

Harbours of the Aegean in Late Antiquity and the Medieval Period.
Thessaly, Maritime Connectivity, and the Eastern Mediterranean Seascapes



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the Eastern Mediterranean Seascapes

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Front cover: Ship entering a harbour. Back cover: A landing stage used for mooring ships at staple markets and *scalae*. Both illustrations: I. Nakas.

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To my family,
my wife Kyra and my sons Orfeas and Orestis

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Preface

This book is a revised and largely extended version of my doctoral thesis, which was submitted in 2014 and awarded with the renowned Conington prize in 2016. After its completion, I was able to continue my studies in Central Greece with an EU-funded research project entitled “Aegean port networks of the Roman to Byzantine periods” thanks to a Marie Curie fellowship. This enabled me not only to continue my coastal and underwater archaeological fieldwork around the island of Skiathos, but also to carry out complementary investigations. As such, while my doctoral thesis focused mainly on the archaeological examination of the harbour works on Skiathos and placed them in the broader context of maritime and coastal activities in Thessaly through further case studies, between 2015 and 2017 I was able to extend my port studies to the whole of Central Greece. Thereby, my primary aim was not only to consider easily tangible port cities and major harbour sites, as most such studies do, but to incorporate and focus also on local and regional infrastructures as the diachronic backbone of maritime economy. This resulted in a comprehensive analysis of historical and architectural developments, as well as an in-depth understanding of port networks and maritime connectivity in the Aegean. However, the compiled data turned out to be too extensive. Within the scope of this study I therefore limited the information to the province of Thessaly as a representative example for maritime landscapes in the Byzantine East. By featuring very diverse maritime landscapes, it portrays a large variety of coastal sites and thus reflects the full spectrum of maritime activities in Late Antiquity and the Middle Ages. These include gulfs, open coastlines, peninsulas, archipelagos and river deltas. Data on harbour sites of the Euboean and Phthiotian coasts such as Larymna or Anthedon can yet be found in individual references and publications. Furthermore, a thorough study of the Malian and Euboean Gulfs in connection with the supply of Constantinople is being planned.

The present work would not have been possible without the support and the opportunity to work in Thessaly kindly provided by the Greek Ephorate of Underwater Antiquities and the Greek Ephorate of Antiquities of Magnesia of the Greek Ministry of Culture. I am particularly indebted to Stavroula Sdrolia, Argyroula Doulgeri-Intzesiloglou and Anna Gialouri for allowing me to use further unpublished material and for fruitful discussions on urban and rural developments as well as the role of fortifications and its interrelation with harbour sites, enriching my perspective on maritime connectivity. My personal gratitude is also expressed to a series of colleagues that contributed their expertise on different aspects of this study such as Natalia Poulou, Beate Böhlendorf-Arslan and Nikos Liaros for their help on the pottery analysis, Arthur De Graauw for technical details on harbour engineering as well as Olga Karagiorgou and Maria Leontsini for their stimulus and comments on the economy, administration and supply network in Byzantium. Finally, my special thanks go to my friend Nikos Kontogiannis for his valuable advises and support as well as to my mentor David Blackman for his personal commitment, constant inspiration and motivation to start working on the *terra incognita* of Byzantine ports.



David Blackman visiting the harbour site of Skiathos in 2012 (A. Ginalis)

Finally, I would have been unable to undertake this research without the support of the European Union and the Alexandros S. Onassis Foundation as well as the scientific freedom I was given by the Römisch-Germanisches Zentralmuseum Mainz, Leibnitz Forschungsinstitut für Archäologie (2017-2019) and the German Archaeological Institute in Istanbul (since 2019) to dedicate time for the completion this work after my last fieldworks in 2016. For this important opportunity I personally thank their directors Falko Daim and Felix Pirson.

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Alkiviadis Ginalis

Abbreviations

AAA	Archaiologika Analekta ex Athinon (Athens Annals of Archaeology)
AD	Archaiologikon Deltion
AE	Archaiologike Efimeris
ARSW	African Red Slip Ware
BCH	Bulletin Correspondance Hellénique
EEA	Eforeia Enalion Archaiotiton (Greek Ephorate for Underwater Archaeology)
EEBS	Epetiris Etaireias Byzantinon Spoudon
IG	Inscriptiones Graecae
ISW	Incised Sgraffito Ware
LR	Late Roman
PAE	Praktika Archaeologikes Etaireias
PGW	Plain-Glazed Ware
SPW	Slip-Painted Ware

Definition of Terminology

Beachrock Beachrock is a hard coastal formation of beach sediments along a shoreline, which consists of encrusted sand with ceramic artefacts and various rock fragments and carbonate cements. In relation to historic coastal landscapes, beachrock formations not only reflect the former (ancient) coastline, which shifted due to the change of sea-level and morphodynamics. It also indicates intensive human coastal activities (Voudoukas *et al.* 2007).

Byzantine The term defines both, the geographical area, the cultural sphere, and the historical era related to the Byzantine Empire. As such, it broadly denotes the Eastern Mediterranean from the foundation of Constantinople as Imperial capital in AD 324/330 to its fall to the Ottomans in AD 1453 (for further details on the chronological and geographical framework see Chapter 1.2). Consequently, it covers both the late antique and medieval periods and therefore should not be equated or confused with those general time definitions.

Cothon A *Cothon* (“κώθων”) is an artificially excavated basin behind the sea coast, forming an inner harbour which is connected with the sea by a channel. The Cothon type architecture, which emerged in the 7th century BC, became a common feature of Hellenistic harbours. While it had initially been limited to naval installations, commercial harbours followed soon after, using regular shaped harbour basins with uniform circular wreath-halls encompassing the harbour.

Epineion The *Epineion* (“ἐπίνειον”) describes a Greek invention of the Classical period that formed a harbour area associated to an inland city. But even though it formed an out-port, which might not have been attached to the city itself, it cannot be seen as an independent area but as a part of its related inland city (Blackman 1982b: 193-194; Lehmann-Hartleben 1923: 24, 105ff.; Leonard 1997: 193; Liddell and Scott 1843: 647).

Late Antique Late Antiquity constitutes a period of transition from Classical Antiquity to the Middle Ages. In accordance with the general understanding (Johnson 2012: 3-24), it defines the time frame between the 3rd and the 7th centuries AD depending on the location.

Metochion During the Byzantine period a Metochion constituted a small monastic establishment with landownership, which was subordinated to a bigger independent monastery (Ginalis 2011: Fn. 9).

Medieval Related to the historical development of the Byzantine East, the present study defines the Middle Ages as the time period following Late Antiquity up to the 15th century AD. In accordance with its general definition, it is subdivided into the “Early Medieval Period” (7th/8th – 11th centuries AD), which goes along with the Arab-Byzantine wars, the “High Medieval Period” (11th – 13th centuries AD), which lasts until the 4th Crusades or the reconquest of Constantinople in AD 1261, and finally the “Late Medieval Period” (13th – 15th centuries AD), which lasts until the fall of Constantinople in AD 1453.

Shipwreck A shipwreck defines the physical remains of a ship’s hull and/or its associated parts and equipment by sinking or breaking up. The wreckage of ships is largely due to accidents at sea caused by bad weather.

Spolia Spolia comprise architectural elements taken from predecessor or any other older buildings and reused or repurposed for new constructions or decorative purposes. While spoliation was quite common throughout the history of architecture, it becomes particularly popular and a systematic practise during Late Antiquity.

Tarsanas Deriving from Byzantine/Arab times, the *Tarsanas* or *Arsanas* indicates a shipbuilding area, which together with its Italian and Ottoman equivalents of *Arsenale* (*Arzanà* in Venice, *Tersanaie* in Pisa, *Tarziena* in Amalfi, *Dersana* in Genoa or *Tersana/e* in Ottoman Constantinople) is often confined to military installations. The term, however, is first mentioned in monastic documents of the 15th and 16th centuries AD. As such, it widely refers to small shipyards for the general maintenance of ships. Consequently, the *Tarsanas* corresponds to the Greek terms *Naupegeio* (Ναυπηγείο - Ναυπηγεῖον) or *Karnagio* (Καρνάγιο - Carenaggio - Lat. *carina*), which is of Venetian origin. The *Tarsanas* is often simply equipped with slipways for the hauling and launching as well as beaching of ships (Ritter 2021: 200).

Villa Maritima It forms a functional farmstead located on the seaside. In contrast to coastal *villae rusticae*, the *villa maritima* is situated directly on the shoreline with close connection to maritime activities. It consists of a *pars urbana* and a *pars rustica* and is often equipped with independent mooring facilities such as individual jetties. A typical feature of the Roman and particularly the

Roman Imperial period, it continued up to the 6th century AD, when the role of villa estates was often taken over by ecclesiastic infrastructures.

Wreck Site In contrast to a shipwreck, which refers to the archaeological remains of at least parts of the

ship *sensu stricto*, a wreck site indicates a possible wreck in the broader sense. As such, a wreck site is often merely reflected by an accumulation of the ship's cargo (including merchandise and objects of daily use such as tableware) or ballast.

I. Introduction

1.1. The purpose and methodology of this study – State of research

Christianity, Roman tradition and ideology as well as Greek cultural heritage have been assigned as the pillars of the Byzantine Empire (Wells 2006: xxix-xxx). In fact, the real crux and enabler of power in an empire which combined the occident with the orient was the control over the seas. As such, seafaring constituted the formula of success for the control over the Mediterranean, playing a key role in communication, military activities and economic exchange. However, it is often overlooked that the meeting point and main gate for commercial, political as well as cultural and social interactions and connection formed the harbour.

Since the study of harbour sites constitutes a relatively new field in archaeology, both the terminology used in their descriptions and the scientific approach in their investigation still lack fundamental knowledge and methodological groundwork, such as a clear definition of different infrastructures and their facilities and how they are used and interconnected with each other. Therefore scholarly interpretations of harbour sites often face the problem of diversity and inconsistency. This makes it difficult to investigate the coastal sites of late antique and medieval Byzantium, which are characterized by their historiographical complexity. Classical Antiquity, and especially the Roman period, is considered as the golden era of harbour architecture. In contrast, the centuries after the Roman Imperial period are seen as a time of sweeping changes, showing decay, deterioration and downfall, as well as lacking in finesse, as well as in previous expenditure and complexity in harbour architecture (Kingsley 2004: ix; Ward-Perkins 2006: 60).

Even within the discipline of Byzantine studies only limited interest has been paid to harbour facilities. Furthermore, wherever Byzantium's coast and its infrastructures were subject of investigation, such as by Ahrweiler (Ahrweiler 1978: 259-298; Ahrweiler 1966; Aidoni *et al.* 1997), any conclusions were mainly based on historical and textual sources. As such, these provide only general, one-sided and therefore often inconclusive information. Therefore, the present work attempts for the first time an introduction to Byzantine harbour studies based mainly on material remains. At the present stage of research, it is not yet possible to write a general archaeological synthesis on Byzantine harbour works without the existence of a coherent

body of well collected regional data of equal academic standards at least for the core regions of the Byzantine Empire though. Consequently, as a first step this work concentrates on Central Greece as the heartland of the Byzantine Empire. This fact makes Central Greece an ideal region to gain equally comprehensive information for the Early- to the Late Byzantine periods. Furthermore, this wider area combined strategic importance with economic wealth, which in turn allows presenting an overall picture of various harbour types with different functionalities. Additionally, its rich urban history and economic exploitation during the preceding Roman and the successive Venetian and Ottoman periods provide useful comparative information. Finally, Central Greece shows not only independent regional influences from the Balkan Peninsula but also imperial central influences due to its geographic proximity to Constantinople. These important components will allow adopting the present research and its results for other regions of the Byzantine Empire with similar characteristics.

However, before getting to the study of individual harbour sites and the understanding of their archaeological finds, a correct interpretation of various harbour features and their functionality has to be given in order to set the results into a historical framework corresponding to studies of Classical harbour sites such as by Lehmann-Hartleben or more recently by Blackman (Blackman 1982a-b; Lehmann-Hartleben 1923). Accordingly, part one aims to conceptualize the study of harbour sites and provides a systematic analysis of their associated structures. The correct interpretation and understanding of different features and their functional characteristics is essential for putting harbour sites into a historic-geographical context. Regarding their functions and hierarchy, one has to take into account influencing environmental conditions, such as natural, economic, social and political components allocated and classified into various types of hinterland or foreland. Additionally, setting up a hierarchical model helps us in understanding socio-economic developments and the influence of coastal infrastructures on commercial patterns.

The general understanding and interpretation of different coastal infrastructures is followed by detailed investigation of individual sites along the Central Greek coastline. Accordingly, a comprehensive archaeological study of the Byzantine maritime façade of the coastline of Thessaly is provided in part III. The latter subdivides



Figure 1: The study area (based on Google Earth)

the area in question in distinct regional units based on the environmental impact and the topographic differentiation of the landscape and their effects on historical maritime activities into the coast of Thessaly, with which to understand the nature of the wider Mediterranean and in particular the Aegean Sea. Within the defined areas the sites are presented in a geographical sequence, which starts with the provincial main port city, administrative primary settlement or major port site of the region. Disregarding a distinction between major port sites and smaller harbour areas, a standard layout for the topographic, historical and archaeological studies is used. The analysis of the individual sites is based on visits through fieldtrips conducted in the years 2012 to 2017. This includes a coastal and maritime archaeological research project on the island of Skiathos, entitled “The Maritime Infrastructures of Roman and Byzantine Skiathos”, which was undertaken under the auspices of the Greek Ephorate of Underwater Antiquities in co-operation with the Greek Ephorate of Antiquities of Magnesia as part of my doctoral research between 2012 and 2013. Purpose of this detailed investigation was the study of different coastal sites within smaller economic entities in order to determine the hierarchy and pattern of regional and supra-regional port networks at the same time. While the underwater archaeological research project on Skiathos was enabled by fundings from the A. S. Onassis Public Benefit Foundation and the

University of Oxford, further investigations and test-trenches together with fieldtrips and investigations of the wider geographical area of Central Greece were conducted as part of my Marie-Curie Fellowship with a European Union-funded project between 2015 and 2017, entitled “Aegean port networks of the Roman to Byzantine periods”.

1.2. The chronological and geographical framework

Based on the traditional periodization of the Byzantine Empire by Ostrogorsky (Ostrogorsky 1963: 22),¹ the present book follows the chronological framework of the 4th to the 15th century AD. Subsequently, Byzantine history is sub-divided into the

- Early Byzantine period (AD 330/395 – AD 642)
- Middle Byzantine period (AD 642 – AD 1204)
- Late Byzantine period (AD 1261 – AD 1453)

which is used as basis for this book. However, for a better understanding of the early centuries as a period of transition and change within the general continuity of Roman Imperial culture and tradition (Brown 1971: 7), according to Karagiorgou’s work on the archaeological evidence of the “Urbanism and Economy in Late Antique Thessaly (3rd – 7th century AD)”

¹ Further see Karagiorgou 2001c: 3.

(Karagiorgou 2001c: 2-4), attention is also paid beyond the actual chronological framework. Therefore, where necessary and applicable for the detailed analysis of archaeological material within their historical context and development, the chronological limits extends from the Roman Imperial (and even earlier) to the Ottoman periods.

Concerning the geographical limitation of this book, the area under investigation in fact follows two different definitions. On the one hand, for an easy procedure of fieldwork its geographical limitation is based on the modern division of the Greek province of Thessaly. On the other hand, a historically based definition according to the Byzantine administrative system of *Themes* (*Themata*) is applied.² Consequently, the investigation of the area in question is defined according to and follows the volume “Hellas und Thessalia” of the *Tabula Imperii Byzantini* (Koder and Hild 1976: 37-38), as well as Karagiorgou’s and Drakoulis’ recent works on Thessaly’s settlement network (Drakoulis 2010:

375-390; Karagiorgou 2001c: 6-7). As such, in respect to the geography of the relevant coastline, the area in question is limited between the Pineios river delta between Mount Olympus and Mount Ossa in the north and the gulf of Pteleos in the south (Fig 1).

Accordingly, within the scope of the present work, the archaeological investigation of the Thessalian coasts includes in total five coastal landscapes:

1. The western coast of the Pagasetic Gulf
2. The Pelion peninsula
3. The plain of Aghia
4. The Pineios river delta
5. The archipelago of the Northern Sporades

These go along with the environmental impact and the topographic differentiation of the landscape and their effects on historical maritime activities, which is reflected by the administration and the functional organisation of Thessaly’s maritime economy.³

² For the administrative and military division of the Byzantine Empire see Haldon 1999; Koder 1990: 155-165.

³ For further details see Chapter 4.3.