# Harbours of Byzantium

## The Archaeology of Coastal Infrastructures

Edited by

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Cover: Southwestern harbour of Byzantine Kassandreia in Chalkidiki, Greece (A. Ginalis)



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# Editor's Preface

Christianity, Roman tradition and ideology, as well as Greek cultural heritage, have been labelled as the pillars of the Byzantine Empire. In fact, the real crux and enabler of power in an empire that combined the Occident with the Orient was its control over the seas. As such, seafaring constituted the formula of success for dominance of the Mediterranean, playing a key role in communication, military activities, and, especially, economic exchange. But how does one get from land to water? The linking gates are coastal installations, i.e. ports, harbours, and other infrastructures. These function as economic hubs, cultural and social meeting points, as well as gateways for communication and connection.

Even though the study of harbour sites and port networks of the Byzantine Empire constitutes a relatively new research field, it has nevertheless received significant attention over the last few years, as we can see from the instigation of various projects and the staging of conferences. However, attention is rarely paid to analyses of physical harbour remains and their impact on the general development of Late Antique and Medieval architecture, economy, or trade networks.

As such, in 2018, an international conference on the *Harbours of Byzantium* was organised at the Institute for Advanced Study of the Hanse-Wissenschaftskolleg in Delmenhorst, Germany. This event was intended to focus particularly on the archaeology of Byzantine coastal sites, including both harbour infrastructures *per se*, as well as associated facilities and affected landscapes. Leading scholars in the field from twelve different countries presented new material and data with which to understand the development of harbour architecture and coastal activities from Late Antiquity to the Middle Ages. The papers set out to cover sites from all provinces of the Byzantine Empire, stretching from Italy in the West to the Levantine coast in the East, and the Black Sea in the North to Egypt in the South. This allowed a general overview for comparative analyses and discussions on various aspects of Byzantine harbour networks and maritime connectivity.

Accordingly, the current volume provides a series of scientific papers deriving from presentations given at the conference. Beyond general approaches to the study of Byzantine harbour archaeology, the contributions offer a representative picture of harbour activities across the historical and geographical boundaries of the Byzantine Empire. Although it is impossible to reflect a comprehensive picture of the entire sweep of coastal landscapes, this work hopefully provides a basis for future comparative research in Byzantine harbour studies – on a local, regional, and supra-regional level.

The conference programme is included in the Appendices. The differences between the conference programme and the final version of this volume are explained by the fact that some scholars who submitted abstracts were ultimately unable to attend, and some who did attend and gave their papers did not submit them for publication. Fortunately, other colleagues agreed to contribute to this volume and I am most grateful to them for so doing.

I would like to express my deepest gratitude to all participants in the Delmenhorst Conference for presenting papers that provided unique insights, not just into ongoing excavations and investigations related to harbour installations, but also into hitherto understudied aspects of coastal infrastructures. It has been a considerable challenge to assemble this volume, and I am therefore particularly indebted to all authors who contributed and enriched this publication. Bearing in mind the time-consuming work of editing and unifying the papers, etc., as well as the difficulties brought on by the COVID pandemic, I have done my best to ensure as prompt a publication as possible.

Thanks must go here to Dr Susanne Fuchs and her team from the Institute for Advanced Study of the Hanse-Wissenschaftskolleg for their support in organising the conference in Delmenhorst. I am also sincerely grateful to David Davison and Mike Schurer from Archaeopress for agreeing to publish this volume and for guiding this work through to publication, their technical help, and the quick production of the printed version.

Alkiviadis Ginalis

# 10. Between Yavneh-yam and Rhinocorura: The Byzantine Portals of the Southern Levant

Gil Gambash

## Introduction

The southeastern coastal corner of the Mediterranean, here defined as stretching between Yavneh-Yam and Rhinocorura, is usually considered by scholars merely as an inherent part of the coastal southern Levant. We have mostly missed the fact that the area comes out in the sources also as forming the *façade maritime* of a separate and well-defined micro-region, distinct in many of its characteristics from adjacent units to its north and south, and therefore different from and independent of them. Most ancient written sources hardly offer rigorous and persistent enough categories that would help in discriminating usefully between micro-regions. Too frequently they would resort to basic tools of climate and topography, which would offer micro-regional division at odds with economic patterns of connectivity.

This contribution would wish to claim, however, that various aspects in our written and material sources, mostly concerned with economic routine, accumulate to suggest that, under certain circumstances, perhaps best represented in the Byzantine period, the area of the southern Levantine coast and its hinterland could be defined as a Mediterranean micro-region in the Horden-Purcellian sense of the term, identifying micro-regions by the nature of their commercial connectivity (Horden and Purcell 2000: 123-172).

The model, it would be remembered, defines the general regime in which ancient Mediterranean communities function as one of economic risk, which necessitates constant preparation towards the ever imminent 'seven slim years'. This preparation is realised by diversification in production, the storage of surplus, and the redistribution of this surplus among other Mediterranean communities according to demand. The main platform on which this mechanism relies is one of enhanced maritime connectivity, in a region where topographical fragmentation does not allow for easy terrestrial access across long distances.

To the extent that we allow ourselves to adopt the model, we may also claim that it is the proximity to the sea that would make a location more central, and therefore potentially more successful economically; and that remoteness from the coast may equal economic marginality. To be sure, economic prosperity has its own markers, and there is no need to resort to speculations based on this or other model for economic success where we have sufficient evidence to tell the story by itself, as we often do in our case. However, theorisation may prove useful when we aim to explain processes of growth or decline, rather than mere pictures, frozen in time, of wealth or poverty. The sudden blossom of the Negev cities in the Byzantine period, for example, and their no less sudden decline towards the end of that period, may benefit from an integrated reading of the Negev reality, that would be connected to the routine of the adjacent coastal *emporia*, indeed, as part of a single economic unit or micro-region.

In order to develop a comprehensive understanding of commercial dynamics in the area and delineate the boundaries of a micro-region defined by its shared economic interests, it is essential, first and foremost, to evaluate the potential of maritime connectivity offered by this *façade maritime*.

## The ships

The study of maritime activity in the ancient Mediterranean has recently undergone a significant shift in focus – from large freighters, carrying high-value commodities from one major port to another along sea-crossing routes; to smaller vessels, operating locally, mostly along the coast, while servicing trade activity which consisted of elementary goods. The former practice was prevalent mostly under the supremacy of centralised governments, mostly if successful long-lasting empires. On the other hand, coastal seafaring – also termed in professional literature as 'cabotage' – would have functioned continuously regardless of shifting circumstances. Indeed, forces of sea-bound connectivity in antiquity are now believed to have been strong enough to overcome geographical barriers and unfavourable natural conditions, as well as to cross boundary lines once thought impenetrable – be it of a cultural, political, or religious nature.[1]

An examination of ships and shipping in the southern Levant during the Byzantine period yields a small yet

[1] The so-called 'Geniza documents' were shown to disprove notions of a Muslim-Christian division across the Mediterranean (Goitein 1967-1993; Pirenne 1937).

suggestive body of direct evidence. In a catalogue of ancient Mediterranean shipwrecks compiled in 1992, more than 1,200 items were documented – of which some were excavated thoroughly while others were but superficially surveyed (Parker 1992). By the early 1990s some 30 shipwrecks were recorded along the shores of the southern Levant.[2] The breakdown of this group may lead to several insights. Continuity in maritime activity in the region is one important aspect that may be brought to light by this general data, as well as some *lacunae*, perhaps the most glaring of which would be the scarcity of Byzantine and early Muslim shipwrecks.

Continuous surveying, however, drew the attention of scholars to the area of Dor, particularly to the lagoon that lies south of the Tell's southern bay, where several locations were marked as potentially hosting shipwrecks (Kingsley and Raveh 1996). The systematic work, which was undertaken in the 1990s by the Department of Maritime Civilisations and the Institute for Maritime Studies at the University of Haifa, has yielded so far seven shipwrecks, all dated rather remarkably to the Byzantine and early Muslim periods.[3]

Dor D is estimated to have been of medium size, *c.* 15-20 m long. $^{14}$C analysis performed on the timber of the ship suggests a date around the middle of the 4th century AD. Byzantine pottery found in the area suggests a later date, approximately the beginning of the 7th century AD (Royal and Kahanov 2005; Kahanov 2003; Kahanov and Royal 2001). Tantura A was a small coaster, measuring *c.* 12 m in length. Based on $^{14}$C analysis, as well as on potsherds found in situ, it has been dated to the late 5th or early 6th century AD (Kahanov *et al.* 2004; Kahanov 2001). Dor 2001/1 measured *c.* 17 m and was able to carry some 35 t of cargo, probably mostly along coastal routes. Analysis of the ceramics, as well as $^{14}$C tests performed on organic materials from the ship, suggest a date around the early 6th century AD (Mor and Kahanov 2006; 2009). Dor 2006 appears to have been the largest vessel in this group, likely beyond 20 m long. Pottery and $^{14}$C analysis have established a date between the 5th and 6th centuries AD (Navri and Barkan 2010). Tantura F is estimated to have measured 16 m in length and to have served coastal purposes of either trade or fishing. Based on $^{14}$C tests, as well as on the analysis of some 30 ceramic items found on board, it was attributed to the mid 7th to late 8th century AD (Barkai *et al.* 2010; Barkai and Kahanov 2007). Tantura E was not preserved well enough to allow an estimation of its size. By means of pottery analysis and $^{14}$C tests it was dated to the period of the 7th to 9th centuries (Royal and Kahanov 2000; Wachsmann and Kahanov 1997). Tantura B is thought to have measured 18-23 m in length, and 5 m in width. Pottery and $^{14}$C tests suggest a date around the early 9th century AD (Kahanov 2000).

In addition to this group, another shipwreck is being excavated presently at Ma'agan Michael, *c.* 8 km south of the Dor lagoon. The vessel was possibly as large as Dor 2006, and is dated by its cargo to the Byzantine or early Muslim period. It has been entitled the Ma'agan Michael B shipwreck.

Prior to these vessels, shipwrecks from the Byzantine period were discovered in Hof Hakarmel, Sdot Yam, Newe Yam, and Mikhmoret (Parker 1992: nos 505, 1069, 740, 697). Generalising on the entire group of Late Antique shipwrecks of the southern Levant, we may say that their size ranged from small to medium, and their capacity may have reached a few dozen tons. Most of them could navigate in shallow waters, a fact which made natural anchorages a viable option for harbouring and loading or unloading their cargo. This would have made the group particularly suitable for improvised coastal activity.

Most of the ships do not contain a clear indication regarding their cargo. They could have foundered empty, or the goods on board could have been carried away by currents or perished in time. Salvaging, however, was common enough in antiquity, and well supported by particular legislation. For instance, the Rhodian Sea Law enumerates the reward payable to salvors who abide by the law (see Ashburner 1909: cclxxxviii-ccxciii). The closeness of the shipwrecks to the shore makes this option the most likely to have taken place.

This survey offers a picture of the vessels plying the waters of the southern Levant during Late Antiquity. While it demonstrates the expected dominance of the small vessels of cabotage, it includes at least two large ships, which would have been less manageable in shallow depths and narrow bays, and which may represent the part played by more organised channels of connectivity, operating bigger ships sailing along fixed pre-determined routes and during a more rigidly defined sailing season, as well as preferring larger artificial harbours. While none of the wrecks were found on the southern shores of Israel, the group in its entirety should be regarded as representative of the vessels servicing the coastal emporia of our micro-region as well. Some must have arrived at their final point of rest from Gaza or Asacalon, or were on their way there.

As we turn our focus to the southeastern corner of the Mediterranean and its respective maritime heritage, it is important to keep in mind a couple of relevant truths.

[2] See Parker 1992: nos 1; 2; 3; 26; 27; 61; 136; 137; 138; 367; 494; 495; 503; 504; 505; 525; 540; 541; 612; 689; 690; 697; 700; 739; 740; 741; 809; 1069; 1078; 1115.

[3] The shipwrecks (except for Dor 2006) are presented and discussed from a technological point of view (Kahanov 2011: 169-181; 2010).

The shores of the southern Levant are unanimously considered to have been challenging to pre-modern seafarers. The reasons for this are varied and include, among others, the dominant western vector of local winds and the paucity of natural harbours along the coastline (Raban 1995a: 139-141).[4] Yet, this fact alone does not indicate that the degree of maritime activity in the area was significantly reduced in comparison to other shorelines of the Mediterranean. Our rapidly increasing knowledge of *cabotage* strongly suggests that wherever there existed a demand for goods of even the most basic nature, there could be found the merchantman overcoming all obstacles to meet it (Horden and Purcell 2000: 365-400).

Notably, although admittedly less well studied than the north, no Byzantine or early Muslim shipwreck has been discovered so far along the southern part of the Israeli coastline. Multiple finds retrieved from the southern shores corroborate the obvious nonetheless: the south, with its chain of significant coastal emporia between Yavneh Yam and Rhinocorura, was just as connected to Mediterranean trade as the north and thus must have witnessed similar maritime traffic. Occasional discoveries of assemblages of artefacts such as anchors or amphorae may represent the sites of shipwrecks where hulls did not survive, though jettison as a result of sea or ship conditions always remains a valid option in such a case.

## The harbours

While significant, and certainly demonstrative of maritime activity, the number of shipwrecks (and shipwreck assemblages) representing the Levant during the Byzantine period can hardly do justice to the picture portrayed by the written sources. These refer to maritime activities at Gaza, Ashkelon, Caesarea, Iamnia, Ioppa, Sycamina, and Akko (Ptolemais). In addition, archaeological material indicates harbour activities at Dor, Apollonia-Arsuf, and Sdot Yam, as well as along the Carmel coast, Atlit and Neve Yam (Yasur-Landau *et al.* 2018: 80). The next topic we must therefore address is that of the coastal facilities that would have served them. The yield of evidence here, however, is significantly scantier. Apart from some repair works done in the harbour in Caesarea, which are reported by Procopius of Caesarea and identified by archaeologists, there is no definitive archaeological evidence for other harbour construction works in the Byzantine Southern Levant. Two built harbours have been suggested for Byzantine Apollonia-Arsuf by Grossmann (2001). The northern, so-called 'Crusader Harbour' has been identified as a facility enclosed by three breakwaters. The results of renewed excavations in the harbour, however, suggest that the supposed Byzantine (western) breakwater is actually part of a natural rock (Mirkin 2018).[5]

Unlike cities such as Akko and Caesarea, where we at least know the location of the harbour during the Byzantine period, its rough structure and plan, as well as its original date of construction in earlier centuries, we do not know details for the cities of the south. Indeed, while the written sources keep referring to harbours in Gaza and Ascalon, we cannot even claim that built artificial features were actually introduced to the mostly straight coastline running from Yavneh-Yam towards Gaza. We do know that the coastal sites generally thrived during the Byzantine period, whether they owned harbour facilities or not.

One such example is the city of Caesarea, which prospered despite having only basic harbour facilities. Archaeologists recognise an all-round neglect and deterioration, probably starting already with the death of Herod's son Archelaus in AD 6 and showing its signs soon thereafter. The decline of the harbour's outer basin was noticeable by the end of the 1st century AD (Hohlfelder 1992: 75-78), and the inner basin suffered from siltation by the end of the 2nd century AD (Raban 1996; 1992a). Underwater excavations, and the discovery of shipwrecks inside the harbour basin, indicate that the outer breakwaters lost their integrity before the mid 3rd century AD, perhaps as a result of a strong surge from the open sea (Raban 1985: 158).

During this period, and in decades and centuries to come, the deterioration in the condition of the town's port facilities was met with no response by the government in Rome, to the effect that the harbour soon ceased to be functional to vessels of larger size.[6] By the 4th century AD, the external, deeper part of the harbour – originally imagined to have served the great grain clippers – was already in ruins and out of use (Hohlfelder 1992). At the turn of the 6th century AD, the praise directed by Procopius of Gaza to emperor Anastasius I for repairing the harbour is noteworthy, not only on account of the late timing with which Caesarea ultimately returned to at least partial functionality, but also because of the distinct context of imperial munificence in which this repair was obviously carried out (Kempen 1918: 19). Accordingly, the repairs were

[4] See Flavius Josephus' report: 'This city [i.e. Strato's Tower] is situated in Phoenicia, on the sailing route to Egypt, between Joppa and Dora, which are coastal towns with inappropriate anchorage, on account of the attacks of the winds upon them, which dragging the sand from the sea to the shore, do not allow the landing of ships, and the merchants are forced for the most part to anchor in the open sea.' (Josephus *Antiquitates Iudaicae* 15.331)

[5] The lower courses of the northern and southern 'breakwaters', or walls, are built in header fashion. Unfortunately, the scarce finds made during the renewed excavations do not contribute to a proper dating of these structures.

[6] Based on the account of the city's changed status into that of a colony, Raban dates this development to AD 70 (1992b: 69).

modest, with a simple rubble breakwater placed on the submerged northern breakwater (Hohlfelder 1988).

Caesarea's model would be applicable to contemporary coastal emporia in the region with basic harbour facilities, and this possibility remains valid for the cities south of Yavneh-Yam (at least for the time being the search for harbour facilities has not been exhausted). But this is not the only relevant model for economic success, since also cities that possessed only natural anchorages to support their economic activity demonstrated elaborate connectivity and similar success. Here the case of Dor is revealing. The various layers of Tel Dor testify to the city's importance and ongoing activity from the time of the Middle Bronze Age to the Byzantine period. Evidence of regular seagoing activity is rife, with the natural bays and lagoons that surrounded the city alternately serving this activity. Port facilities dating to the Late Bronze Age and to the Hellenistic and Roman periods were perhaps present in the central and north bays respectively. Although harbour installations were suspected at Dor already in the 19th century (Guerin 1875: 306-308), it is noteworthy that there is no indication of Late Antique port facilities around Dor's southern lagoon where the above discussed shipwrecks were discovered.[7]

The decline of the settlement at the Tel by the first quarter of the 3rd century AD has been traditionally understood to be a result of the rise of neighbouring Caesarea (Stern 1995: 280f), rendering Dor's harbours redundant. However, there is growing archaeological evidence for the continuation of the town with its harbours being highly active; the town continued off the Tel, to the north and east (Gibson and Dauphin 1994-1995). Not only did Byzantine Dor encompass a considerable area (6.8 ha), but it also possessed one of the largest episcopal basilicas (a possible pilgrimage site) in the southern Levant (Dauphin 1997). Industrial activity is attested by a potential purple dye workshop on the coast, nine farmsteads, and 30 wine presses from Dor's immediate hinterland (Gibson *et al.* 1999; Raban 1995b).

In addition, the 118 active sites from Dor's neighbourhood are clear evidence of a lively rural community, dependent upon the coastal city for Mediterranean connectivity (Olami *et al.* 2004). The Byzantine shipwrecks discussed above, as well as the iron anchors and ceramic assemblages found in the southern anchorage of Dor attest the vibrant maritime activity there. Furthermore, recent work has revealed vibrant maritime commercial activity also in Dor's northern bay. The demand for goods by the ever-growing population of Dor's immediate hinterland, and on occasion perhaps even by the area of Caesarea itself, was thus met by two simultaneously operating natural anchorages at Dor (Gambash 2015).

**Southern Levant**

We return now to the micro-region which is at the focus of this chapter with this background in mind. Multiple sources indicate the main sites along this coastal stretch, running quite smoothly from Yavneh-Yam to Rhinocorura – the district, and probable coastal town, that marked the borderline between Palestine and Egypt (Pliny *Naturalis Historiae* 5.14; Josephus *Antiquitates Iudaicae* 14.2; Josephus *Bellum Iudaicum* 1.14). An elaborate contemporary description may be retrieved in strikingly detailed features from an Early Byzantine mosaic map found on the floor of the church of St George at Madaba in Jordan, known as the Madaba Map. The map's main aim was indeed to represent a picture of sites relevant to the pilgrimage movement – it shows Christian holy sites and makes a point in representing urban centres first and foremost by their churches and basilicas. But, beyond knowledge of the holy sites, the map may also supply a description of the logistical network that supported the pilgrimage movement, which grew to become a dominant factor deeply incorporated within systems of mobility and economy in Byzantine Palestine. The list of sites, from north to south, includes: Jamnia (the adjacent Yavneh Yam was not preserved), Azotos, Ascalon, Maiumas, Gaza, Raphia, and Rhinocorura. Holy Christian sites, such as those of St Hillarion and St Victor, appear separately. This density demonstrates the variety and multiplicity of landing-points for the pilgrim making his or her way by maritime means from or to Egypt.

Seeing that the movement of pilgrims, and indeed maritime mobility in general, would have been closely linked with, if not entirely dependent upon, maritime commercial activity. The picture presented, by implication, is also one of economic activity at large. It is not a straightforward task from the available evidence to learn about options of mobility for locals and visitors during antiquity. Travellers left almost no trace in the archaeological record and the written reports are significantly more reticent about the actual technicalities of travelling than they are on shipwrecking. From the silence of such sources as the Rhodian Sea Law, we may deduce that travellers played a lesser part in the maritime sphere than commercial cargo, at least as far as the official authorities were concerned (Woolf 2016: 462).

In a great number of cases where passengers are referred to in the official legislation, they are specified to be merchants travelling with their merchandise and sharing in the responsibilities for the handling of the

[7] For the northern bay, see Raban and Galili 1985: 339-341. For the southern bay, see Raban 1987; 1995b.

cargo and the ship's welfare. In one place in the Rhodian Sea Law the captain has to consult merchants with goods on board should the need for jettison arise; an ultimate decision is made by the vote of all merchants on board. Another reference to the topic discloses the mutual responsibility of captain and merchant for compensation in case of the loss of a ship: 'If the captain and crew cause damage or shipwreck out of neglect, let the captain and crew be responsible to the merchant for covering the damage. If it is as a result of the merchant's negligence that the ship and the cargo are destroyed, let the merchant be responsible for the damage caused by the shipwreck.' (NRN 3.9)

One is reminded of Paul's plea to the captain not to continue the voyage on account of the late date and the incoming weather. The pilot (κυβερνήτης) and captain (ναύκληρος) of the ship thought otherwise and 'the majority decided that we should sail on' (οἱ πλείους ἔθεντο βουλὴν ἀναχθῆναι κἀκεῖθεν) (*Acts of the Apostles* 27.9-12). The group that voted must have consisted of merchants travelling with their cargoes, the same goods that would soon be thrown overboard with the arrival of the tempest.

Other than the Madaba Map, additional representations are available for some of the coastal sites of the southern Levant, not least the *Tabula Peutingeriana*, which includes Iamnia, Azotos, Ascalon, and Rhinocorura. It is noteworthy that no representation of a harbour survived in any of them, i.e. we know from the Hellenistic 'Letter of Aristeas', that there was a spacious harbour – described as *limen* – ascribed to the city of Ascalon already in the 2nd century BC. But recent research has made scholars cautious about the terminology of written texts, even when these presume to describe the sites they survey from the point of view of the sailing ship, such as the *periplus* of Pseudo Skylax (Yasur-Landau *et al.* 2018: 73-75). The texts from the period we discuss here would describe a city such as Ascalon as an *Emporion* without direct reference to an artificial harbour.

The picture produced by the written sources and the archaeology of shipwrecks and harbours will always be partial, even in areas better documented than ours. Not every large harbour is evidence for intense activity, as Herod's Caesarea demonstrates (Gambash 2013). Certainly, not every basic facility is proof of reduced activity, as the southern coastal Levant often shows. The crucial indication for maritime activity should be sought, above all, in imported and exported goods, which supply the most reliable picture for the quality and intensity of micro-regional maritime connectivity. And here we may find the range of sources available to us of more help. There is multiple evidence for the scope of maritime activity generated by the portals of our micro-region and its impact – both outwards (on Mediterranean systems) and inwards (on the routine life of the local populations). A thorough examination is far beyond the scope of this contribution and we can restrict ourselves here to two detailed examples: the export of wine and the import of marble.

**Wine exports**

The wines of Gaza and Ascalon became famous throughout the Mediterranean during the Byzantine period, as attested through several written and material sources, not least the fulsome praise of Corippus: 'Sweet gifts of Bacchus, which fruitful Sarepta and Gaza had created and which beloved Ascalon had given to her prosperous colonists... The ancient gifts of Palestinian Lyaeus were mingled in, white with the colour of snow, exceedingly light and with an agreeable taste.' (Corippus *In Laudem Justini* 3.88)

Multiple factors played a part in this commercial success, starting, of course, with the high quality of the product (Decker 2013: 107; Mayerson 1985: 75-76). Numerous references to the quality of the wine appear in contemporary writings. The variety of the genres involved – from poetry and philosophy to history and hagiography – and the detailed description of the wine's colour, strength, and taste, would confirm that this is not just a popular literary theme. There are also numerous references to wine coming from our micro-region in medical texts, i.e. Oribasius and Alexander of Tralles (Gregory of Tour, *Hist. Franc.* 7.29; Gregory of Tour, *Liber in Gloria Confessorum* 64; Sidonius Apollinaris, *Carmina* 17.15; Cassiodorus, *Variae* 12.12.3; Fortunatus, *Vita S. Martini* 2.81-82; Oribasius, *CMG* VI.1.1.152 No. 433.7; *Cassii Felicis de Medicina* 101.42; Aetius of Amida, *Iatricorum* XII.64, I.2.417; Alexander of Tralles, II.2.53, 172, 353, 393, 455, 457; Paulus from Aegina, *CMG* XXII.2.376).

Christianity naturally added to the popularity of Levantine wines through the sanctity ascribed to the Holy Land and everything that arrived from there to the Christian world. And the elaborate pilgrimage movement that flourished during Late Antiquity would have contributed to its agency, circulating the name and fame of Levantine wines, thus creating demand across the Mediterranean, which was swiftly and efficiently fulfilled by both the manufacturing centres and the merchants plying the routes of commerce (Decker 2013: 107; Eastmond and James 2007: 175).

It is hard to assess why exactly the wines of Gaza and Ascalon achieved a reputation above all other Levantine wines; the agreed quality was probably the initial promoter of the micro-region's name. And, of course, many of the pilgrims arriving from Egypt and

the Sinai Peninsula entered the Holy Land from the Gaza area, which hosted the southernmost harbours or anchorages of Palestine (Caner 2010).[8] Certainly, there is abundant evidence for the nature and extent of the activities of those involved in meeting the growing demand. Throughout our coastal stretch, and the extensive hinterlands reliant upon it, numerous wine presses have been discovered, which would have produced enough surpluses to export to foreign markets. Even the arid Negev desert has revealed itself to have played a dominant part in the process (Frankel 1997).[9]

Despite the challenging climate, contemporary documents describe the thriving viticulture prevalent in the Negev area, and the local material culture clearly demonstrates its intense involvement in the industry that produced the wines of Gaza and Ascalon.

For the transport of all this wine, numerous kilns across the entire micro-region were busy producing the containers necessary to carry the valuable cargo to its many destinations. One form of container in particular appears to have been favoured for transporting wine (and other locally produced goods) safely to destinations near and far. This Gazan vessel has become known as the *gazition* and is found at many sites in southern Palestine, including the Negev, while on the other side of the Mediterranean, it appears at destination points in Italy, Gaul, and Spain

The wine trade of the Byzantine southern Levant thus brings us back to the problem of the harbours between Yavneh-Yam and Rhinocorura – the coastal stretch most immediately available for transportation options from the micro-region. No doubt, an organised artificial harbour would have facilitated the process, with a deep basin for larger ships, jetties, and quays for the loading operation, and breakwaters for all-weather functionality. In the absence of such a harbour (at least for now), the question must be asked whether the wines from Gaza and Ascalon could have had the same impact on the overall Mediterranean wine market by only relying on natural anchorages or on a barge-based loading system?

The answer here may be a tentative affirmative. While the quantities involved were likely significant, cargoes in amphorae would also have been manageable, both for loading and unloading, by means of open-sea anchoring and transferring the jars to smaller craft, i.e. barges and boats that could freely work in shallow waters. Alternately, smaller boats, such as the ones found inside the lagoon at Tantura, could have come close to the shore and been unloaded directly and without agency, or even hauled ashore at appointed sites. Instances appear as early as the Classical period for Mediterranean fleets, with mariners hauling and careening their vessels when landing on harbourless shores. Thucydides is our source: 'They have discovered that the length of the time we have now been in commission has rotted our ships and wasted our crews, and that with the entireness of our crews and the soundness of our ships the pristine efficiency of our navy has departed. For it is impossible for us to haul our ships ashore and careen them [τὰς μὴν γὰρ ναῦς οὐκ ἔστιν ἀνελκύσαντας διαψύξαι], because the enemy's vessels being as many or more than our own, we are constantly anticipating an attack.' (Thuc. 7.12.3-4)[10]

## Marble imports

Larger and heavier cargoes would have presented a more difficult logistical challenge, the obvious example coming from the trade in marble. Israel has no marble resources of its own and therefore all finds of marble can be ascribed to imports, most frequently by means of maritime transportation, where the manageability of this heavy commodity is eased. Written sources on marble imports are scarce and much of the picture we have relies on archaeology. Palestine was incorporated into the imperial marble trade network already by the 2nd century AD, and while the significant presence of marble is also detected in areas quite far from the sea, experts usually trace the route of the marble back to one of the major harbour cities of the southern Levant, logically the most favourable landing points for the heavy cargo. Thus, Scythopolis, located some 70 km inland, would have received its marble shipments through Akko/Ptolemais or Caesarea. Joppa would have served a similar purpose for inland sites in the central part of Palestine, including Jerusalem.

But what about the south? Unsurprisingly, marble also became popular in southern Palestina Prima as well as in Palestina Tertia, and demand for it can be seen everywhere between Yavneh-Yam and Oboda in the southern Negev. This demand increased yet further with the rise of Christianity and the building of new basilicas and churches. The town of Shivta, *c.* 100 km from the Mediterranean coast, well illustrates the growing dependence on this expensive and rare commodity, not only in the public-religious sphere, represented in the spread of churches around its territory, but also among the elites, i.e. the preference for marble for their funerary monuments.

But unlike the solutions available for amphorae-based cargos, likely enabling also smaller coastal sites, e.g.

[8] E.g. the writings of Egeria (9.1-7) and Peter the Deacon (PD,Y 4-17).
[9] Significant quantities of grape seeds have turned up in spoil heaps at Shivta; wine presses have been excavated at Haluza, Shivta, and Oboda (Mayerson 1985: 75-76).
[10] See also Thuc. 6.66 and 8.11.

Azotos and Maiumas, to engage directly in maritime trade, marble would have required more sophisticated facilities able to handle the great loads involved. However, at this stage it is impossible to confirm which Mediterranean harbours would have served the southern micro-regions for this purpose.

Some earlier ancient sources, such as the Hellenistic 'Letter of Aristeas' referred to above, suggest the presence of artificial harbours in some Levantine coastal sites. Byzantine contemporary sources often include more general descriptions of the coastal sites they mention, i.e. *Emporion/Emporia*, or simple 'the coast'. With the absence of clear indications of artificial harbours in such pictorial representations as the Madaba Map and other mosaics, and with the lack of archaeological evidence, some experts go as far as to conclude that such facilities did not exist south of Caesarea Maritima. Instead, they suggest once again the regular solutions for the mooring and loading/unloading of vessels, either by having the larger ships lay at anchor in deep water and using rafts or smaller craft for transportation; or by hauling boats, even those of significant size, onto the local beaches, either by hand or by using various mechanical means.

These methods, as we have seen above, were common practice among Mediterranean mariners and we do have direct and circumstantial evidence for their employment. But, perhaps unsurprisingly, marble experts continue to talk about actual harbours in Gaza and Ascalon, even as the archaeologists of the area continue to negate their existence. The conflict is epitomised in the report from the 'Life of Porphyry', describing the arrival of marble columns to Gaza in the early 5th century AD:

And in the next year empress Eudoxia sent the pillars she promised, marvelous and great, in number two and thirty (and they are called Carystian), the which are in the holy church shining like emeralds. But when they came into harbour, there was shown forth again the zeal and eagerness of the Christ loving folk; for all when they heard it straightway ran to the shore, not only the men, but also women and children and old men (for the desire of the faith enabled all of them), and bringing wagons they laid each pillar upon a wagon and drew it and set it in the open part of the temple, and turned again and conveyed another until they had conveyed them all. (Life of Porphyry 84)

The contact point between the maritime and terrestrial is captured here by the arrival of the ships to the 'harbour', the rushing of the people to the 'shore', and the transfer of the columns from ship to wagon. But the actual facilities supporting the complicated process eludes us.

The complexity of the unloading operation when conducted without proper facilities is well illustrated at Dor's northern bay, where systematic looting and the removal of spolia from the Tell occurred at some point in Late Antiquity, leaving large quantities of material in the water, including blocks, slabs, column drums, etc., which had been lost while loading them onto light rafts and transporting them to larger vessels moored outside the shallow bay. No similar evidence has yet been discovered along the coast from Yavneh-Yam to Rhinocorura, sites still waiting their turn for thorough underwater surveys.

**Conclusions**

Setting out to evaluate the state of southern Palestine's Byzantine harbours is no easy task, since the area has not yet been properly surveyed and the sources available to us do not provide a full picture. Nevertheless, maritime activity is connected naturally to a range of adjacent and remote micro-regions, and the more detailed information we have for the northern parts of Palestine, as well as our existing knowledge of the commercial activity that took place inland in the southern regions, allow us at least to outline the nature of maritime activity south of Yavneh-Yam.

Natural anchorages and accommodating shores would have served for most of the year as opportunistic harbours, offering most of the solutions required by cabotage-based activities. As at numerous other coastal sites along the Mediterranean shores of the period, this would have sufficed for the routine needs of local populations, and even for requirements larger in scope associated with the import of everyday or luxury goods and the export of locally produced surpluses.

But large ships did play a significant part in this economy. Some exports – wine at the very least – did serve significant parts of Mediterranean-wide markets, and large and heavy commodities, such as marble columns, did enter southern Palestine through seaports. The fact that such activities would seem to call for more than the model of opportunistic harbours alone suggests that at least one large and deep artificial harbour would have been much desired in the south, if not essential. And in looking for such a site, then, with its accommodating location along the spice route, its reported importance, and the fact that it has been researched even less than other local sites to its north, may well suggest that the harbour we are searching for is to be found in Gaza.

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