–1230 BCE), the LBA II A and II B (Hamilton 1935: 1–16). Benjamin Mazar (Maisler) suggested that the LBA stratum of TAH should be dated from the 14th century BCE to the "Sea Peoples" invasion at ca. 1178 BCE (Mazar 1951). Anati defended that stratum V extended from the early 14th century BCE to 1178 BCE (Anati 1963). Balensi proposed that the LBA stratum of TAH dated from the 16th century BCE to 1178 BCE (Balensi 1985). Later on, she suggested that the LBA stratum continued without interruption into the IA (Herrera and Balensi 1992; Balensi 2004). Herrera and Gómez Toscano proposed that Hamilton's stratum III, the Iron Age, should be subdivided into six subphases and dated to 1000 BCE to 725 or 759 BCE (Herrera and Gómez Toscanos 2004; Aznar *et al.* 2005). In light of the imported ceramics discovered during the 2001 excavations, Artzy dated the anchorage to the period comprehended between the 15th century BCE and 1230 BCE, coinciding with stratum V as proposed by Hamilton (Artzy 2006; 2013).

Two types of plainwares were also discovered at the TAH anchorage: the plainwares produced in the local tradition and the PWWM. The locally produced PWWM and the imported PWWM from Cyprus, Syria, and Lebanon represent more than 70% of the plainwares found at the anchorage. Most of the local PWWM were produced at sites near the anchorage (Fig. 6; Artzy 2016). In addition to the imported PWWM, many imported fine wares from Cyprus, such as White Slip II, Base Ring II, Monochrome ware, and White Shaved wares, as well as cooking wares, were found. Imports from the Northern Levant, the Aegean, and Anatolia were also discovered (Artzy 2006; 2013; 2016; 2019; 2019b Artzy and Martín in press).

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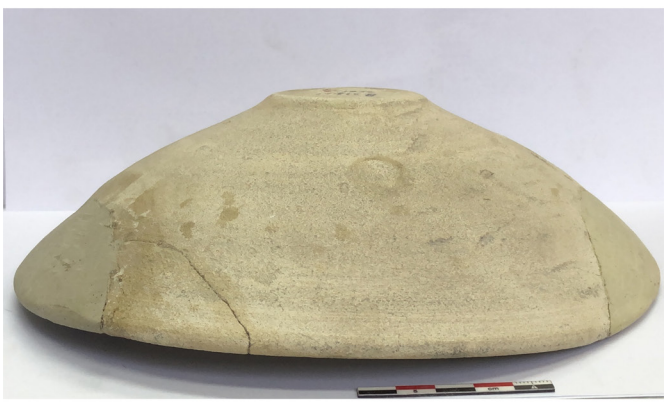

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Figure 6. Plainware bowls from Tell Abu Hawam. Local tradition bowl (top) and locally made Plain White Wheel Made bowl (bottom).

6. Discussion

6.1. The Lower Qishon Terrestrial Network

El-Amarna letter 36 demonstrates that the king of Alašiya (Cyprus) exchanged copper for grain from the province of Canaan with the king of Egypt (Rainey 2015: 1381). The Canaanite grain must have come from agricultural areas like the Beqaa Valley, the Jordan Valley, or the Jezreel Valley. During the LBA, many routes connected the Jezreel Valley with the coast (Aharoni 1967; Artzy 1998; 2006; 2013; 2018 Dorsey 1991; Gal 1992). TAH was the nearest harbor to the rich agricultural area of the northeastern Jezreel Valley and abundant with storage jars, *pithoi,* and basins, all suitable for grain transport, suggesting its involvement in the Egyptian agricultural trade.

The TAH network stands out from the neighboring Akko system, by the PWWM, a ceramic type produced in the Southern Levant in large quantities only in the vicinity of TAH and by the type, origin, and chronology of its imports (Artzy 2006; Artzy and Zagorski 2012; Artzy 2013). Considering the results of PWWM analyses from Tel Risim and Tel Regev, we propose that both sites interacted with TAH in the LBA. The distribution of the PWWM indicates that there were at least three zones of contact: Zone 1, the coastal area where the PWWM was produced; Zone 2, the inland part of the Akko Plain, extending to the hills of the Lower Galilee where the

site of ‘Ein Yivka is situated; and Zone 3, the Jezreel Valley, the final area in which the PWWM ceramics were frequent (Fig. 7). TAH, Tel Regev, Tel Risim, and other sites along the Lower Qishon, Nahal Zippori, and Nahal Gedora were likely parts of an economic network that operated in the southern Plain of Akko and the Jezreel Valley during the LBA.

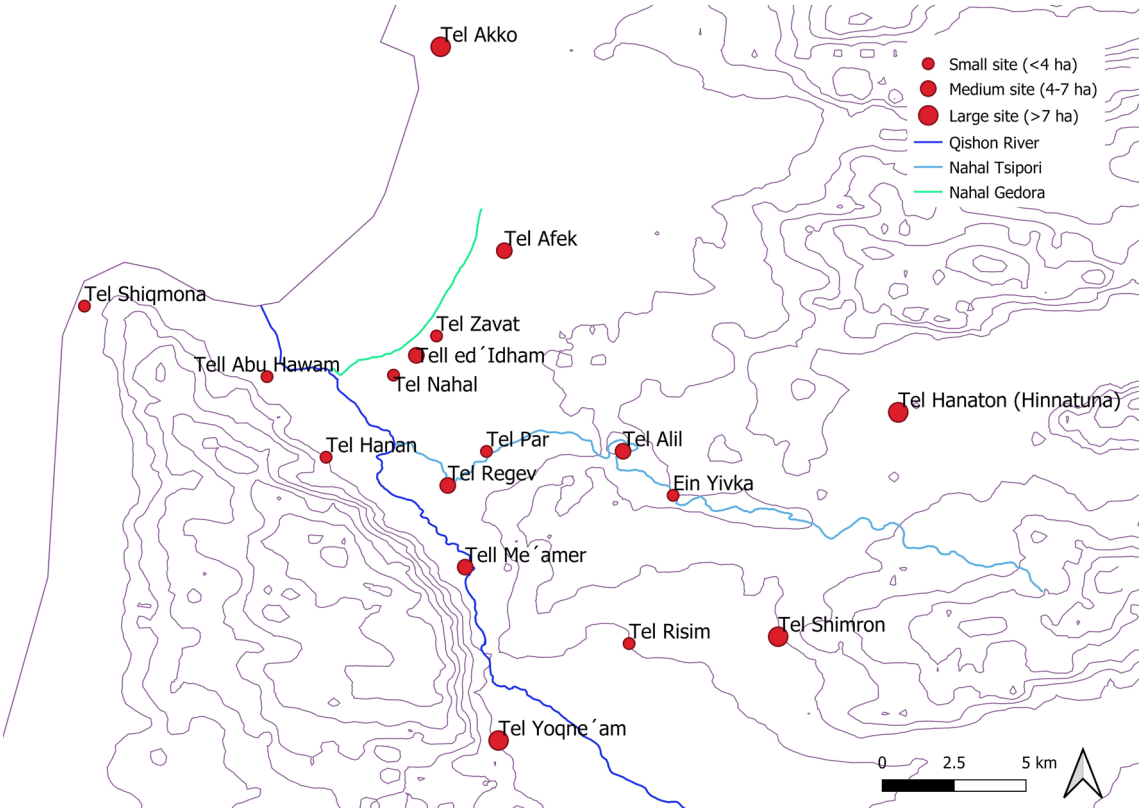

Figure 7. The Lower Qishon network with the Qishon River, Nahal Gedora, and Nahal Zippori.

Several routes may have connected TAH with the Jezreel Valley. The first route likely crossed the Qishon River between TAH and Tel Nahal, using animals to wade through the river near the coast, as in later periods, or barges and small boats, or fording it by foot in the dry season. From Tel Nahal, the route followed the river to Tel Regev and Tel Qashish and turned east towards the Jezreel Valley and Tel Shimron. The second route turned west via Nahal Tsipori at Tel Regev and followed the river towards Tel ‘Alil and ‘Ein Yivka. From ‘Ein Yivka, it continued north to Tel Hanaton or south to Tel Shimron. The third hypothetical route turned north at Tel Nahal, followed the coastland, situated 5 kilometers eastwards during the LBA (Inbar and Sivan 1986; Zvieley *et al.* 2006), or the Nahal Gedora, and passed through Tell ed-Idham and Tel Zivda. From Tel Zivda, it continued north to Tel Aphek, wherefrom it turned eastwards to Tel Hanaton. The fourth route might have passed through the western side of the Qishon River, connecting TAH with Tell Me’amer and Tivon via Tel Hanan. However, this last route is problematic, as the swamp west of the Qishon would have prevented its usage during most of the year (Artzy 2013).

We think that TAH, and other sites in the Lower Qishon, were connected with Hazor, which was probably also in contact with Sidon. This hypothesis is supported by the strong similarities in type, chronology, and provenance between the Cypriot and especially the Mycenaean imports from Hazor and TAH(Stockhamer personal communication 2018). The connection continued from TAH to Pella and Amman, both communicating with Akko (Artzy 2018), as suggested by the presence of many TAH-like imports at them. The

Nahal Gedora route and Tel Hanaton linked the Lower Qishon network and Hazor. This link continued east from Tel Hanaton to the Kinneret lake and then north to Tel Kinrot and Hazor (Artzy 2013). The Lower Qishon was in contact with the Transjordan via the routes that connected TAH with Tel Shimron. The course from Tel Shimron to Beth Shean passed through Tel Shadud and ʻAfula, a similar path to the one that connected Akko to Beth Shean (Artzy 2018). From Beth Shean, it would have been easy to cross the Jordan River and eventually reach the Transjordanian sites of Pella and ʻAmman (Fig. 8).

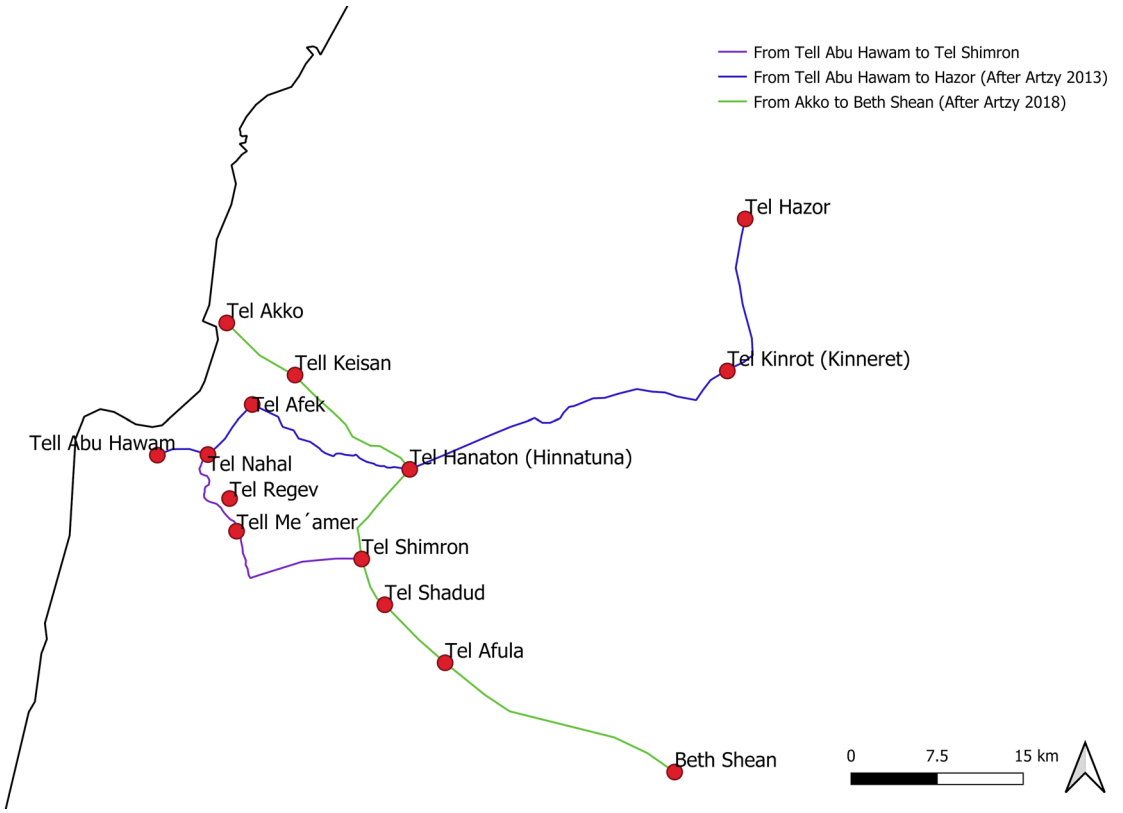

Figure 8. The Lower Qishon terrestrial network. Hypothetical trade routes are color depicted: Akko–Beth Shean (green), Tell Abu Hawam–Tel Shimron (purple), and Tell Abu Hawam–Hazor (blue).

6.2. The Lower Qishon Maritime Network

The presence of Cypriot and Levantine ceramics at the Lower Qishon suggests it was in close contact with other maritime networks, such as Cyprus and the Levant, especially its northern coasts. It is not surprising, considering that TAH was an active international LBA anchorage. While the Lower Qishon network involved the Levant, Cyprus, Anatolia, Egypt, and the Aegean, as suggested by the imported ceramics from TAH and Tel Regev, its most frequent imports were the Cypriot and coastal northern Levantine. Perhaps the best evidence for the communication between the Lower Qishon and Cyprus are utilitarian ceramics found among the imported vessels, such as diverse Cypriot cooking pots discovered at the TAH anchorage (Artzy and Martín in press). The absence of utilitarian ceramics or cooking pots from the Aegean at the anchorage implies its connection with Greece was indirect and possibly occurring via Cyprus and Ugarit. From Ugarit, boats could have traveled along the Levantine coast, transshipping, or stopping at Sidon, Sarepta, or Tyre, where numerous plainware ceramics and cooking pots arrived. The variety of types and wares of the TAH cooking pots and the NAA analysis of its PWWM ceramics support the above hypothesis. The contact between the Lower Qishon network and Egypt was also likely indirect via Tel Shimron and by transshipment at the anchorage of Tel Akko, located about 5 kilometers north of TAH (Fig. 9; Artzy 2018).

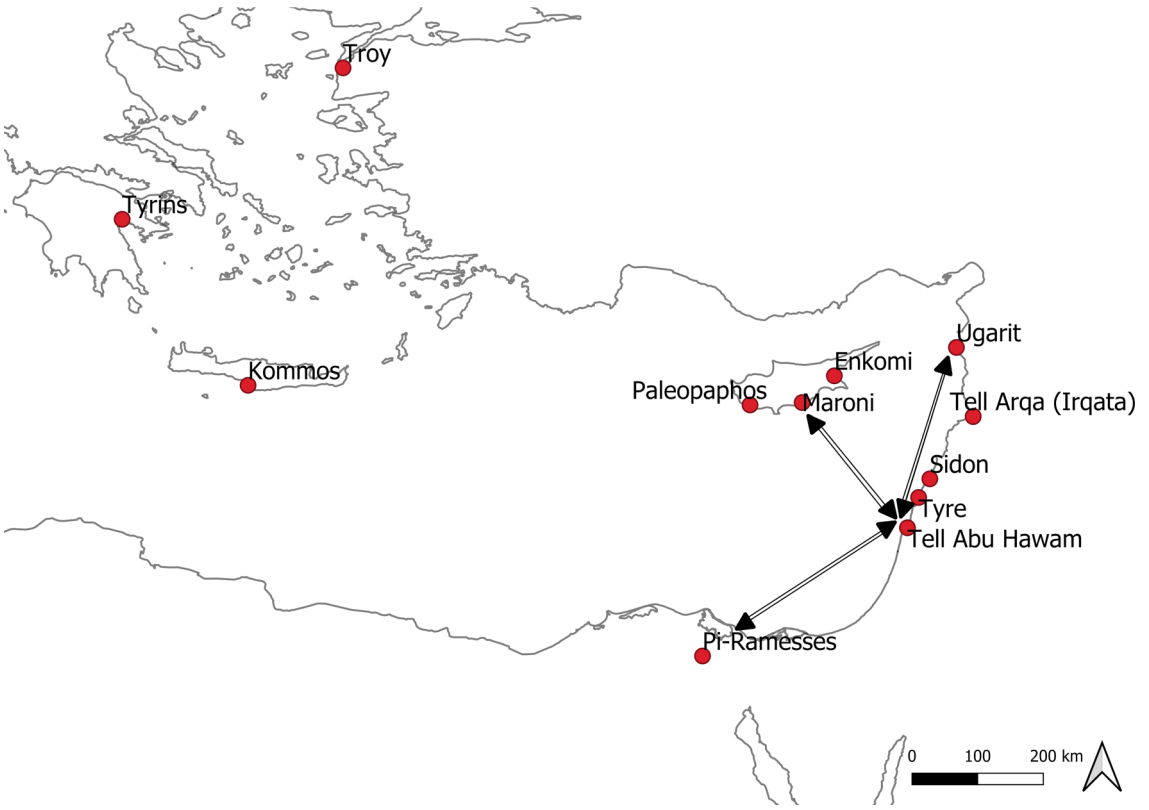

Figure 9. The Lower Qishon maritime network. Red circles indicate all the sites in contact with the ancient harbor of Tell Abu Hawam. Black arrows suggest direct connections.

The inland sites of the Lower Qishon network had productive agricultural hinterlands, and TAH was a suitable anchorage for international trade. Hence, we suggest that the network, as Kamid el-Loz or Tel Dan, was embedded in an Egyptian agricultural exchange. The food supplies would have been grown in the Jezreel Valley, collected at Tel Shimron, and moved with barges and donkey caravans to TAH, where they were shipped to their destination. The exchange of agricultural goods between Egypt and the northern hungry areas such as Alašiya and Hatti continued after the El-Amarna period, as reflected by the written sources. The first letter alluding to this matter during the LBA IIB dates to the middle of the reign of Ramses II, in which the Hittite Queen Puduhepa urges him to use the dowry of the Hittite princess sent to his court in exchange for grain. Following the peace treaty between Ramses II and Hattusili III, a high-ranking Hittite expedition went to Egypt to fetch the grain shipment for Hatti. Merneptah also reported that he shipped grain in vessels to help the Land of Hatti (KRI IV 5, 3. Singer 1999: 715).

Notes

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