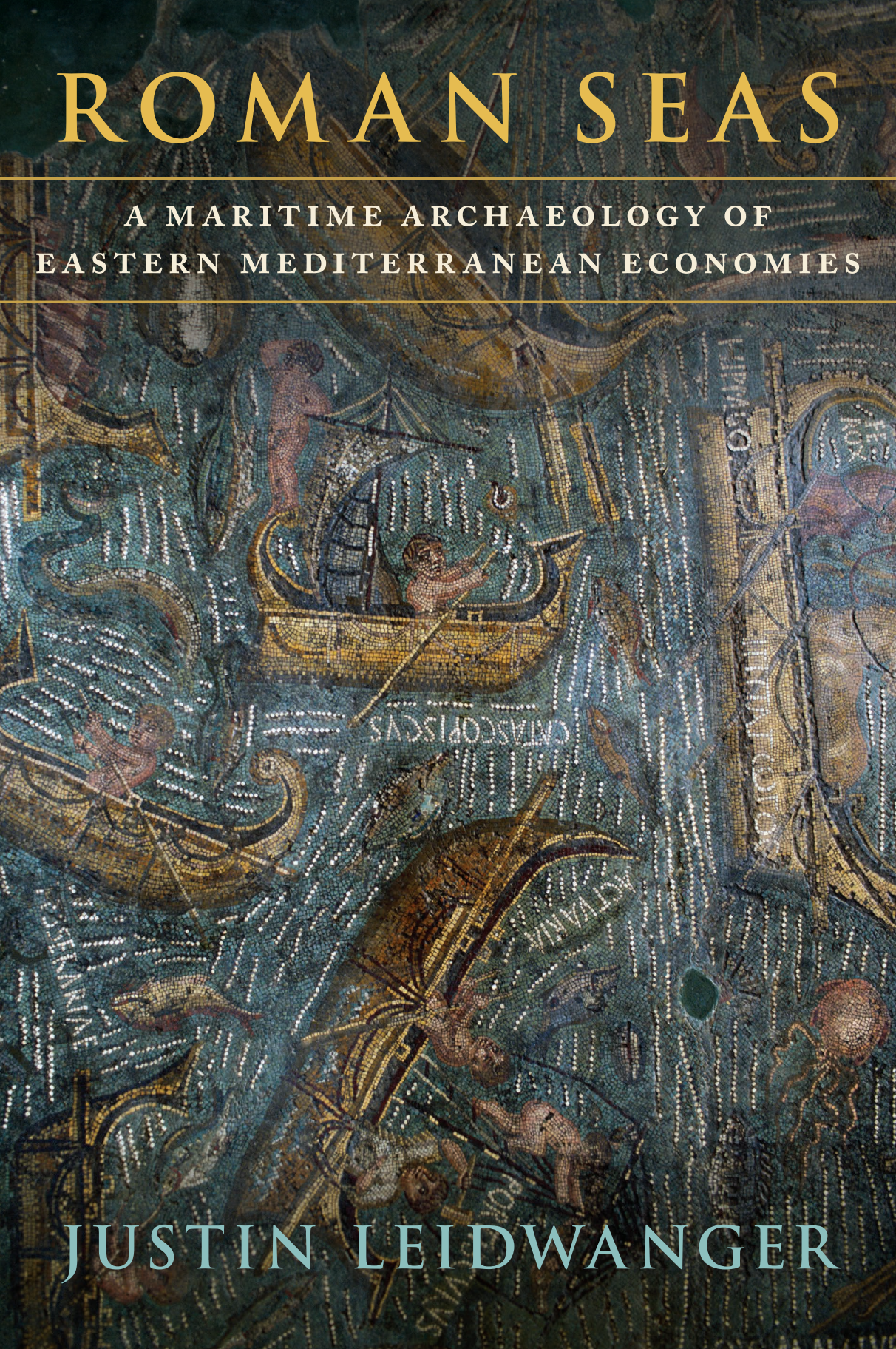
ROMAN SEAS

A MARITIME ARCHAEOLOGY OF EASTERN MEDITERRANEAN ECONOMIES



JUSTIN LEIDWANGER

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A Maritime Archaeology of Eastern Mediterranean Economies

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PREFACE

THIS BOOK IS ABOUT USING the maritime archaeological record—especially shipwreck cargos but also ports—to study long-term economic structures in the Roman and Late Antique Mediterranean. It centers on a question that should be fundamental in the wake of a new generation of connectivity studies following the tradition of Fernand Braudel (1972), Peregrine Horden and Nicholas Purcell (2000), and, most recently, Cyprian Broodbank (2013): how did seaborne contacts influence the development of economic—and by extension social—communities at different scales around the shores of the Mediterranean? That communication, travel, and exchange across *mare nostrum* flourished during the Roman era is hardly in doubt, but a preference for viewing the grandest long-distance trade among major urban centers against a Brownian motion of small-scale, short-haul exchange has tended to flatten the finer and varied contours of maritime interaction and coastal life into a featureless blue Mediterranean.

My goal is to shed light on how economic regions, neighborhood communities of sorts, developed around maritime space over the extended Roman and Late Antique era. What did busy seaborne contacts mean for the cadence of economic life in the ancient Mediterranean, the availability of goods and patterns of consumption not only in but also beyond the metropoleis, how (and how often, and how far) one might acquire and dispose of goods, and where groups of producers, merchants, and consumers organized themselves into communities and markets? And how did these patterns of economic and social life shift over time, in particular with the rise of Rome and the subsequent transformation of the Mediterranean world into Late Antiquity? An alternative framework is necessary to address these

distinctly regional and diachronic issues through a maritime archaeological record marked by opportunistic preservation and exploration.

Through detailed study of a rich assemblage of sites in one corner of the Mediterranean, I attempt to bridge two divergent approaches to shipwrecks: on the one hand, the analysis of a single site, studied in detail and often fully excavated, and on the other hand, the massive database of wrecks more cursorily treated across the expanse of the ancient Mediterranean. Qualitative and quantitative methods each offer critical insights and distinct advantages in terms of depth and breadth of study, yet there have been few syntheses of the two. A middle ground could capitalize on the growing body of shipwreck data while also profiting from details of individual well-explored sites. There are probably many reasons for this gap, but among the most important is a comparative lack of well-developed systematic survey within the mainstream of underwater fieldwork in the Mediterranean, which has resulted in a near-exclusive focus on (well-preserved) shipwrecks and ports rather than a synthetic socioeconomic treatment of the full range of maritime archaeological evidence. Examining long-term trends in maritime regional interaction is dependent on a multiscalar analytical framework that embraces both the growing corpus of data and the nuance gleaned from close study of complex cargos and related archaeological assemblages.

My interest in these problems arose over the course of some 15 years of maritime archaeological fieldwork in Cyprus and Turkey, but no less out of a keen awareness of six decades of remarkable accomplishments by others whose long-term research programs and constant methodological innovations have brought hundreds of shipwrecks, ports, and related sites to light along these coasts. This book hardly amounts to a comprehensive treatment of the archaeological evidence for the Roman maritime Mediterranean, but with it I aim to move the discussion a step further by offering an approach to synthesizing maritime archaeological data through the dual lenses of landscape and network in one corner of the ancient world. While explicitly Roman and eastern Mediterranean in its focus, this volume offers considerations of economy, exchange, mobility, regionalism, markets, and community identity that may be of utility for intellectual voyages into other periods and areas.

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BOOK REVIEW

Justin Leidwanger: Roman Seas. A Maritime Archaeology of Eastern Mediterranean Economies

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Alkiviadis Ginalis[1]

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This book presents a comprehensive study of maritime interaction and historical network analysis based on underwater archaeological records from the northeastern Mediterranean. For the first time the Roman and Late Antique economy is being examined not just based on shipwreck data. Beyond the study of cargos and other aspects of seafaring, coastal landscapes, ports and diverse marine environments also find their way into "considerations of economy, exchange, mobility, regionalism, markets, and community identity" (viii). This aims for a different angle of illuminating *longue durée* developments of Mediterranean maritime communities, which eventually offers a deeper and more synthetic understanding of economic and social connectivity.

In six chapters the author approaches the perception of maritime contacts by contrasting the traditional ancient economic and maritime studies with the current state of archaeological records of the Eastern Mediterranean. The first chapter, "Maritime Interaction and Mediterranean Communities", provides a first critical analysis of means of connectivity through existing network studies such as that of Braudel, Horden and Purcell or Broodbank, adding also "scale" as a further aspect to be taken into account when discussing the development and character of markets. Since most socioeconomic models rely on datasets, Leidwanger correctly points to the problem of interpreting archaeological evidence and hence the weakness of databases. The latter often fail to reflect the different facets and complexity of the varied economies, especially when it comes to understand the time period of the second century BC to the seventh century AD. As such, by applying a variety of additional parameters, he tries to explain the way of understanding and using compilations of data such as Parker's corpus of shipwrecks.

This is followed up in chapter two, "Topography and Tools of Interaction", which is dedicated to the geographical and physical key parameters that affected ancient seafaring and coastal activities. Primarily, aspects of navigation like visibility, winds, tides and currents as well as a region's marine environment and coastal topography form the most relevant factors. As a response to the environmental, topographic but also economic, social and political impact to maritime activities, the author provides a nice overview of shipbuilding history throughout the Mediterranean. This includes recent research on types, sizes and the

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construction of ships, the rigging with the capabilities and manoeuvrability of sail types as well as seasonality, temporality, distances or journey times. The fact that the transition of nautical technology and seafaring practises from the Hellenistic to the Byzantine era did not follow a linear trajectory is shown both through archaeological evidence and different textual and iconographic sources.

Chapter three, "Modeling Maritime Dynamics", forms the theoretical framework for the ground methodological approach applied at the case studies along the Datça peninsula in southwestern Turkey and the southern coast of Cyprus. Leidwanger turns his attention to the concept of space and maritime topography. With a particular focus on the question of "regionalism" he examines the spatial use of landscapes and its reflection on maritime spheres and the formation of community identities. Based on Westerdahl's concept of "maritime cultural landscape" (77) as well as the works of Broodbank and Tartaron, the author tries to construct a model of maritime interaction that emphasizes different ways of "mobilities" such as trade, travel and even fishing. This opens a long needed discussion on the important role of even small scale or local roads, rivers and parts of the sea for the wider transportation network, which of course vary between time, area and actors. Thus, a differentiation between long distance—short haul, large scale—small scale and regular—occasional/seasonal activities illustrates a more complex picture of maritime connectivity throughout the Mediterranean.

With chapter four, "Exploring Shipwreck Data", the author reaches the core section of his book, where the theoretical methodology is finally applied to the dataset of wreck finds from his area under investigation. For the Roman and Late Antique periods this comprises a total number of 67 shipwrecks from his significantly reassessed and enriched catalogue (Appendix 1) based on older shipwreck databases like that of Parker. By shifting the focus from site locations to geographical links, one-mode and two-mode network visualizations are being produced. Within these, the author opposes Roman era to Late Antique data, which, among other information, shows a shift from single freights towards cargos from multiple areas. An ArcGIS-based analysis (145) eventually illuminates distances and related lengths of journeys. Taking into account the speed and direction of wind data or the capabilities of ships and sailors, this suggests new considerations for modelling ancient seafaring.

Chapter five, "Ports and Everyday Economies", turns the attention from shipwrecks to port sites as the second major aspect of maritime connectivity. Serving as "interface between land and sea", harbours formed "dynamic zones of social and economic contact" (154). In contrast to the traditional approach of considering exclusively major port sites and facilities instead of coves, sandy beaches or seasonal sites, the author again rightly argues for the importance of small facilities and bays for maritime economic networks. As such, he rather aims for a bottom-up study in order to reflect the entire range of coastal sites, including those he calls "inconspicuous" (159). After a first introduction into harbour studies and a rough definition of its facilities, Leidwanger again concentrates on the harbour situation along the Datça peninsula and the southern coast of Cyprus. Importantly, for these two case studies the detailed research extends even beyond coastal infrastructures, way into the hinterlands of the associated maritime communities.

The final chapter, "Maritime Networks in the Roman East", of this book merges the information gained from the shipwreck assemblages with that of port sites and their corresponding hinterlands. This offers for the first time a comprehensive synthesis of data with potential of producing accurate and not just superficial models of maritime economic networks throughout the Mediterranean and beyond. The chapter ends with the intention of putting the network data into the wider historical context of the Roman and Late Antique

periods. Leidwanger eventually concludes chapter six and thus his book by remarking that network studies have to rely on many different "indicators of mobility, interaction and economic development throughout the hinterlands" (226).

With this book the author admirably masters a first deep insight into the complex world of Mediterranean economies. With the archaeological records indicating a diverse relationship and interdependency between economic networks and environmental, social and political impacts, a highly difficult task has been undertaken, especially for Late Antiquity. However, Leidwanger's work should not be taken as an ultimate study but rather as a starting point for new perspectives in maritime archaeology.

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People, ships, and ports: between models and reality

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LEIDWANGER, J. L. 2020. *Roman Seas: A Maritime Archaeology of Eastern Mediterranean Economies*. New York: Oxford University Press. DOI: 10.1093/oso/9780190083656.001.0001. Pp. xi + 323, 1 table, 64 figs. ISBN: 0190083654, 9780190083656.

The 21st c. finds maritime archaeology burgeoning on a global scale. Maritime archaeologists, now fully integrated into academia and current scholarly dialogue, are exploring new paths through and beyond integral subjects of our domain – namely, iconography, harbors, and shipbuilding. New theoretical and technological challenges, such as digital applications and, more recently, network analysis, lead to intriguing new ideas and open new paths for exploring the past. As a maritime archaeologist who works in the eastern Mediterranean, I opened this book with great interest and with a genuine incentive to sail into the "Roman seas" of "Eastern Mediterranean economies."

The book is divided into six chapters, accompanied by two appendixes and an index. The first three chapters (109 pages, almost half of the main text), are well-researched introductions to the main components of maritime archaeology treated in this book. Comprehensive overviews of previous scholarship, based on a copious and up-to-date bibliography, can be used with confidence by scholars who need a kick start in this area of research. Certain sections on the applications and potential of network theory in maritime archaeology, in particular, are very informative and create a robust theoretical context.

The first chapter, "Maritime interaction and Mediterranean communities," sets the scene for what is to follow and establishes the goal of the book – namely, "to identify patterns and densities of connections through the movements of people and goods, between the 2nd century BC and the 7th century AD" (5). Four short but well-explained sections discuss basic concepts and research areas: "movement, connectivity, and economic history," "Roman maritime economies," "shipwreck data sets" – and they introduce the "Eastern Mediterranean case studies." Overarching themes that the reader encounters throughout the book – such as regionalism, the necessity for a multiscalar approach to Roman maritime economies, and the significance of small ships and ports – are first addressed here.

The second chapter, "Topography and tools of interaction," focuses on ancient seafaring and navigation. The rich literature on the subject is well handled, and the author deftly summarizes the results of previous research. Some topics could have been covered more thoroughly, such as the history of shipbuilding, where an opportunity is missed to better contextualize the social aspects of various traditions by elaborating on Pomey's idea of different structural families of boats and ships.[1] But the overall discussion is well structured, and what the reader takes away is another key theme of this book: the significance of the

[1] Pomey et al. 2012, 303.

varied local conditions and the diversity of vessels available for use in a range of different contexts.

The third chapter, "Modeling maritime dynamics," picks up the theme of variability and turns to maritime cultural landscape studies to explore some key conceptual approaches. This is an interesting synthesis that builds on previous scholarship about much-discussed umbrella terms, such as "islands and islanders," "landscapes," and "mobilities." The concept of "region and regionalism" (70) is well defined, and an interesting argument is introduced about the interplay of the different facets of maritime mobility along intersecting geographical, scalar, and temporal axes. The theoretical inferences are quite plausible, although a bit too general. Particular elaboration is given to complexity, interdependence, and multiscalar interaction.

These well-written introductions cover a broad theoretical and methodological spectrum and epitomize the author's evident talent for synthesis. When it comes to the eastern Mediterranean specifics, however, the signal becomes weaker. This impression is created by both small details and the discussion itself. The iconographic analysis of a central – not an eastern – Mediterranean monument, the 3rd c. CE mosaic floor from Althiburus, Tunisia, with representations of 25 different vessels (also depicted on the cover photo), is obviously one such detail.[2] As one reads through these introductory chapters, the impression grows. This is especially the case when one comes across complaints that might be justified for the scholarship of the 20th c., but that sound slightly unfair for the present. For instance, studies on maritime landscape in the eastern Mediterranean (80) are not that rare anymore.[3] The author also lists the "uncertainty of the transport amphora provenance" as one constraining factor for this analysis (39). Again, this does not do justice to all the work done during the last two decades in refining data resolution for Late Roman amphorae, for Cyprus and the Levant in particular.[4] Also, it is true that small ports have not attracted the attention of many Roman archaeologists, but the same can be said about urban ports in the Roman East.[5] Similarly, the author rightly points out the disproportionate scholarly focus on the state provisions of Rome (86–87), but one would expect more on the history of this institution in the eastern Empire, which is the focus of this book.[6]

The most interesting part of the book, presented in Chapters 4 and 5, concerns the results of network analysis, defined as "the methodological framework for interrogating the changing shape of connections, which can then be measured and evaluated with certain basic statistics" (138). In Chapter 4, both quantification and network exploration are used to investigate distinct patterns that governed maritime interaction. The author is aware of the geographical unevenness of the evidence, as well as the limitations of the growing corpus of shipwrecks that have been extensively used in the past as markers of

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2 Duval 1949.

3 A good example was the international conference Under the Mediterranean (Nicosia 2017), which reflected a very dynamic turn toward this area of study (Demesticha and Blue 2021).

4 See for example, Pieri 2005; Reynolds 2005; Reynolds 2008. All are cited by the author in different sections.

5 Typical are the selections of papers in recent edited volumes on harbors by the Mainz Römisch-Germanisches Zentralmuseum (Preiser-Kappeler and Daim 2015; Schmidts and Vucetic 2015; von Carnap-Bornheim et al. 2018).

6 See, for instance, Mitthof 2001, not cited in the bibliography.

economic history. Accordingly, he tests his methodology – successfully – by plotting the 67 selected shipwrecks listed in Appendix I, which are a basic pillar of archaeological evidence in this book, against larger datasets known from OXREP (the Oxford Roman Economy Project) and DARMC (the Digital Atlas of Roman and Medieval Civilizations). Then follows the most interesting part of the chapter, which presents comparative visualizations of the exploratory network analysis, through which the focus is cleverly shifted from the location of the sites themselves toward the geographical links created by the composition of the cargoes. According to the results, the two areas under study – the Datça Peninsula and Cyprus/Cilicia/the Northern Levant – seem loosely connected during the Early and Mid-Roman periods, whereas during Late Antiquity, the second became more central. Connections plotted against geographical areas provide some rather hard-to-follow graphs (Fig. 4.15) that are not very well explained in the text, but in general, the results are well presented. GIS is used to estimate average journey durations, thereby adding the human experience of movement (145) and the impact of geography on maritime network development and structures.

The 67 shipwrecks of Appendix I were selected on the basis of clearly explained criteria, among which was the author's access to the material, so that immediate control over quality and representativeness could be achieved.[7] This list makes an important contribution in itself. Only half of the 67 shipwrecks are included in two widely used online databases – OXREP and DARMC – and the author has revised these, correcting mistakes and inconsistencies. Moreover, 17 of the remainder are not published in English, and two are not published at all, known to the author by personal communications. Consequently, non-Turkish-speaking scholars will benefit a great deal. There are some methodological issues to discuss, however, that I believe are of interest, because clarity is of the essence for understanding new approaches, not least how this one is different from the "quantitative evaluations of economic historians seeking broad trends" that the author complained about at the beginning of the book (22).

First, it is not easy to consider this list of shipwrecks as being as "inclusive and comprehensive as possible" (19), and most important, representative of half the area under study, i.e., Cyprus/Cilicia/the Northern Levant. One shipwreck in Cilicia (no. 60) and one in Syria (no. 46) are inadequate for quantified analysis, general or not. In fact, given that no port site in Cilicia or Syria is discussed in the book either, one cannot help wondering why the author did not choose to focus on specific Roman provinces with available data – that is, Caria, Lycia, and Cyprus. L. explains that fine-grained datasets are rare in archaeology, and he is aware that this unevenness "bears directly on how quantitative comparisons can be structured within the study area" (111). Nonetheless, the regional patterns of maritime interaction were based on the analysis of these data, with little written about how or if this discrepancy had actually been considered.

My second point concerns the parameters and data used in the formal network modeling of shipwrecks. For readers like me, at least, with no knowledge of the specific software and with a strong interest in the archaeological material used to feed it, a section or a table with such information would help to better appreciate the connectivity graphs and the author's claim that his model allows "new consideration of maritime interaction in light of geography, environment, *and* technology" (141; emphasis my own). Regarding sailing

[7] Most of these shipwrecks were already published in Leidwanger 2017.

times, for example, it is only in footnote 166 (60) that we find out that "all of the journeys quoted here assume 24 hours of sailing per day," whereas it is many pages later that we read that "the GIS model does not distinguish separate seasonal communication patterns but rather relies on a single, year-round representation" (150). So were the detailed wind roses and diagrams in Appendix 2 actually used? Interim stops on these journeys were not taken into account either, although in previous chapters, we were prompted to consider the importance of local phenomena, seasonality, and geography. Moreover, despite the emphasis on diversity in tonnage, so well explained in Chapter 2, one has to assume that ship sizes were not incorporated in the model (this is not clearly stated before p. 214, at the end of the book) because only one of the 67 shipwrecks (Yassıada, no. 44) was fully excavated, and therefore could provide sufficient evidence of the hull's size. In addition, the modeled sailing performance is based on the experimental sails of the *Kyrenia II*, which is a replica of a Hellenistic (not a Roman) ship, and there is not enough evidence to support the suggestion that it represents a "typical merchant vessel in the ancient Mediterranean" (145). This is the case not only because its depth has already been revised[8] but also because not all Roman vessels excavated in the eastern Mediterranean had a "wine glass" cross section (unlike what the author implies on p. 144).[9] The lack of available data on the performance of Roman ships is an understandable problem, but the lengthy analysis in previous chapters on small scale and diversity in maritime interaction would justify some more clarity on the matter. A table with the number of shipwrecks per period (Early Roman, Mid-Roman, and Late Antique) would also be very helpful. For example, the drop in numbers of shipwrecks led to an argument, further discussed in Chapter 6, that regional activity had "ground nearly to a halt" during the Mid-Roman period (211). Cross-referencing with Appendix I reveals that only three shipwrecks (nos. 32–34) date to this period (3rd to early 4th c. CE), a number too small to be left only to pedantic readers to check out.

Another area of similarly poor visibility in the modeled data concerns the cargoes themselves. There is too little space devoted to evidence regarding the provenance of the 67 cargoes, 63 of which consist of transport amphorae. According to L., this may not be necessary because "more precise origin attributions for cargoes can at times prove counterproductive" (126). It is, of course, understandable that provenance and typologies are beyond the focus on this book, but at least a section on the special character of maritime transport containers would have added meaningfully to the discussion on mobility, agency, and maritimity in antiquity.[10] Provenance is also related to the "weighted values" of each cargo's components. These are all given in a footnote (n. 42, 128) as text instead of in a separate table or as a column in the Appendix itself, an arrangement that does not make for easy referencing. For example, we learn from another footnote (n. 52, 137) that one of the Arwad B wreck (no. 46) cargo components was not included as a link in the network modeling because of its uncertain provenance. If one wants to know how many other such omissions may exist,

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8 After a loading experiment with true replicas of the cargo amphorae, Richard Steffy suggested that the original hull could have been deeper (Katzev 2008, 78–79).

9 Characteristic examples are the flat-bottom ships of Tantura A (end of 5th–beginning of 6th c. CE) and Dor 2006 (beginning of 6th c. CE), discussed with other Roman and Byzantine shipwrecks in Pomey et al. 2012.

10 For some diachronic attributes of maritime transport containers, see Knapp and Demesticha 2017.

and how this affected the graphs, it is almost impossible to do so. Additionally, no distinction is made in the Appendix between coherent and scattered sites, or homogeneous and heterogeneous cargoes, all attributes with a direct impact on quantified analysis and connectivity patterns.[11] Consequently, it is hard to comprehend how (or if) any differentiating parameters were considered when scattered cargo assemblages – such as those found in the anchorage of Burgaz, Turkey (no. 61), or Avdimou, Cyprus (no. 44) – are quantified together with homogenous shipwrecks such as Yassıada (no. 64) or Knidos A (no. 53).

Chapter 5, "Ports and everyday economies," turns to port sites and opens with a remarkable synthesis of the literature on secondary ports. After a brief summary of the sites under consideration, some very interesting questions are asked, such as "Who could easily and reliably reach the maritime sites in consideration? How might different communities have converged on nearby urban centers and outlying ports?" (182). An instructive, albeit slightly deterministic, GIS exercise on catchment analysis is conducted, based on the ports' geographic locations. With no material record taken into consideration, however, no answers to "who" and "how" are provided. But the results do add a useful temporal factor to the ports in question. They demonstrate that settlements in the Datça Peninsula were located on average 2.02 hours from the nearest port during the Roman period, whereas during Late Antiquity, the average rose slightly to 2.36 hours (Figs. 5.6, 5.7). The results also suggest a hypothetical division of the peninsula into "port catchment areas." Some archaeological information on the sites not discussed as ports – or at least their names on the map – would be useful for contextualizing this information, given that Tuna's surveys on the peninsula are published only in Turkish.

In an effort to make a meaningful link with the concept of "extended archipelagos," the two areas under study are reintroduced as "miniature archipelagos" (166), with local ports integrated into their respective coastal systems and maritime networks as "nodes of density in a matrix of connectivity."[12] The cleverness of the metaphor notwithstanding, I found the use of the term "archipelagos" unfortunate in this case, mainly because of its geographic connotations. The economy and maritime connectivity of each mainland *peraia* in the Aegean, like that of the Datça Peninsula, were closely interlinked with their offshore islands, but they are not included in this study.[13] The south coast of Cyprus, with no other land in sight, developed a distinctive maritimity, which is also very different from that of the interconnected ports of an archipelago, whether figurative or not. But the Cypriot seascape is presented in a fragmented manner in this book. Although L. explains that the list of port sites discussed is not meant to be exhaustive (166), it is still puzzling how easily coastal sites are interpreted as outlets of local agricultural products, particularly given the thorough analysis in the previous chapters of the diverse systemic contexts of small ships and anchorages. To help readers who are unfamiliar with the archaeology of the island, the author could have analyzed the sites in their Cypriot context by placing other contemporaneous anchorages on the island's map.[14] I confess that in reading about "a dense set of rudimentary ports that dotted the coastlines of south-central

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[11] Parker 1981; Nieto 1997. For a site catchment analysis of shipwreck sites, where heterogenous and homogenous cargoes were plotted separately, see Harpster 2017.

[12] For the concept of "extended archipelagos" and "nodes of density in a matrix of connectivity," see Horden and Purcell 2000, 133–36, 393.

[13] For the *peraiai* in the Aegean, see Constantakopoulou 2007, 247.

[14] For a thorough analysis on Roman ports and anchorages on Cyprus, see Leonard 2005.

Cyprus," situated no more than about 10 km apart (194), I wondered if the author was talking about the same island I have worked on most of my life. Changing our established impressions is one of the most inspiring aspects of science, of course, but this is not feasible unless arguments are based on conclusive evidence. My impression is that such evidence is lacking in this case, which is a pity because it weakens the potential of this analytical experiment.

More specifically, the first Cypriot site under discussion is Avdimou, on the western part of Episkopi Bay. Underwater finds, surveyed previously by the author, are scarce: a possible scattered wreck assemblage (no. 44) of some 30 amphorae at very shallow depth (3–4 m), 9 stone anchors, and 3 millstones, which might or might not belong together.[15] Small assemblages of scattered sherds on the coast and no evidence of other sites in the immediate hinterland cannot convincingly support any kind of regular commercial activity. Still, L. sees "a space for transhipment of local agricultural produce from around the valley" (178) with "the routine of economic life" (191) underscored by a Late Roman road that led to the coast; this was, in fact, a hard-to-date vestige of a possible road, found with fragments of Hellenistic and Roman pottery on its surface.[16]

The elasticity of inference is stretched even more with the next site under consideration: three shallow inlets at the eastern end of Episkopi Bay, on the west side of the Akrotiri Peninsula. No anchors were found underwater. The scattered, fragmentary pottery finds located by the author could have been the result of occasional wrecking episodes rather than anchoring episodes, given that the coast is unprotected from the prevailing winds.[17] Nonetheless, the inlets are plotted on the map (Fig. 5.9) as a "port of Late Antique period'' and are discussed as "one of several focal points for local maritime activity," serving "small vessels with minimal draught on short stops, perhaps limited to the calmer morning conditions or when the winds shifted direction" (179). Less than three miles west of these inconspicuous inlets of west Akrotiri is the coastal site of Dreamer's Bay, with port infrastructure and documented terrestrial and underwater remains, which played a key role in the local maritime networks of southern Akrotiri and most probably the two bays that flank the peninsula.[18] The site is marked on the map, but its role is only mentioned in passing. The omission of Dreamer's Bay would not necessarily be a problem, given that L. explains that he picked the Cypriot sites to "illustrate some of the variety these spaces entailed" (177). But when he suggests, without any further elaboration, that it "functioned together with the more exposed West Akrotiri" (188) in a book discussing networks and interaction, it cannot go unchallenged.

The third Cypriot "port" is also a choice that may puzzle many archaeologists working on the island. Zygi-Petrini is a coastal Late Roman 1 (LR1) amphora kiln site, now completely destroyed by erosion, with no associated underwater finds. In this respect, it is similar to Mersincik and Mesudiye on the northern and southern coasts of the Datça Peninsula, respectively, also discussed in this chapter. The lack of underwater finds does not negate

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15 No detailed mapping or quantification table appeared in this book or in the earlier publication (Leidwanger 2007).

16 Bekker Nielsen 2004, 218.

17 Leidwanger 2013.

18 The site was surveyed by L. and Leonard, and it is still under systematic investigation. For the latest report, see James et al. 2021.

the possibility that some rudimentary facility could have existed in front of the kiln site. But important sites nearby that could well have been used as local ports are, again, absent from the analysis – e.g., the mouth of the Vasilikos River to the immediate west of Zygi, now a modern industrial harbor; and two documented Late Roman anchorage sites within 10 miles to its east, Maroni Yialos and Mazotos Petounda.[19] The main concern here, however, is neither the limited analysis of the coastal topography nor the nonconsideration of other sites. Instead, it is the creative interpretation of Petrini itself first as a port, and second, as one that served the entire Vasilikos valley. This phantom port, with a busy phase during Late Antiquity that had a "profound impact on local interaction" (193), holds a key role in the analysis of the next chapter as well. It was an inlet for Cilician amphorae, found at Kopetra, a site up the hill in the Vasilikos valley (201), which made it "a nodal point" in regional interactions.

Chapter 6, "Maritime networks in the Roman East," is the final one, with a synthesis of the book's findings. The diachronic, "indestructible everyday activity of maritime life" of Braudel comes to mind, when the key role of small-scale maritime activity (short-haul voyages, small ships, opportunistic ventures, inconspicuous ports) was reinstated for the connectivity of rural communities.[20] By this stage in the book, some readers (such as this reviewer) may have wondered where the archaeology is in processes so hard to trace, such as the possible "opportunistic transfer of goods in a fisherman's home waters and the occasional employment of mercantile vessels and crews for shoaling fish" (98). In fact, all readers might expect some more elaboration in this chapter on how successfully networks can actually be used as interpretive tools to understand past phenomena such as maritime connectivity on such a small scale.[21]

Instead, however, the author opted to place the emphasis in this chapter on the ancient economy, drawing a notable inference from the previous analysis: maritime networks of small ports could have functioned independently from nearby urban centers, thereby reflecting the true dynamism of regional maritime economies in the Roman eastern Mediterranean. If the evidentiary support were stronger, this would constitute an important contribution of network studies to maritime archaeology and the study of the ancient economy. But I found no arguments robust enough to convince me that the evidence of the specific "inconspicuous coves" (178) and ''unimportant ports" (199) could be used to trace *and* model their impact on the Roman economy. Apart from the inadequate material evidence, I felt there was an overemphasis on the small scale, which overshadowed any other economic scale. For example, the discussion on urban ports is so brief that it takes some meticulous reading to make clear that maritime economies of the Late Roman Mediterranean were not just regional, based only on exchanges with small ships that connected simple and unassuming ports. The same is true regarding ship sizes; it is stated beyond doubt that, in Late Antiquity, cargoes approaching over 500 amphorae were rare in the archaeological record (214). In this case, L. succumbs to a pitfall about which he warned the reader in Chapters 1 and 2: shipwreck datasets are neither conclusive nor comprehensive enough to support such conclusions – at least not yet. Recently published

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19 Manning et al. 2002; Papakosta 2020.

20 Braudel 1972, 147.

21 For similar questions regarding different materials and contexts, see Brughmans 2018.

shipwrecks have demonstrated that there is a lot we still do not know about Late Roman maritime scales.[22]

Just before the end of the book, L. explains that his multiscalar approach goes "beyond fitting into prevailing historical narratives" (214). Indeed, historical context seems to function as a backdrop in this book, leaving the foreground to discussions on skillfully formulated new (and older) analytical approaches. The connection between the two (the historical context and the analysis) does exist, of course, but it has been left to the reader to put it together. For example, the well-documented administrative and cultural links between Cyprus and Cilicia are only touched on in a footnote (n. 31, 205), with the least possible elaboration, although the potential of direct networks between the two regions is discussed extensively in this chapter. This is not to say that these networks did not exist. On the contrary. But a lot has been left unsaid. For example, there is no comparative analysis of LR1 amphorae from both regions, which could be very telling about regional and interregional economic systems.[23] Similarly, there was no room left for local histories in the five pages at the very end of the book, where L. addresses the important issue of state provisions and their impact on commercial exchanges. A careful look at the rich bibliography on this matter, which obviously could not be exhausted in such a densely written summary, is enough to show how much of the *large* scale has been left out of this discussion of "long-term economic structures" (vii) of the eastern Mediterranean during the nine centuries of the Roman period.

The production of the book is nearly flawless and of a high standard. I have found very few and minor editing problems or omissions. Cross-references to other chapters are meant to help the reader, but they can sometimes be disruptive (a quick search in the digital document found 49 footnotes with "see chapter XX"). Moreover, it would have been helpful if some site names outside the regions under discussion – such as Akraiphia (96), the port of Anthedon (96), and Amalfi (159) – had been followed by some geographical definition, whether ancient or modern. Typos are few: a misplaced table line (shipwreck no. 44) in Appendix I (237); some missing numbers appearing as "XX": footnote 35 "see earlier, n. XX." (189); "see Chapter 2, Page XX–XX" (239).

This book ends by considering "further journeys" with the application of analytical approaches to the increasingly rich datasets beyond this corner of the Roman world. I could not agree more. My criticisms aside, I learned a lot by reading *Roman Seas*, and at the end, I felt that its ambitious title and the promises made in the preface may have been its worst enemies. The reader who looks for a comprehensive "maritime archaeology of eastern Mediterranean economies," or the scholar who expects to discover a robust new perspective that bridges "previous contrasting approaches to shipwrecks," as well as the gaps between the seminal thalassologies of Braudel or of Horden and Purcell, might be disappointed. But there is no doubt that the application of network analysis in maritime archaeology is an inspiring exercise and that this book has opened promising paths in this direction. This is true not only for those interested in exploring new approaches to

[22] At least three shipwrecks with estimated tonnage of more than 750 amphorae were surveyed in deep waters of the Datça Peninsula (Brennan et al. 2020).

[23] The different LR1 variants produced in Cilicia and Cyprus have been discussed by various scholars, e.g., Pieri 2005; Opait 2010; Demesticha 2013.

old data but also for anyone who cares for a fresh view and more voyages across periods, in different corners of the maritime Mediterranean and beyond.

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