

**Yenikapı, A Late Antique and Byzantine
Harbor in Constantinople:
A Historical, Archaeological and Architectural Study of
The Newly Discovered Remains**

**by
Ayşe Ercan**

**A Thesis Submitted to the
Graduate School of Social Sciences
in Partial Fulfillment of the Requirements for
the Degree of
Master of Arts
in
Anatolian Civilizations and Cultural Heritage Management**

**Koç University
October 2010**

© Ayşe Ercan, 2010
All Rights Reserved

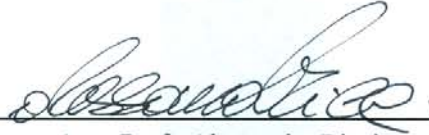
Koc University
Graduate School of Social Sciences and Humanities

This is to certify that I have examined this copy of a master's thesis by

Ayşe Ercan

and have found that it is complete and satisfactory in all respects,
and that any and all revisions required by the final
examining committee have been made.

Committee Members:



Asst. Prof. Alessandra Ricci



Prof. Paul Magdalino



Associate. Prof. Ufuk Kocabaş

Date: 4 October 2010

ABSTRACT

YENİKAPI, A LATE ANTIQUE AND BYZANTINE HARBOR IN CONSTANTINOPLE: A HISTORICAL, ARCHAEOLOGICAL AND ARCHITECTURAL STUDY OF THE NEWLY DISCOVERED REMAINS

Ayşe Ercan

ACHM, MA Thesis, 2010

Thesis Advisor: Alessandra Ricci

Keywords: Yenikapı, Marmaray, Eleutherius, Theodosius, Caesarius, harbor, scala, seawalls, trade, grain, underwater engineering, Vlanga, tannery, Jews, Constantinople, Byzantine, archaeology.

In 2004, for the first time in the history of ancient Constantinople, one of the harbors of the Byzantine capital started to be excavated in today's Yenikapı, prior to the beginning of the Marmaray subway construction project. Covering a large area of 59,000 m², the archaeological excavations in Yenikapı -carried out by the Istanbul Archaeological Museum and funded by the Ministry of Transportation and the Istanbul Metropolitan Municipality- are considered to be the largest and the most challenging rescue archaeological project ever conducted in Istanbul.

So far, the archaeological excavations at Yenikapı have revealed countless groundbreaking findings in the silted harbor area such as the remains of the earliest prehistoric settlement in Istanbul and the Byzantine shipwrecks dating from the fifth to the eleventh centuries. Despite the growing interest in newly discovered remains, two aspects of the harbor in Yenikapı have still not received sufficient attention: its history and its newly discovered architectural remains.

This thesis combines for the first time the historical and archaeological evidence and presents a comprehensive historical survey about the harbor in Yenikapı with a particular focus on those two neglected aspects. In doing so it draws on various Byzantine primary sources, which provide significant insights about the harbors of Constantinople in general and the harbor in Yenikapı in particular. In comparison with other Roman harbor excavations, the study discusses the grain storage problem and the underwater engineering technique

applied in Yenikapı being one of the few Byzantine period examples discovered so far.

Based on the historical and the new archaeological evidence, this thesis draws attention to the importance of the harbor in Yenikapı for Constantinople and proposes a new interpretation of the harbor's historiography and archaeology, particularly for its newly discovered remains dating from the fourth to the thirteenth centuries.

ÖZET

YENİKAPI, KONSTANTİNOPOLİS'DE BİR GEÇ ANTİK ÇAĞ LİMANI: YENİ BULUNTULAR ÜZERİNE TARİHSEL, ARKEOLOJİK ve MİMARİ BİR CALIŞMA

Ayşe Ercan

ACHM, Master Tezi, 2010

Tez danışmanı: Alessandra Ricci

Anahtar Kelimeler: Yenikapı, Marmaray, Eleutherios, Theodosius, Kaesarios, liman, scala, deniz surları, ticaret, tahıl, sualtı mühendisliği, Langa, tabakhane, Yahudiler, Konstantinopolis, Bizans, arkeoloji.

2004 yılında, Yenikapı Metro ve Marmaray inşaat projeleri kapsamında, Bizans'ın eski başkentinin limanlarından birinde arkeolojik kazılara başlandı. İstanbul Arkeoloji Müzeleri'nce yapılan, Ulaştırma Bakanlığı ve İstanbul Büyükşehir Belediyesi tarafından finanse edilen, ve yaklaşık 59.000 m²' yi kapsayan bir alanda gerçekleştirilen arkeolojik kazılar İstanbul tarihindeki en büyük ve en sorunlu arkeolojik kurtarma kazı projesi olarak tarihe geçti.

Altı yılı bulan kazılar sonucunda, Yenikapı'daki toprak altında kalmış liman bölgesinde, İstanbul yarımadasının bilinen en erken prehistorik dönem yerleşim kalıntısı ve otuzu aşkın Bizans dönemi batığı başta olmak üzere çok sayıda buluntu gün ışığına çıkarıldı. Yenikapı'da yaklaşık M.S. 4.yy'dan beri varolan Bizans limanı tarihi ve mimarisi ise tüm bu buluntuların bir anlamda gölgesinde kaldı.

Bu yüksek lisans tezi Yenikapı'da yer alan limanın bugüne kadar yeterince üzerinde durulmamış olan bu iki özelliğine odaklanarak, limanla ilgili arkeolojik ve tarihi verileri ilk defa karşılaştırmalı olarak içeren, kapsamlı bir tarihi araştırma ortaya atar. Bu amaçla Konstantinopolis limanları geneli, Yenikapı limanı özelinde olmak üzere tarihsel kaynaklardan kesitler sunar. Diğer Roma dönemi liman kazılarıyla karşılaştırmalı olarak, tahıl depolama problemi, sualtı mühendisliği gibi konuları Yenikapı limanı kapsamında inceler.

Bizans dönemi tarihi kaynakları ve yeni ortaya çıkartılan arkeolojik buluntuları temel alarak, bu tez çalışması limanın Konstantinopolis açısından önemini vurgulayarak, liman tarihi ve özellikle M.S. 4.yy ile 13. yy arasına tarihlenen arkeolojik kalıntıları için yeni önermelerde bulunur.

ACKNOWLEDGEMENTS

I am thankful to my thesis advisor Asst. Prof. Alessandra Ricci for her continuous support, encouragement and guidance during this long journey, in which I explored the entrance to the Byzantine world. I also owe thanks to Prof. Paul Magdalino for his valuable comments on my study and to Associate Prof. Ufuk Kocabaş for his positive and encouraging attitude.

I am also grateful to the former director of Istanbul Archaeological Museum, Dr. Ismail Karamut for helping me with the selection of my thesis and for enabling me an access to the Archive of the Yenikapı Excavations.

I also wish to express my gratitude to the present excavation team of Yenikapı and to the staff of the Istanbul Archaeological Museum particularly Zeynep Kızıltan, Rahmi Asal, Emre Öncü, Sırrı Çömlekçi, Bekir Köşker, Mehmet Ali Yılmaz, Günşıl Kılıç, Filiz Yalçındağ, Halil Yalçındağ, Mine Kiraz and Metin Gökçay who each time welcomed me warmly, answered my questions patiently and with whom I had exciting discussions about archaeology.

I am thankful to Adrian Saunders for his translations from Ancient Greek into English and also for his wonderful Greek and Latin classes, which inspired me always during my studies at the Koç University.

For providing the books and articles I needed, I owe special thanks to the library staff of Koç University especially Feriha Kayacan and Duygu Kızılaslan Paçalı.

I am grateful to all my friends who have listened my endless speeches about my thesis without complaining and each time successfully pretending as if they were hearing about it for the first time. I am particularly thankful to Ahu Çeziker, Ezgi Dikici, Şirin Şan Mutlutürk, Dan Shoup, Kaya Uluç, Eda Yiğit and Aslı Zeren for their priceless support and contributions in every way.

Last but not least, I owe thanks to my family, Nurhan Ercan, Selen Ayırtman Ercan, Adem Ercan, Can Deniz Ercan and Deniz Ercan who have saved me from perishing beneath the books and piles of paper that, especially during the last days, covered my room completely. As a matter of fact, I could not accomplish this thesis without their support.

TABLE OF CONTENTS

TITLE PAGE

ABSTRACT	i
ÖZET	iii
ACKNOWLEDGEMENTS	iv
TABLE OF CONTENTS	v
LIST OF FIGURES.....	viii
LIST OF ABBREVIATIONS	xv

INTRODUCTION 1

Chapter I THE HARBORS OF CONSTANTINOPLE..... 6

Introduction 6

1.1. Previous Researches on the Harbors of Constantinople..... 7

1.2. The Harbors on the Golden Horn: Literary Evidence, Topography and Architectural Remains 10

1.2.1. The Sea Walls and the *Scalae* along the Golden Horn..... 12

1.2.2. The Neorion Harbor 14

1.2.3. The Prosphorion Harbor 19

1. 3. The Harbors on the Sea of Marmara, Propontis Shore: Literary Evidences, Topography and Architectural Remains..... 23

1.3.1. The Topography of the Propontis Shore..... 23

1.3.2. The Sea Walls along the Sea of Marmara 25

1.3.3. The Harbor of Julian/ Sophia/ Kontoscalion 27

1.3.4. The Harbor of Eleutherius/ Theodosius 34

1.3.5. The Harbor of Caesarius..... 38

1.3.6. Boukoleon Harbor 42

1. 4. Harbors along the Bosphorus and along the Coasts of the Constantinopolitan Suburbs	45
1. 5. Conclusions	52
Chapter II THE HISTORY OF THE HARBOR IN YENIKAPI: FROM AN IMPERIAL HARBOR TO A PUBLIC GARDEN	55
Introduction	55
2.1. Yenikapı From the Fourth to the Seventh Century: The Period of Construction, Renovation and Change	57
2.1.1. The Lycus River and a New City: Kainopolis	57
2.1.2. Eleutherion and Ὁ δε λιμὴν του Ἐλευθερίου	62
2.1.3. The Twelfth Region of Constantinople and <i>Portus Theodosiacus</i>	66
2.1.3.1. The Fifth Century Urban Layout and The Surroundings of the Harbor according to the Notitia	67
2.1.3.2. Yenikapı as An Ostia for Constantinople: The Grain Supply for the Byzantine Capital	69
2. 2. Yenikapı From the Seventh to the Fifteenth Century: Searching the Traces of the Harbor	76
2.2.1. The Seventh Century Quarter Caesarius and the Proclianesian Harbor of Caesarius	78
2.2.2. The Silted Harbor as the Vlanga Gardens	80
2.3. Yenikapı From the Fifteenth Century Onwards: The Vlanga Gardens in the Eyes of the Travelers and of the Miniaturists	84
2.3.1. Yenikapı before the Conquest in Cristoforo Buondelmonti	84
2.3.2. Yenikapı during the Ottoman Period	88
2.4. Conclusions	93

Chapter III THE ARCHAEOLOGY OF THE HARBOR IN YENIKAPI: COMBINING ARCHAEOLOGY WITH HISTORICAL CONTEXT.....	97
Introduction	97
3.1. Yenikapı Before the Archaeological Excavations.....	98
3.2.The Archaeological Excavations in Yenikapı	103
3.2.1. The Description of the Excavated Sectors	103
3.2.2.The Geoarchaeological History of Yenikapı: The Coastal Changes and the Stratification in the Harbor	105
3.2.3. The Archaeological Evidence From the Fourth to the Thirteenth Century: The Newly Discovered City Walls, Brickstamps and Structures.....	107
3.2.4. A Unique Evidence about the Byzantine Underwater Construction Technique: The Scalae and Piers.....	119
3.2.4.1. The Underwater Construction Technique Applied in Yenikapı	123
3.3. A Comparative Study for the Harbor in Yenikapı	126
3.3.1. The Grain Shipment at the Harbor in Yenikapı	127
3.3.2. Key Elements in Harbor Architecture.....	131
3.4. Conclusions	134
CONCLUSIONS	137
FIGURES	145
BIBLIOGRAPHY	173
VITA	187

LIST OF FIGURES

I.1. The map of Constantinople, from Müller-Wiener	9
I.2. The city walls and the harbors of Constantinople, from Janin.	10
I.3. The Golden Horn shore and the seawalls, from Dirimtekin	13
I.4. The Neorion and the Prosphorion harbors, from Mordtmann	15
I.5. The topographical map of Istanbul, from Kuban	24
I.6. The Propontis shore, from Van Millingen	25
I.7. The regions and the harbors of the fifth century Constantinople, drawn by Eda Yiğit.....	30
I.8. The fifth century Constantinople, from Mango	35
I.9. The Boukoleon palace and its harbor, from Müller-Wiener	43
I.10. The Bosphorus and the Asian shore, from Kuban	46
I.11. The Bosphorus map, from The Barrington Atlas of Classical World.....	49
I.12. Byzantium under the Severan Dynasty, from Bassett.....	145
I.13. The iron chain, from Mordtmann.....	145
I.14. The seawalls along the Marmara shore (photo. by Trémaux).....	145
II.1. The list of the primary sources about the harbor in Yenikapı	56
II.2. Mosaic from the Bardo Museum, from Rickman	58

II.3. The map of the fourth century Constantinople, from Mango	60
II.4. Fora's functions, from Thomov and Ilieva	68
II.5. A raw marble capital discovered in Yenikapı, (photo. by author).....	75
II.6. The Middle Byzantine church from northeast, from Gökçay	82
II.7. Constantinople in Buondelmonti's <i>Liber Insularum Archipelagi</i> , Venice, Bib Marc XIV.45 (=coll.4595) fol.123r., from C. Buondelmonti: <i>Liber Insularum</i> <i>Archipelagi</i> ; Faksimile (Wiesbaden: Reichert, 2005)	146
II.8. Yenikapı in Buondelmonti, 1422, detail from the manuscript kept in Venice, from Tanney	146
II.9. Yenikapı in Buondelmonti, the Düsseldorf variant, from C. Buondelmonti: <i>Liber Insularum Archipelagi</i> ; Facsimile (2005).....	147
II.10. Paris variant of Buondelmonti, 1457-58, Bibliotheque Nationale de France, Nouv. Aqu. Lat. 2383, fol. 34	147
II.11. Detail of Yenikapı in Buondelmonti's Paris variant, 1422, from Bardill and Berger	148
II.12. Detail from Düsseldorf variant, from C. Buondelmonti: <i>Liber Insularum</i> <i>Archipelagi</i> ; Facsimile (2005).....	148
II.13. The fifteenth century Constantinople and Yenikapı in Hartmann Schedel's <i>Liber Chronicarum</i> , Nuremberg 1493, from Berger and Bardill	148
II.14. Constantinople by Guillaume Joseph Grelot, 1680-1681, version of J.Peeters, 1723, from Berger.	149
II.15. View of Constantinople, a copy of <i>Notitia Dignitatum</i> illustrated by Peronet Lamy, 1436, Oxford, Bodleian Library, Ms. Canon, Misc.378, fol.84r.	149
II.16. Yenikapı by Vavassore, from Müller-Wiener	150
II.17. Yenikapı by Guilono Balloni, Venice, 1569	150
II.18. Yenikapı in Marco Sadler's <i>Viaggio da Venetia a Constantinopoli</i> , Ed. Filippi, Venice, 1984, from Tanney	150

II.19. Yenikapı by Sebastian Münster, <i>Cosmographia</i>	150
II.20. Yenikapı by Guilino Ballino, <i>De disegni delle piu illustri citta et fortezze del mondo</i>	151
II.21. Yenikapı by Piri Reis, <i>Kitab-ı Bahriye</i> , copy from Paris, from Tanney ...	151
II.22. Piri Reis in <i>Kitab-ı Bahriye</i> , from Tanney.....	151
II.23. Yenikapı by Matrakçı, from Tanney	152
II.24. Yenikapı by Veli Can, Topkapı Palace Library, from Tanney.....	152
II.25. <i>Hünernâme</i> of Sayyid Lokman from Anafarta.....	152
II. 26. View of an Ottoman period well, (photo by author)	91
III.1. Plan of the harbor in Yenikapı, from Dirimtekin.	99
III.2. Plan of the harbor around 400 C.E., from Berger	102
III.3. The plan of 100ADA, plan taken from the Archive of Yenikapı Excavations, colored by Eda Yiğit.....	108
III.4. General view of the 100ADA from south facing north, taken from Archive of Yenikapı Excavations (photo. by Köşker)	108
III.5. Structure No.2, (photo. by Köşker)	110
III.6. The fragment of the harbor's inner walls, (photo. by Köşker).....	112
III.7. Structure No.5, view of the wall masonry, (photo. by Köşker)	114
III.8. Spilled stamped bricks next to a wooden dock looking south, (photo. by author)	116
III.9. View of the dock in 100ADA from southwest, from the Archive of Yenikapı Excavations, (photo. by Köşker)	120
III.10. View of the dock from southeast, (photo. by author).....	121
III.11. View of the formwork remains in Yenikapı, (photo. by author).....	122

III.12. Reconstruction of the formwork in Caesarea, from Oleson	123
III.13. The plan of the harbor by Dirimtekin.....	104
III.14. The Isis Giminiana, an Ostian tomb painting, from Meiggs	131
III. 15. Yenikapı plan, from Müller-Wiener.....	153
III.16. Yenikapı in Pervititch	153
III.17. Yenikapı in Alman Mavisi (German Blue).	153
III.18. Yenikapı in 1946, from www.ibb.gov.tr	154
III.19. Yenikapı in 1982, from www.ibb.gov.tr	154
III.20. Aerial view of today's Yenikapı, from Kocabaş	154
III.21. Plan of the archaeological excavations at Yenikapı, from Gökçay.....	155
III.22. The geological and archaeological stratification of the harbor, from Kocabaş	155
III.23. View of layers, from Perinçek.....	156
III.24. View of the layers, from Perinçek p. 207	156
III.25. View of layers, from Perinçek.....	156
III.26. The inner walls of the harbor in 1859, from Curtis.....	157
III.27. The western tower on the outer walls of the harbor, from Curtis.	157
III.28. View of the gate next to the tower 65, from Dirimtekin	157
III.29. A tower at Yenikapı, (photo. by author)	158
III.30. View of the harbor's remaining walls lying on the western part of the tower, (photo. by author).....	158

III.31. View of a fragment belonging to the harbor's inner walls, (photo. by author)	158
III.32. The masonry of the fifth century wall at the northwest of the harbor, (photo. by author)	159
III.33. Structure No.5, detail from the brickstamps, from the Archive of Yenikapı Excavations, (photo. by Köşker)	159
III.34. Structure No. 5, view of the insitu stamped bricks, the Archive of Yenikapı Excavations, (photo. by Köşker)	159
III.35. Structure No.5, detail from the brickstamps, from the Archive of Yenikapı Excavations, (photo. by Köşker)	159
III.36. View of a stamped brick on site, (photo. by author)	159
III.37. View of the stamped bricks' assemblage, (photo. by author)	160
III.38. View of the so-called tsunami layer, from Kocabaş	160
III.39. Remains of the possible tannery workshops in 100ADA area, taken from the Archive of Yenikapı Excavations, (photo. by Köşker)	161
III.40. Structure No.2, (photo. by Köşker)	161
III.41. View of a wooden scala and the ongoing excavations in order to reach the seabed below the bricks' assemblage, (photo. by author).....	162
III.42. View of a wooden dock, (photo. by author).....	162
III.43. View of the dock, looking to the northwest, (photo. by author)	162
III.44. The upper part of the dock, looking south, (photo. by author).....	162
III.45. Detail from the dock, looking to the northeast, (photo. by author).....	163
III.46. View of the dock and the spolia frieze block from southeast, (photo. by author)	163
III.47. Detail of a spolia frieze block, (photo. by author).....	163
III.48. The south eastern end of the eastern dock, (photo. by author).....	164

III.49. Detail of the dock looking to south, (photo. by author)	164
III.50. Plan from Caesarea breakwater, from Oleson.....	164
III.51. A perforated stone block on the quay in Yenikapı, (photo. by Köşker)...	165
III.52. Marble bollard, 5th-6th centuries, from <i>Every Day Life in Byzantium</i>	165
III.53. View of the inscribed block in 100ADA, (photo. by Köşker).	165
III.54. View of the so-called quay from northwest, from the Archive of Yenikapı Excavations, (photo. by Köşker).	166
III.55. Location of Ostia according to Rome, from Vitelli.....	166
III.56. Horrea in Ostia, from Vitelli	166
III.57. Plan of Leptis Magna, from Blackman	167
III.58. Plan of Sidon, from Blackman	167
III.59. The harbor of Piraeus, form Blackman.	167
III.60. Wall painting from Stabiae, from Bass	168
III.61 Sestertius of Nero, from Boyce	168
III.62. Bronze Coin from Soloi Pompeiopolis, from Boyce	168
III.63. Imaginary view of Caesarea Maritima, from Hohlfelder	168
III.64. Depiction of the Puteoli harbor, The National Museum, Prague	169
III.65. The pharos of Alexandria, from Hague.....	169
III.66. Pharos depicted on the Pisan tower's entrance, (photo. by author)	169
III.67. Plan of the harbor complex at Caesarea Maritima, from Hohlfelder	169
III.68. The location of the piers in the Cosa port, from McCann.....	170

III.69. A relief from Portus, from Meiggs.....	170
III.70. Funerary Relief from Isola Sacra, Tomb 90, Ostia, from Meiggs.....	170
III.71. Relief from the Catacomb at Praetextatus, from Casson.....	170
III.72. Sesterius of Antoninus Pius, from Boyce.....	171
III.73. Terracotta model of a lighthouse from Vulci, Rome Villa Giulia Museum, from McCann	171
III.74. A harbor with a lighthouse, from Quirinale, from Rickman	171
III.75. A sixth century mosaic from Theodorias, www.livius.org	172
III.76. The Lighthouse in La Coruña, Spain.....	172
III.77. Patara Lighthouse, from http://www.denizfenerleri.net/turkiye/patara/patara-9	172
III.78. General view of the harbor's walls on the southwestern limit, (photo. by Köşker)	113

LIST OF ABBREVIATIONS

DBİA	Dünden Bugüne İstanbul Ansiklopedisi, Ankara.
AJA	American Journal of Archaeology.
BF	Byzantinische Forschungen, Amsterdam.
BMGS	Byzantine and Modern Greek Studies, Oxford.
BZ	Byzantinische Zeitschrift, Leipzig and Munich.
CahArch	Cahiers Archéologiques.
CPh	Classical Philology.
DOP	Dumbarton Oaks Papers. Cambridge, Mass., and Washington.
JFA	Journal of Field Archaeology.
JHS	The Journal of Hellenic Studies, London.
JMS	Journal of Medieval Studies
JNES	Journal of Near Eastern Studies.
JRS	The Journal of Roman Studies, London.
IJNA	The International Journal of Nautical Archaeology.
IstMitt	Istanbuler Mitteilungen.
MAAR	Memoirs of the American Academy in Rome.
MHR	Mediterranean Historical Review.

INTRODUCTION

In 2004, the Istanbul Archaeological Museums started a new rescue project in the urban precinct known as Yenikapı, which lies on the southern shore of the peninsula.¹ The Yenikapı precinct, the former harbor of the Byzantine capital known as the harbor of *Eleutherius* or *Theodosius* was decided to be one of the transfer points for two different lines of the Marmaray and the Metro subway construction projects. By crossing the Bosphorus with submerged tunnels beneath the sea, the subway is planned to follow a route that arrives at Yenikapı from the northern and the eastern sides of Istanbul.²

In this way, the largest archaeological project in the history of Istanbul started in an area of 59,000 m² that comprises not the entire but a partial section of the largest harbor of the Byzantine capital.³ The archaeological excavations, which were funded by the Ministry of Transportation and the Istanbul Metropolitan Municipality, have been ongoing over the last six years now and they seem to require a few more years to complete due to the complexity of the excavations and the size of the excavation area.⁴

The archaeological excavations in Yenikapı still continue without interruptions with hundreds of people working on the site. Looking back to what

¹ For publications about the project, See: Ed. Arzu Karamani Pekin. *Gün Işığında İstanbul'un 8000 Yılı: Marmaray, Metro, Sultanahmet Kazıları* İstanbul, Vehbi Koç Vakfı, 2007; Ed. Ufuk Kocabaş. *The 'Old Ships' of The 'New Gate': Yenikapı'nın Eski Gemileri*. İstanbul: Ege Yayınları, (2008); Ed. Ufuk Kocabaş. *1.Marmaray–Metro Kurtarma Kazıları Sempozyumu Bildiriler Kitabı 5-6 Mayıs 2008*, İstanbul, (2010).

² Yalçın Eyigün, "İstanbul Metrosu Yenikapı-Unkapanı Arası Metro İnşaatı Projesi: Yenikapı İstasyonu." *1.Marmaray–Metro Kurtarma Kazıları Sempozyumu Bildiriler Kitabı 5-6 Mayıs 2008*, İstanbul, (2010).

³ Ibid., p. 55.

⁴ For the budget of the archaeological excavations in Yenikapı, see Eyigün, "İstanbul Metrosu Yenikapı-Unkapanı Arası Metro İnşaatı Projesi: Yenikapı İstasyonu", pp. 57-58.

has been done during the last six years, the excavations have provided numerous groundbreaking findings to the world of archaeology that has changed the history of Istanbul, as well as the understanding of Byzantine shipbuilding technology. Among these findings the earliest known prehistoric settlements and burials of the Istanbul peninsula, the well-preserved prehistoric and Byzantine wooden artifacts, thirty-four Byzantine shipwrecks dating from the fifth to the eleventh centuries and large earth deposit samples are the most discussed evidence so far.⁵

Having been discovered at 6.30 m below sea level, the Neolithic findings are unique in terms of their contributions to the Neolithic period of the city.⁶ Another striking discovery in the archaeological excavations in Yenikapı is the remains of the rowing ships with sails known as galleys, which are the only examples of these ships in the world dating back to the Middle Byzantine period.⁷

In addition to these discoveries, the harbor in Yenikapı, the only excavated harbor of the Byzantine capital, is also significant for other aspects that researchers have overlooked due to the sparse evidence at first sight. Two of these neglected aspects that have not been examined in detail are the history of the harbor and the architectural remains that stand as components of the historical evidence.

Since the beginning of the archaeological excavations, no scholarly publications have been devoted to a comprehensive discussions about the history of the harbor. The existing publications of the Yenikapı project refer to the history

⁵ Zeynep Kızıltan. "Marmaray Metro Projeleri Kapsamında Yapılan Yenikapı, Sirkeci, Uskudar Kazıları." 1.Marmaray–Metro Kurtarma Kazıları Sempozyumu Bildiriler Kitabı 5-6 Mayıs 2008, İstanbul, (2010), pp. 2-14.

⁶ Ibid., p. 7.

⁷ Ufuk Kocabaş. "İstanbul Üniversitesi, Yenikapı Batıkları Projesi: Gemiler." 1.Marmaray–Metro Kurtarma Kazıları Sempozyumu Bildiriler Kitabı 5-6 Mayıs 2008, İstanbul, (2010), p. 5.

of the harbor only in short introductions.⁸ Similarly, architectural remains discovered in Yenikapı have not receive the scholarly attention they deserve. So far, they have been discussed only within the scope of an article by Metin Gökçay the former supervisor of the archaeological excavations at Yenikapı.⁹

After reviewing the existing literature on the harbor in Yenikapı, this study focuses on the textual evidence, the archaeology and the architectural remains of this harbor in order to fill the gap in the existing studies. Furthermore, it also examines the Byzantine capital from a different perspective based on a mercantile complex and the surrounding structures.

For this purpose, the study is divided into three chapters. The first chapter investigates the harbors of Constantinople and develops a comprehensive historical context from the fourth century to the thirteenth century A.D. Accordingly, this chapter is divided into two main parts with respect to the location of the harbors: the harbors on the Golden Horn and the harbors on the *Propontis*, the Marmara shore. The chapter presents an analysis of five main harbors of the capital: the Neorion and the Prosphorion harbors, the harbors of Julian, Theodosius and Boukoleon. The harbor of Caesarius presents the most challenging case as the possible continuation of the harbor of Theodosius, and will be analyzed under a separate title. Based on the existing research in the field, I investigate the environment and the buildings that surround the harbors by revealing at the same time the etymological and historical aspects including

⁸ For publications about the project, See: Ed. Arzu Karamani Pekin. *Gün Işığında İstanbul'un 8000 Yılı: Marmaray, Metro, Sultanahmet Kazıları* İstanbul, Vehbi Koç Vakfı, 2007; Ed. Ufuk Kocabaş. *The 'Old Ships' of The 'New Gate': Yenikapı'nın Eski Gemileri*. İstanbul: Ege Yayınları, (2008); Ed. Ufuk Kocabaş. *1.Marmaray–Metro Kurtarma Kazıları Sempozyumu Bildiriler Kitabı 5-6 Mayıs 2008*, İstanbul, (2010).

⁹ Metin Gökçay. "Yenikapı Kazılarında Ortaya Çıkarılan Mimari Buluntular." *Gün Işığında İstanbul'un 8000 Yılı: Marmaray, Metro, Sultanahmet Kazıları*, edited by Arzu Karamani Pekin. İstanbul: Vehbi Koç Vakfı, (2007): 166-180.

natural disasters, economic and political conditions that shaped the life of the harbors throughout their history.

The second chapter of the thesis will focus on the history of the harbor in Yenikapı, which came to be known as the harbor of Eleutherius, the harbor of Theodosius or the harbor of Caesarius. For doing this, I present an analysis and a reinterpretation of all Byzantine primary sources that refer the harbor such as *the Notitia Urbis Constantinopolitanae*, *the Patria of Constantinople* (Πάτρια Κωνσταντινουπόλεως), *the Chronicon Paschale*, *the Parastaseis Syntomoi Chronikai*, *the Chronicles of Theophanes the Confessor* and *the Anonymous Miracles of St. Artemius*. By doing this, I will answer questions concerning the changes in the name of the harbor, the reasons for its constructions and abandonment. More specifically, the main questions that will be addressed in this part are: why and when was the harbor first built, by whom was it commissioned, what happened to the harbor as time went on, whether or not it survived after the Persian attacks, when it started to silt up and whether it was later renovated for different purposes.

In the third chapter of the thesis, I will offer an interpretation of selected newly discovered remains in order to determine whether and to what extent they conform to the history of the harbor that is proposed in the second chapter. While doing this, I will compare the architectural remains of the Yenikapı harbor to the other well-known remains from the harbor excavations like Cosa, Caesarea Maritima, Leptis Magna or Alexandria.¹⁰ A selection from the ancient depictions of the harbors such as the famous harbor of Puteoli, Ostia and Alexandria will be

¹⁰ The comparative material had to be chosen from the Roman examples since the harbors of the Byzantine period are relatively poorly known.

presented. By doing this, I will regenerate the picture of the harbor in Yenikapı when it was still an active harbor during the Byzantine reign.

The present thesis aims to present a comprehensive reassessment and a general picture of the harbor in Yenikapı. It also provides useful insight for future studies with respect to the general understanding of the Byzantine harbors about which we still have sparse evidence.

The future of the newly discovered remains at Yenikapı is one of the most challenging questions and it is as important as the history and the archaeology of the harbor. What will happen to this harbor's remains after the completion of the archeological excavations? Who will be the group that will benefit from the information derived from this archaeological research? And how?

The attempt for answering these questions had to be part of this thesis and it was at the very beginning. However given the time and space constraints and the complexity of the management of Yenikapı, instead of offering solutions as possible management projects for this urban archaeology project, this study focused on the history and the archaeology of the harbor.

Considering the location of the district, the increasing investments to the cultural heritage of Istanbul, the 2010 cultural capital of Europe, the inadequacy of the Istanbul Archaeological Museums for the newly discovered artifacts, Yenikapı can be an ideal opportunity for a proposal of a new museum project for Istanbul. This project that could incorporate a research center, could ideally focus on the Byzantine heritage of Istanbul and exhibit the material culture of the Byzantine empire in its capital. By moving the focus of the tourism from Sultanahmet to Yenikapı, Istanbul could definitely benefit from this project.

Chapter I

The Harbors of Constantinople:

Introduction

*...the sea unites all that its water detaches...*¹¹

The above quote from Hélène Ahrweiler represents the principal idea behind this study. The harbors of the Byzantine capital, are not only physical landing facilities but also “natural extension of the land” in other words, connection points that served as imaginary bridges between a city and its outside world.¹² Given this, the overall aim of the analysis in the first chapter is to determine both tangible and intangible components of the world, which linked the Byzantine capital Constantinople to its hinterland by its harbors.

Accordingly, this chapter is divided into two main parts with respect to the location of the harbors: the harbors on the Golden Horn and the harbors on the Propontis, the Marmara Shore. Subsequently, each single harbor discussed under these locations will be presented in chronological order. Accordingly, while the section about the harbors on the Golden Horn will focus on the Neorion and Prosphorion harbors, the harbors on the Marmara Shore will entail the harbors of Julian, Theodosius, Boukoleon and finally the harbor of Caesarius which presents the most challenging case in terms of being the possible continuation of the harbor of Theodosius.¹³

¹¹ Hélène Ahrweiler. "Les ports byzantins (VIIe-IXe Siècles)." *La Navigazione Mediterranea Nell'alto Medioevo*. Vol. 1. (1978), p. 264.

¹² Anna Avramea. "Land and Sea Communications, Fourth-Fifteenth Centuries." *The Economic History of Byzantium: From the Seventh Through the Fifteenth Century*, DOS 59 (Washington, D.C., 2002), I, p. 57; Ahrweiler, "Les ports byzantins", p. 264.

¹³ The transcriptions of the Greek words into English were made according to the *Oxford Dictionary of Byzantium*.

While presenting the harbors of Constantinople including the harbor in Yenikapı, I will respectively touch upon the etymological, the topographical and the historical aspects including natural disasters and the economic and the political conditions that shaped the life of the harbors. Based on the existing research in the field, I will also investigate the environment and the buildings that surround the harbors, the streets leading to the harbor, the fora which are linked to them, and nearby facilities such as religious or palatine complexes and baths by the harbors.

The analysis of the structures, which once surrounded the harbor, constitutes an important part of the study. As a matter of fact, some harbors were constructed to meet certain needs such as the Boukoleon harbor that belonged to a palatine complex.

In the first half of the sixth century, the Byzantine author Procopius explained that the baths of Arcadianae which stood “on the left side sailing from Propontis up towards the eastern side of the city”, served the sailors who reached the capital after a long journey by sea.¹⁴ After seeing the city for the first time from one of the city’s four harbors, the sailors stepped on land and wandered around the streets linking the harbor to the city. The urban experience started from the harbors and continued through the streets, which were living organisms tying the harbor into the vivid economic life of the city through the shops and porticoes.

1.1. Previous Research on the Harbors of Constantinople

From the nineteenth century onwards, various scholars investigated and documented the harbors of Constantinople and the surrounding remains. Among them, Alexander van Millingen at the end of the nineteenth century, Raymond

¹⁴ Procopius, *On Buildings*, xi.2-6.

Janin, Feridun Dirimtekin and Rodolphe Guiland in the early twentieth century and Wolfgang Müller-Wiener in the second half of the twentieth century developed the first historiography of the harbors in Constantinople.¹⁵

Yet their approaches to harbor studies diverge noticeably. Alexander van Millingen's approach depended on the analysis of the primary sources referring to the harbors and of the existing remains. Van Millingen, in *Byzantine Constantinople*, documented all the existing ruins including the harbors' walls and the gates.

Raymond Janin and Rodolphe Guiland concentrated on the primary sources, hence Feridun Dirimtekin focused on the material remains in order to present detailed plans for the harbors. Some decades later, a German architect, Wolfgang Müller-Wiener, who concentrated his work on the study of material remains, continued this approach (Fig. I.1). In principle, these scholars used the same method for identifying the location of harbors. They all placed the harbors in the solid framework that they constructed by analyzing the seawalls along the Golden Horn and the Propontis (Fig. I.3, I.6).¹⁶

At the end of the twentieth-century, topographical studies within the framework of urban dynamics focused on the physical aspects of the

¹⁵ The major publications, which deal the harbors in Constantinople, chronologically are: Van Millingen, Alexander. *Byzantine Constantinople, the Walls of the City and Adjoining Historical Sites*. Elibron Classics, 1899. London: Adamant Media Corporation, 2005; Raymond Janin. "Les ports de Constantinople sur la Propontide." *Byzantion* 20 (1950), 73-79; Feridun Dirimtekin. *Fetihten Önce Marmara Surları*. Istanbul: Istanbul Fetih Derneği Yayınları, 1953; Rodolphe Guiland. "Les ports de Byzance sur la Propontide." *Byzantion* 23 (1954): 225f; Feridun Dirimtekin. *Fetihten Önce Haliç Surları*. Istanbul: Istanbul Enstitüsü, 1956; Raymond Janin. *Constantinople Byzantine, développement urbain et répertoire topographique*. Paris: Institut Français d'Etudes Byzantines, 1964; Rodolphe Guiland. *Etudes de topographie de Constantinople Byzantine*. Vol.2. 2 vols. Berlin: Akademie Verlag, 1969; Marlia Mundell Mango. 'The Commercial Map of Constantinople' *DOP* 54 (2000): 189-207; Paul Magdalino. *Constantinople Médiévale: étude sur l'évolution des structures urbaines*. Paris: De Boccard, 1996; Cyril Mango. *Le développement urbain de Constantinople, IVe-VIIe siècles* Paris: Diffusion de Boccard, 2004. Wolfgang Müller-Wiener. *Istanbul'un Tarihsel Topografyası*. Istanbul: Yapı Kredi Yayınları, 2007.

¹⁶ See the previous footnote for the bibliographic details of the publications.

Constantinopolitan harbors. Accordingly, Cyril Mango, Marlia Mundell Mango and Paul Magdalino investigated the harbors by incorporating further discussions.¹⁷ Their studies put emphasis on the necessity of defining the economic dynamics and the political struggles that affected the life of the harbors.

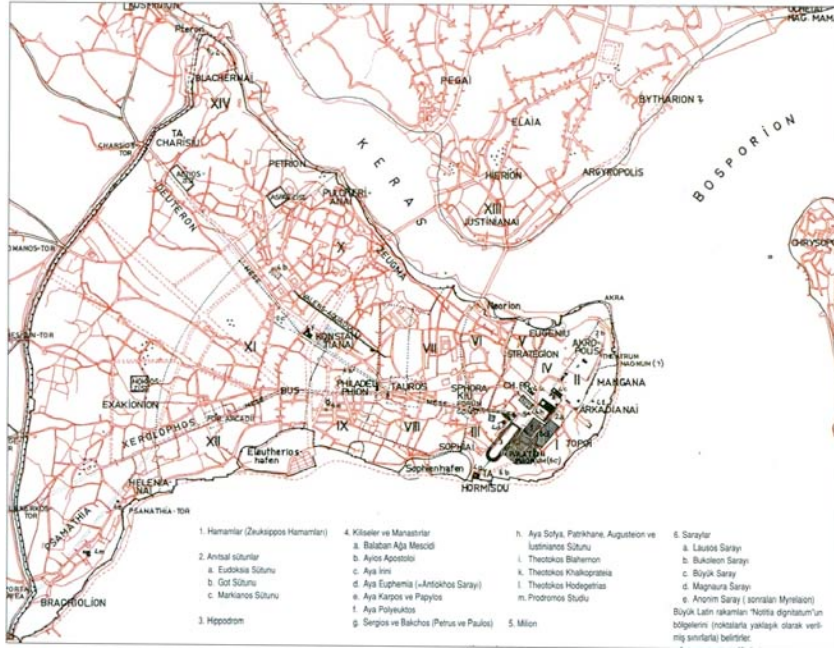


Fig. I.1. The map of Constantinople by Müller-Wiener.

The Yenikapı excavations created a new opportunity for reassessment of the historiography of the Constantinopolitan harbors, particularly of the harbor in Yenikapı, in the light of the newly discovered remains. Through the archaeological evidence, a third period started in the historiography of the harbor that enabled drawing conclusions for various discussions.

However, archaeology remains in the shadow of the practical needs especially in urban precincts. Being mostly rescue excavations, the archaeological

¹⁷ Marlia Mundell Mango. 'The Commercial Map of Constantinople' *DOP* 54 (2000): 189-207; Paul Magdalino. *Constantinople Médiévale: étude sur l'évolution des structures urbaines*. Paris: De Boccard, 1996; Cyril Mango. *Le développement urbain de Constantinople, IVe-VIIe siècles* Paris: Diffusion de Boccard, 2004.

investigations are only conducted within the limits of the construction sites and not by scientific curiosity. Accordingly, the archaeologist dealing with urban archaeology faces a huge puzzle with missing pieces derived from the fragmentary rescue excavations that constitute the sole archaeological data like in the case of Yenikapı.

1.2. The Harbors on the Golden Horn: Literary Evidence, Topography and Architectural Remains

Stretching about 5,500 meters in length, the bay known as the Golden Horn or Χρυσὸν Κέρας lies on the northern part of the promontory of Constantinople between today's Eyüp and Sirkeci (Fig. I.2).

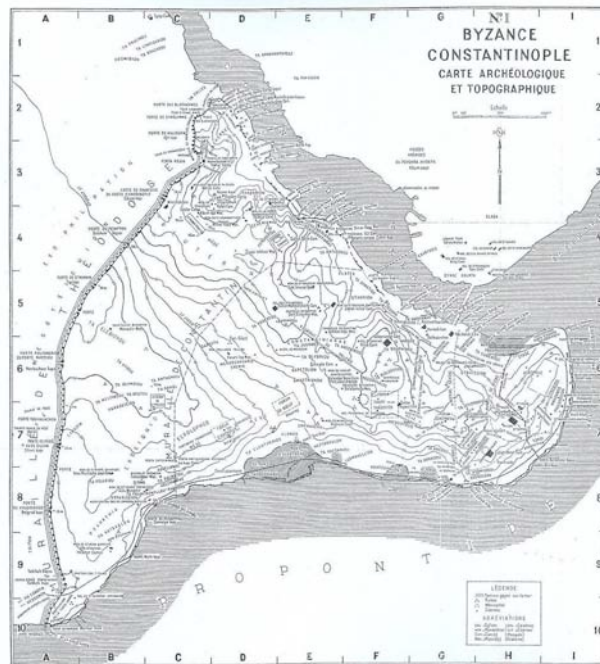


Fig. I.2. The city walls and the harbors of Byzantine Constantinople by Raymond Janin.

Two rivers, Cydaros and Barbyzes, fed the Golden Horn that reaches to a width about 500 meters at its widest point.¹⁸ Since antiquity, the Golden Horn shore together with Galata that lies on the opposite shore, has always been

¹⁸ John Freely, *Istanbul The Imperial City*, (Penguins Books, 1998): p. 4.

favorable for ships, not only because it was a deep and navigable natural harbor, but also on the grounds that it was shielded from the storms that were generally caused by the south wind, Notus.

According to Procopius, the name of the strait Κέρας, Ceras or the Horn is derived from “Ceroessa, the mother of Byzas, the founder of the city”.¹⁹ Hence the City of Byzantium, mythically founded by the eponymous founder Byzas, was the offspring of the Golden Horn that is symbolically represented as Ceroessa. Before the foundation of Constantinople, the citizens of Byzantium who first dwelt along the Golden Horn later moved to the tip of the promontory and benefited from the Golden Horn as the main natural harbor of their settlement.

Dionysius of Byzantium, in the second century C.E., the author of ‘Ανάπλους Βοσπόρου’, wrote that there were three harbors on the Golden Horn.²⁰ Two of these harbors are Neorion and Prosfhorion, which were both situated approximately in Sirkeci below today’s train station. The third harbor, which had to be further west according the Barrington Atlas of the Classical World, was named *Melias Sinus*.²¹

Two harbors on the Golden Horn, Neorion and Prosfhorion, were both suitable for the maritime traffic since they lay ideally next to the open sea. Once sealed by a chain, which was hung at the mouth of the Golden Horn, they were far from all possible naval attacks (Fig. I.4, I.13).²²

¹⁹ Procopius, *On Buildings*, I.v.1.

²⁰ Ανάπλους Βοσπόρου has not been translated into any modern language so far. The edition that is used in this study is the one translated into Latin and published by Rudolf Güngerich in 1958. The editor attributes the work earlier than the Second Sophistic period thus the late second century C.E. by adding that the author does not mention the sack of the city and its destruction by Septimius Severus in 195-6, which had to be considered as a *terminus ante quem* (Güngerich XLIV).

²¹ See the maps no: 52 and 53 in *The Barrington Atlas of the Classical World* for a detailed survey of the harbors and anchorages in Constantinople and in the Bosphorus (See Fig. I.11 for map no:53)

²² The Iron chain is represented in a miniature attributed to Hartmann Schedel (Berger&Bardill 1998, p. 5) (Fig. II.13). Niketas Choniates (*O city of Byzantium*, 7.205-6) tells that an iron chain

Apart from the harbors, the coast of the Golden Horn included all special facilities for creating a safe anchorage for vessels. Being part of these practical components, *scalae* were, in simple terms, wharf-like structures constructed from wood, stone, brick or if required from hydraulic concrete, and projected from the land to the sea. They were used for different purposes related to private, public or imperial needs. Some *scalae* were commissioned by aristocrats, from the Byzantine imperial court, who were likely involved in seaborne trade beside their governmental duties.

1.2.1. The Sea Walls and the *Scalae* along the Golden Horn

Stretching about 5,600 meters in length, the construction date for the sea walls on the Golden Horn is debatable. The *Chronicon Paschale* writes that the part lying between the Constantine and Theodosian Walls was constructed after the construction of the Land walls.²³

Under the reign of Theodosius II, much of the sea walls, which were probably newly built, was repaired by the urban prefect Cyrus Panopolites following the earthquake of 437.²⁴ This northern maritime defense system that incorporates a number of towers and gates, which gave access to the coastal facilities, was restored and repaired several times in the history of the capital.²⁵

Starting on the western side from the Koiliomene Gate (Küçük Ayvan Saray Kapısı) and ending with the Gate of *Eugenius*, which leads to the

stretched 'from one shore to another' and protected the acropolis, the Golden Horn as well as the palace of Blachernae. Later Doukas (*Tarih: Anadolu ve Rumeli*, XXXVIII.6.) informs us about a chain which was then hanged between the Gate of Oraia and to the shore of Galata. The Iron chain which stood in Hagia Eirene and subsequently in the Istanbul Archaeological Museum where it is now situated may give an idea about the size of the Byzantine period's chain.

²³ Anonymous, *Chronicon Paschale*, p. 72

²⁴ Müller-Wiener, *Istanbul'un Tarihsel Topografyası*, p. 308; Timothy E. Gregory "Kyros" *The Oxford Dictionary of Byzantium*.

²⁵ For the most recent study of the Golden Horn walls, see Müller-Wiener, *Istanbul'un Tarihsel Topografyası*, pp. 308-311.

Prosphorion harbor on the eastern shore of the promontory, van Millingen and Dirimtekin suggest a number between sixteen and twenty for the gates on the Golden Horn walls (Fig. I.3).²⁶ Apart from the gates opening to Neorion and Prosphorion, the five gates opening to *scalae* are identifiable today.



Fig. I.3. The Golden Horn shore and the seawalls by Dirimtekin.

For instance, the *scala Timasii* at the end of the promontory is the only securely identified landing stage. Van Millingen argues that it was named after *Timasius* who was a general of the emperor Arcadius.²⁷ On this account, the pier commissioned by aristocrats could serve the emperors or their visitors wishing to

²⁶ Michael Doukas. *Decline and Fall of Byzantium to the Ottoman Turks*. Trans. Harry J. Magoulias. (Detroit: Wayne State University Press, 1975), XXXIV.8; Van Millingen, *Byzantine Constantinople*, pp. 194-247. Dirimtekin, F. *Fetihten Önce Haliç Surları*, Istanbul, 1956. In the eighth century Arab attacks, the tower of Eugenius was used for fixing the iron chain for the purpose of blocking the entrance of the Golden Horn (Müller-Wiener, *Istanbul'un Tarihsel Topografyası*, p. 308).

²⁷ Van Millingen, *Byzantine Constantinople*, pp. 195-228

reach on horseback to the Great Palace as quickly as possible without encountering any possible danger.²⁸

Further east, in the vicinity of the neighborhood known as *Kynegos*, which lay on the western side of the Balat Gate, another unidentified landing stage stood.²⁹ Undoubtedly it was not the sole scala down to the pier in front of the *Drungarius* Gate (Odun Kapanı Kapısı) and known as the *Scala* of the *Drungarius* (Yemiş İskelesi) since this coast was also known as Heptaskalon, the seven skalai, being an active port area from the tenth century.³⁰

Advancing to the east, apart from the *scalae*, there were two other gates related to the two major ports of Constantinople, which are considered as the earliest: the *Porta Neorion* and the Gate of *Veteris Rectoris*. The former served the Neorion harbor, the latter the Prosphorion Harbor. Both must have provided access from the harbors to the commercial installations that lay behind the harbors such as markets, shops and porticoes and also to the streets leading to the public places of Constantinople.

1. 2. 2. The Neorion Harbor

Before the foundation of Constantinople by Constantine I, two main harbors, which were situated on the Golden Horn, Neorion and Prosphorion were known to be the principal harbors of the city (Fig. I.4).

Enclosed by the city walls, the Neorion Harbor was a simple naval installation that was next to *Porta tou Neorion*, a gate on the city walls, which is

²⁸ Ibid.

²⁹ Ibid., p. 199.

³⁰ Magdalino, "The Maritime Neighborhoods of Constantinople", p. 221.

situated approximately in today's Bahçekapı, between the New Mosque (Yeni Valide Camii) and the madrasah of Abdülhamid.³¹



Fig. I.4. The Neorion and the Prosphorion by Mordtmann.

The Neorion, meaning “the dockyard” in Greek, was protected by an iron chain as a necessary precaution at most of the harbors in order to control security. Dio Cassius, the third century chronicler, describes this iron chain that was fixed on the towers, which were carried by the breakwaters.³² These towers must have served also as watchtowers for regulating maritime traffic. If the towers were lit up during the nighttime, as lighthouses, they would additionally have guided the sailing ships through the entrance of the harbor.

According to a chapter in the fifth century *Notitia Dignitatum* devoted to Constantinople entitled *The Notitia Urbis Constantinopolitanae*, under the reign of Theodosius II, the sixth region of Constantinople contained *Neorium* and

³¹ Van Millingen, *Byzantine Constantinople*, p. 220; Müller-Wiener, *Istanbul'un Tarihsel Topografyası*, p. 58. As far as I know, we do not know any remains of the Neorion harbor. The only archaeological excavations carried out near the train station in Sirkeci, where the Prosphorion harbor lay, did not offer findings attributable to a harbor installation but remains of later warehouses (For the articles on the archaeological excavations in Yenikapı and in Sirkeci see Ed. Arzu Karamani Pekin. *Gün Işığında İstanbul'un 8000 Yılı: Marmaray, Metro, Sultanahmet Kazıları* Istanbul, Vehbi Koç Vakfı, 2007; Ed. Ufuk Kocabaş. *The 'Old Ships' of The 'New Gate': Yenikapı'nın Eski Gemileri*. Istanbul: Ege Yayınları, (2008); Ed. Ufuk Kocabaş. *1.Marmaray–Metro Kurtarma Kazıları Sempozyumu Bildiriler Kitabı 5-6 Mayıs 2008*, Istanbul, (2010).

³² Dio Cassius. *Roman History I*. (Cambridge, Mass.: Harvard University Press, 2006), Book 74, 10-14.

Portum.³³ The imperial officer who wrote the account possibly meant a dockyard by Neorium since it is the literary meaning of the Greek word “νεώριον” and the harbor of Prosphorion by Portum.³⁴

Scala Sycaenae; the Sycae landing stage is the following element in the fifth century imperial account.³⁵ According to the *Notitia*, Sycae formed the thirteenth region, and was in close contact with the city by frequent sailings through the scala reserved to it that has to be close to the harbors of Neorion and Prosphorion.³⁶

In the fifth century, the commercial complex spread around the harbor, which was also famous for a bronze statue of an ox, was recorded several times by different authors in connection with the fires in 433 and 465 C.E.³⁷ The *Chronicon Paschale* or the “Easter Chronicle”, “an anonymous chronicle from the early seventh century”, describes the fire in 433 C.E. as follows:³⁸ “...there was a great conflagration from the Neorion; and the granaries and the bath called Achilles burnt, in the month Lous, on day 12 before Kalends of September (21 Aug.)”.³⁹

³³ Anonymous. *Notitia Urbis Constantinopolitanae*. Ed. and trans. Otto Seeck. (Berlin, 1876), p. 65-234. In order to have a better idea about the regional system and the public and private institutions that they contained, see the map drawn by the author on the basis of Albrecht Berger's interpretation of *Notitia Urbis Constantinopolitanae*.

³⁴ See “νεώριον, τό” entry in Liddell and Scott's Greek Lexicon, p. 1172.

³⁵ Anonymous, *Notitia Urbis Constantinopolitanae*, 234.

³⁶ The neighborhood that bore the name Sycae is considered to be next to today's Galata (Janin, *Constantinople Byzantine*, p. 425).

³⁷ The ox statue at the harbor was a copy of the one in the forum of Theodosius, which gave its name to the forum (Anonymous. *Constantinople in the Early Eighth Century: The Parastaseis Syntomoi Chronikai*. Ed. and trans. Averil Cameron and Judith Herrin. (Leiden, 1984), pp. 61, 117). Maurice probably sank the ox in the harbor because of the bad luck that it was believed to have brought (Anonymous, *The Parastaseis Syntomoi Chronikai*, p. 174 commentary, see the Patria for the further explanation).

³⁸ Anonymous. *Chronicon Paschale 284-628 A.D.* Trans. Mary Whitby and Michael Whitby. (Liverpool: Liverpool University Press, 2007), ix.

³⁹ Anonymous, *Chronicon Paschale 284-628 A.D.*, 71.

According to the account, the fire spread from the Neorion harbor as far as the bath of Achilles next to the *Strategion*.⁴⁰ Being fed by the waters carried by the aqueduct of Hadrian, this bath was known to be one of the oldest legendarily built monuments under Byzas next to the shrines of Ajax and Achilles.⁴¹

In the sixth century, the wholesale food market, which stood in the Neorion harbor, was moved to the harbor of Julian under the reign of Justinian I or Justin II.⁴² This decision made possible the revitalization of the quarter until the arrival of the Italian merchants.

In relation to the district of the Neorion harbor, the earliest concentration of the Jewish settlement living in Constantinople was in the Chalkoprateia in the copper market, which was placed on the western side of the Hagia Sophia either by Constantine I or Theodosius II.⁴³ One of the most significant accounts about the Jews living in Constantinople dates back to the year 442 and refers to a demand for the construction of a synagogue in Chalcoprateia.⁴⁴ At that moment, the emperor Theodosius II was in the eastern campaign and when he came back ordered the conversion of the newly constructed synagogue into a church.

Theophanes the Confessor refers to the Neorion harbor while writing about a plague that occurred in 697-9. The eighth century author narrates the disaster as follows: "Now, as Leontios was cleansing the Neorion Harbor at Constantinople,

⁴⁰ For the discussions about the location of the Strategion, See Cyril Mango. "The Triumphal Way of Constantinople and the Golden Gate." DOP 54 (2000): 173-188.

⁴¹ Janin, *Constantinople Byzantine*, p. 210.

⁴² Anonymous, *The Parastaseis Syntomoi Chronikai*, p. 153; Magdalino, *Constantine V and the Middle Age of Constantinople*, p. 10.

⁴³ David Jacoby, "Les quartiers Juifs de Constantinople à l'époque Byzantine." *Société et Démographie à Byzance et en Romanie Latine*, London, (1975), p. 221.

⁴⁴ *Ibid.*, p. 169.

a bubonic plague fell upon the city and in the course of four months, killed a multitude of people”.⁴⁵

Theophanes’ account, which has to be seen as a reverberation of the economic and political conditions of the empire at the end of the seventh century, describes the Neorion harbor as in a relatively neglected state and secondly a disastrous disease occurs certainly not by chance at the same time.

The sixth and the seventh centuries were marked by severe political struggles for the empire such as the Persian threat to Constantinople, the Lombard, Avar and Slav invasions of the western provinces and the Persian and Arab conquests of the eastern provinces and of Egypt, which were the main grain supplies of the Empire.⁴⁶ In relation to these events, after the dredging the harbor accommodated the navy in 698 “in response to the Arab threat” and from the end of the seventh century the harbor was temporarily reserved for the war fleet.⁴⁷

One of the few references to the Neorion Harbor is in connection with an eighth century political act that aimed to take over the throne of the Emperor Artemius. At a later date, a local man, Theodosius from Adramytion, who was first appointed as the collector of taxes, was acclaimed emperor by revolting against the emperor Artemius. The rebels subsequently built a fleet to fight against the emperor’s forces stationed in St. Mamas, which is today’s Beşiktaş,

⁴⁵ Theophanes the Confessor. *The Chronicle of Theophanes the Confessor: Byzantine and Near Eastern History, A.D. 284-813*. Trans. Cyril Mango and Roger Scott. (Oxford: Oxford University Press, 1997), p. 517.

⁴⁶ Paul Magdalino. "Constantine V and the Middle Age of Constantinople." *Studies on the History and Topography of Byzantine Constantinople*. Burlington, VT: Ashgate Pub. Co., (2007): 1. In order to better understand the seventh century, See also John Haldon. *Byzantium in the Seventh Century: The Transformation of a Culture*. Cambridge: Cambridge University Press, 1993. And also Howard-Johnston, J.D. "The Siege of Constantinople in 626." *Constantinople and its Hinterland: Papers from the Twenty-Seventh Spring Symposium of Byzantine Studies, April 1993*, Ed. Cyril Mango and Gilbert Dagron, Oxford: Aldershot [u.a.]: Variorum, (1995), pp. 131-143.

⁴⁷ Magdalino, *Medieval Constantinople*, p. 20.

and “for six months fought one another every day. When the city fleet moved its moorings to the urban harbor of Neorion...”⁴⁸

Between the ninth century and the eleventh century, the written sources are notoriously inadequate about the Neorion harbor. But by the tenth and eleventh centuries, in addition to the Jews living in Constantinople, Amalfitan and Venetian merchants and by the twelfth century Pisan and Genoese merchants came to the vicinity, mainly to the southern and western edges of the harbor of Neorion.⁴⁹

In the eleventh century, the restrictions created by the financial conditions of the empire necessitated a series of precautions in order to revitalize the capital’s economic life such as inviting merchants from the emerging Italian states and giving them privileges in the mercantile life of the capital. As a result, from the reign of Alexius I to the reign of Alexius III, Venetian, Pisan and Genoese merchants started to acquire trading quarters both in Neorion and Prosphorion.⁵⁰

1. 2. 3. The Prosphorion Harbor

On the eastern limits of the Neorion Harbor, in today’s Sirkeci next to Sepetçiler Kasrı, stood another principal harbor of Constantinople: the Prosphorion or Bosphorion (Fig. I.11).

The sixth century author Stephanus of Byzantium explains the etymology of the harbor’s name as follows: “...In addition, this port was also named Bosphorion. However the locals use ‘p’ instead of ‘b’ for the following reason: while the siege of Byzantium, Philip the Macedonian ordered the digging of a secret entrance (a tunnel) beneath the city walls. For the secrecy of the men

⁴⁸ Theophanes the Confessor, *The Chronicle of Theophanes the Confessor*, p. 537.

⁴⁹ Magdalino, *Medieval Constantinople*, p. 87; Müller-Wiener, *Istanbul’un Tarihsel Topografyası*, p. 59; Mango, “Constantinople”, p. 70.

⁵⁰ Magdalino, *Medieval Constantinople*, p. 87.

digging the tunnel, Hekate gave them light (φωσφορος). Thus the locals call this place Phosphorion; the lightbearer...”⁵¹ However the etymological explanation of Stephanus of Byzantium inspires little confidence.

Another explanation that is more reasonable identifies the harbor’s name (προσφόριον) with the Greek word ‘βοσφοριον’. Thus taking into consideration the close resemblance of these two words, the harbor that lay close to the Golden Horn mouth facing the Bosphorus, was named after the Bosphorus. The name of the harbor may have a functional reference such as being the main landing stage of the vessels sailing from the Bosphorus but we do not have any proof confirming this assumption.

The earliest account referring to the Prosphorion harbor by this name is the Notitia Urbis Constantinopolitana. According to the Notitia Urbis Constantinopolitanae, *portus prosforianus*, the Prosphorion harbor was situated in the fifth region as well as *scala Chalcedonensis*, the Chalcedon landing stage.⁵² The existence of a landing stage next to the Prosphorion harbor emphasizes the relation of the Neorion harbor to the landing stage of Sykae.

The Chalcedonian jetty was one of *scalas maritimas tres*, the three maritime landing stages that were described by the Notitia Urbis Constantinopolitanae.⁵³ It was cited later in the Chronicon Paschale with the same function: a landing stage for the transfer of the sacred relics of St. Samuel and later St. John the Baptist. Through the information presented in the Chronicon Paschale, in addition to their practical use, jetties played roles in rituals: “... And in the same year the remains of St. Samuel were conveyed to Constantinople by

⁵¹ Stephanus of Byzantium. *Ethnica*. Ed. Margarethe Billerbeck, adiuvantibus Jan Felix Gaertner, Beatrice Wyss, Christian Zubler. Vol.1. (Berolini: W. de Gruyter, 2006): pp. 364-365.

⁵² Anonymous, *Notitia Urbis Constantinopolitanae*, p. 234. See also Fig. 17. for the division of the regions and their contents according to Albrecht Berger’s interpretation.

⁵³ Ibid.

way of the Chalcedonian jetty... And the remains of Joseph the son of Jacop, and of Zacharias, the father of St. John the Baptist, were conveyed to Constantinople by way of the Chalcedonian jetty... ”⁵⁴

According to the *Notitia Urbis Constantinopolitanae*, in the fifth century, the harbor of Prosphorion was in the same region with the markets and the imperial warehouses in close connection with the city's supplies. The *Notitia* refers to the *Horrea Olearia* (the depot for oil storage), *Horrea Troadensia* (the Troadensian warehouse), *Horrea Valentiaca* (the warehouse of Valens) and *Horrea Constantiaca* (the warehouse of Constantius) in the fifth region where *Portum Prosforianum* (the harbor of Prosphorion) was.⁵⁵ Evagrius writes that in the year 461, the district burnt down due to a fire started from the Prosphorion harbor and spread as far as the harbor of Julian.⁵⁶

According to the *Patria*, being one of these markets surrounding the port, the cattle market was transferred to the Forum of Theodosius in the eighth century by the emperor Constantine V.⁵⁷ This decision, that has to be for the purpose of relieving the busy mercantile activities in the harbor's vicinity, is also interpreted as an “insalubrious development” for occupying the public spaces for animal sale.⁵⁸

After a long time span with no satisfactory information about the harbor of Prosphorion, under the Palaiologoi, the Prosphorion harbor served also as a

⁵⁴ Anonymous, *Chronicon Paschale*, pp. 60-64.

⁵⁵ Anonymous, *Notitia Urbis Constantinopolitanae*, pp. 233-234.

⁵⁶ Evagrius Scholasticus. *The Ecclesiastical History of Evagrius Scholasticus*. Trans. Michael Whitby. (Liverpool: Liverpool University Press, 2000), Book II.13.

⁵⁷ Preger, *Scriptores*, pp. 263-4.

⁵⁸ Magdalino, "Constantine V and the Middle Age of Constantinople", p. 3.

landing stage for the emperors who sailed from the palace of Blachernae wishing to reach Hagia Sophia.⁵⁹

Both the Neorion and the Prosphorion harbors carried primary significance for the capital. From the eleventh century onwards, special trading privileges were given to the Italian maritime powers. In addition, the Byzantine government granted trading quarters to the merchants from Venice, Pisa and Genoa and accordingly the Golden Horn regained special importance.⁶⁰

In 1082, Alexios I Komnenos granted the Venetians “*freedom of trade in all commodities*” in all parts of the Roman Empire by lifting the time limitation of residence in Constantinople.⁶¹ Subsequently in 1111, Pisa had a trading colony in Constantinople and Genoa in 1170, respectively extending to the east.⁶²

The trading quarter that was offered to the Genoese merchants was at the old harbor of Prosphorion.⁶³ This was doubtlessly a mutual partnership, since the Byzantine government expected in return gains from its partners, such as military support or financial benefits through new markets spread all around the Mediterranean. Considering all these developments, the Golden Horn including the Galata quarter as independent trading corners became particularly significant from the eleventh century onwards until the end of the Ottoman period.

⁵⁹ Müller-Wiener, *Istanbul'un Tarihsel Topografyası*, p. 57.

⁶⁰ David Jacoby, "Italian Privileges and Trade in Byzantium before the Fourth Crusade: A Reconsideration." *Anuario de estudios medievales* 24 (1994), p. 349.

⁶¹ The date for the privileges given to the Venetians is debated to be 1092 instead of 1082 (Magdalino, *Medieval Constantinople*, p. 87).

⁶² Brown, H. "The Venetians and the Venetian Quarter in Constantinople to The Close of the Twelfth Century" *JHS* 40 (1920), p. 71; Jacoby, *Ibid.*, p. 350; Magdalino, *Ibid.*

⁶³ Magdalino, "The Maritime Neighborhoods of Constantinople", p. 222. Magdalino adds that the Genoese demanded as first choice 'a location between the Venetian quarter and the palace of Constantine Angelos' but they were later replaced further east (*Ibid.*).

1. 3. The Harbors on the Sea of Marmara, Propontis Shore: Literary Evidence, Topography and Architectural Remains

1. 3. 1. The Topography of the Propontis Shore

Measuring about 8,500 meters in length from today's Sarayburnu to Yedikule, the coast of the Sea of Marmara, the southern shore of the promontory was in use in good weather conditions.⁶⁴ Compared to the Golden Horn shore, the south wind *Notus* was the main threat for vessels mooring to the Marmara shore.

A fifteenth-century account depicts a perfect example of the weather conditions that *Notus* may cause. According to the account, the historian Michael Doukas states that during the siege of Constantinople, the ships carrying food supply to the inhabitants of the city sailed from Chios and due to the south wind *Notus* were soon drifted and could not reach the city.⁶⁵

The geographical features of the Marmara shore, more specifically the shoreline, were completely different in the past as proved by the geoarchaeological analysis during the archaeological excavations at Yenikapı.⁶⁶ The geographical maps clearly indicate that before having been silted up and partly filled by the emperor Theodosius I, the Marmara shore was indeed a bay surrounded by the so-called fifth, sixth and seventh hills of the peninsula; where the river Lycus emptied into the sea (Fig. I.5).⁶⁷

⁶⁴ Müller-Wiener, *Istanbul'un Tarihsel Topografyası*, p. 312.

⁶⁵ Michael Doukas, *Decline and Fall of Byzantium to the Ottoman Turks*, XXXVII.7.

⁶⁶ See the first preliminary report of the geoarchaeological study carried out in the harbor; Algan, O. et al. "Antik Theodosius Yenikapı Limanı'nın Jeoarkeolojik Önemi: Geç-Holosen Ortam Değişimleri ve İstanbul'un Son Onbin Yıllık Kültürel Tarihi." *Gün Işığında İstanbul'un 8000 Yılı: Marmaray, Metro, Sultanahmet Kazıları*. Ed. Arzu Karamani Pekin. Istanbul: Vehbi Koç Vakfı, 2007: pp. 242-45.

⁶⁷ As a matter of fact, Constantinople had six hills and a seventh hill was added by Theodosius II as a reminiscent of Rome (Mango, "Constantinople", p. 65).

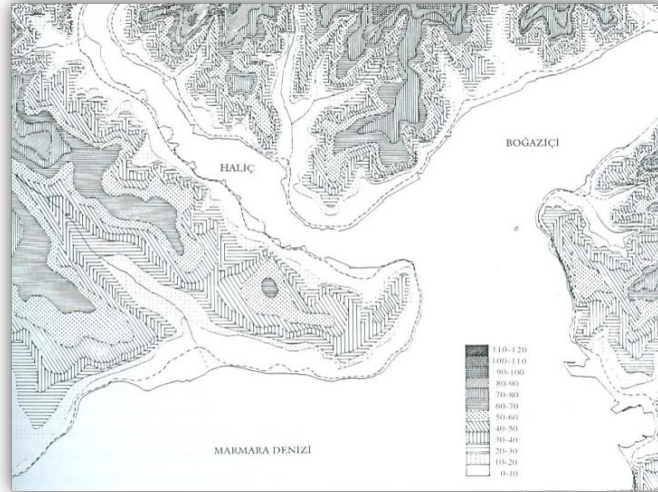


Fig. I.5. The topographical map of Istanbul by Kuban showing the Lycus Valley.

According to the hypothetical plans proposed by Janin, Mango and Kuban, due to the “steep south-facing slopes”, terraces were statically essential for stronger constructions on land especially between the Forum of Theodosius and the Column of Marcian that lay approximately between today’s Beyazıt and Fatih.⁶⁸ Future geoarchaeological studies of the shore and the vicinity, when conducted on a larger scale, may undoubtedly contribute to our understanding of the geography of the Marmara Shore and the harbors constructed along this shore.

The shoreline of Constantinople steadily changed during the past centuries and it is still changing due to both natural and human factors (Fig. III.18, 19). However, the period between ca. 550 and 1050 to which Magdalino refers to as “the apogee of the southern shore” the shoreline was likely to be similar to today’s shoreline. The well-preserved sea walls constitute strong proof for this similarity.⁶⁹

⁶⁸ James Crow, "The Infrastructure of a Great City: Earth, Walls and Water in Late Antique Constantinople." *Technology in Transition A.D. 300-650* Ed. Luc Lavan and Zanini, E.; Sarantis, A., Late Antique Archaeology 4, Leiden (2006): p. 9; Mango, *Le développement urbain de Constantinople*, Plan I; Jean Ebersolt. *Etude sur la topographie et les monuments de Constantinople*, (1909): p. 37.

⁶⁹ Paul Magdalino, "The Maritime Neighborhoods of Constantinople: Commercial and Residential Functions, Sixth to Twelfth Centuries." *DOP* 54 (2000), p. 21. For the documentation of the

1. 3. 2. The Sea Walls along the Sea of Marmara

The sea walls along the Marmara shore that are better preserved compared to the walls on the Golden Horn stretch approximately from today's Sarayburnu with the Ἑὼα Πύλη or the Gate of St. Barbara, to the Mermerkule with the last gate Narlıkapı that stood next to the church of the monastery of St. John the Baptist, “the Studion” (Fig. I.6).⁷⁰ This coast measuring about 8,500 meters in length required from the earlier periods a defense system since it was directly exposed to the naval attacks that could come from the Sea of Marmara.

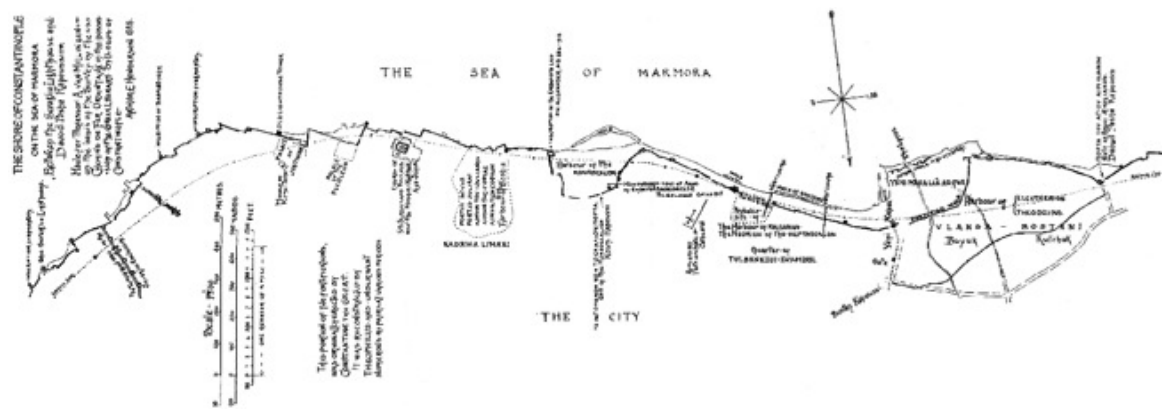


Fig. I.6. The Propontis shore by Van Millingen.

The Byzantine city of Constantinople has three main urban phases: the pre-Byzantine Byzantium, Constantine's Constantinople and the Theodosian city that base on the same principle for the seawalls.⁷¹

Neither the ancient sources nor the present remains are sufficient to determine where exactly the Constantinian seawalls stretched.⁷² However, some

seawalls' remains on the Marmara shore, see Feridun Dirimtekin. *Fetihten Önce Marmara Surları*. Istanbul: Istanbul Fetihter Derneği Yayınları, 1953 and Van Millingen, Alexander. *Byzantine Constantinople. The Walls of the City and Adjoining Historical Sites*. Elibron Classics Series. London: Adamant Media Corporation, 2005.

⁷⁰ Van Millingen, *Byzantine Constantinople*, pp. 249-265.

⁷¹ For the urban development of the Byzantine Constantinople, see Janin, R. *Constantinople Byzantine, développement urbain et répertoire topographique*. Paris: Institut Français d'Etudes Byzantines, 1964; Magdalino, P. *Constantinople Médiévale: Études sur l'évolution des structures urbaines*. Paris: De Boccard, 1996; Mango, C. *Le développement urbain de Constantinople (IV^e-VII^e Siècles)*. Paris: De Boccard, 2004.

historical accounts argue that the section of the seawalls lying between Davudpaşa and *Porta Aurea* was the latest section constructed under the reign of Theodosius II along with the construction of the so-called Theodosian Land Walls.⁷³

Several emperors had regularly repaired the seawalls on various occasions. For instance an inscription on the Gate of Yenikapı describes a restoration work conducted by the praetorian prefect Constantinus due to the earthquake in 447.⁷⁴ Against the Arab threat, Tiberius II and Anastasius II strengthened the walls in the eighth century.⁷⁵ Extensive rebuilding was undertaken during the reigns of Michael II, Theophilus, Michael III and Basil I in the ninth century, Nikephoros Phokas II in the tenth century, Manuel Komnenos I in the twelfth century and Andronicus Palaiologos II in the fourteenth century.⁷⁶ Particularly under the reign of Theophilus, these extensive restoration activities included the addition of new towers on the walls, which can be still identified today by inscriptions.⁷⁷

Writing in the twelfth century, Nicetas Choniates states that after hearing about the expedition of the King William of the Norman Sicilians with the aim of reaching Constantinople, the Byzantine emperor Andronicus Comnenus “made the rounds of the city walls and gave orders that those sections that had fallen into disrepair because of the ravages of time be shored up and restored”.⁷⁸

On the Marmara sea walls there were 103 towers and the number of gates was fifteen, or if small gates are included the number rises to 36.⁷⁹ Most of them

⁷² Müller-Wiener, *Istanbul'un Tarihsel Topografyası*, p. 312.

⁷³ Anonymous, *Chronicon Paschale*, p. 72. Davutpaşa lies on the western end of the Yenikapı and *Porta Aurea* is on the land walls.

⁷⁴ Müller-Wiener, *Istanbul'un Tarihsel Topografyası*, p. 312

⁷⁵ Ibid., p. 313.

⁷⁶ Clive Foss, and David Winfield, *Byzantine Fortifications*, (Pretoria: University of South Africa, 1986), p. 70; Müller-Wiener, *Istanbul'un Tarihsel Topografyası*, pp. 313-314.

⁷⁷ Müller-Wiener, *Istanbul'un Tarihsel Topografyası*, p. 313.

⁷⁸ Nicetas Choniates, *O City of Byzantium*, Book II, 320.

⁷⁹ See the plan by van Millingen for the gates on the Marmara Sea walls (Fig. 16). Müller-Wiener, *Istanbul'un Tarihsel Topografyası*, p. 312.

were linked to the harbors and the others to the simple *scalae*. For instance, Theophanes the Confessor refers to a *scala* of Acropolis in front of the Topkapı Gate.⁸⁰

Over the years, the sea walls were highly deteriorated due to both natural and human factors but they could still survive. Finally in 1871 and later in 1913-14, under the pretext of the construction of the railway line, the sea walls were partly demolished in Topkapı, Çatladıkapı, Kumkapı and Yenikapı in particular.⁸¹

1. 3. 3. The Harbor of Julian/ Sophia/ Kontoscalion:

In the second half of the fourth century, the urban growth of Constantinople was in a period of increase. The population of the city, which was approximately 20,000 following the city's foundation reached between 300,000 and 400,000 by the middle of the fifth century.⁸² Yet, the harbor capacity for the food supply and the transportation of raw materials were restricted to two ancient harbors on the Golden Horn and small-scale *scalae*. These coastal facilities were no longer sufficient for the enlarging capital and the increasing needs of its inhabitants.

Therefore in 361, as narrated by Zosimus, when the emperor Julian resided in Constantinople for ten months, he ordered the construction of a harbor, which is considered the first artificial harbor of Constantinople, on the southern shore at today's Kadirga:⁸³ "...He granted the city the right to have a Senate like the one at Rome and constructed for her a very large harbor, a haven for vessels from the

⁸⁰ Theophanes the Confessor, *The Chronicle of Theophanes the Confessor*, p. 601.

⁸¹ Müller-Wiener, *Istanbul'un Tarihsel Topografyası*, p. 318.

⁸² David Jacoby, "La population de Constantinople à l'époque Byzantine: un problème de démographie urbaine." *Société et Démographie à Byzance et en Romanie Latine*, London, (1975): pp. 81-109.

⁸³ Janin, *Constantinople Byzantine*, p. 223; Janin, *Les ports de Constantinople sur la Propontide*, p. 75.

treacherous south wind; a stoa, in the shape of a crescent (Sigma) rather than in a straight line, running down to the harbor...”⁸⁴

The *Codex Theodosianus*, the law code compiled under the reign of Theodosius II, states an interesting fact about the harbor’s vicinity. A law declared in 419 regulates the location of the limeburners in Constantinople according to the following statement: “ we order the removal of all furnaces throughout the entire space that extends along the shore of the sea between the amphitheatre and the port of the sainted Julian, for the sake of the healthfulness of Our Most August City and on account of the vicinity of Our palace, nor shall license be granted to any person to burn lime in these places”.⁸⁵

However despite this precaution taken, the devastating fires could not be prevented as Theophanes the Confessor narrates in his chronicle. In the sixth century, during the Nika Riot, as it is also stated by the *Chronicon Paschale*, the harbor of Julian and its vicinity were affected from the fire set by rioters: “In December there was a large fire in Julian’s harbor, and many houses were burned as well as churches from the edge of the harbor as far as the quarter of Probus”.⁸⁶ In the same period, either the emperor Justinian I or Justin II transferred the food market to the harbor of Julian.⁸⁷

According to Magdalino, from the fifth century to the eleventh century, the southern shore of Constantinople facing the Sea of Marmara, where the harbor of Julian was situated, had been a desirable precinct for placement of the aristocratic

⁸⁴ Zosimus, *New History*, p. 109.

⁸⁵ Anonymous. *Codex Theodosianus: The Theodosian Code and Novels, and the Sirmondian Constitutions*. Trans. Clyde Pharr, Theresa Sherrer Davidson and Mary Brown Pharr. (Princeton, N.J.: Princeton University Press, 1952), XIV.6.5.

⁸⁶ Theophanes the Confessor, *The Chronicle of Theophanes the Confessor*, p. 345; Anonymous, *Chronicon Paschale*, pp. 117-118.

⁸⁷ See the chapter about the Neorion Harbor for the discussions about the transfer of the food market.

houses.⁸⁸ In the early period, the district was relatively less populated than the northwestern side of the city by the monastic or the religious complexes and the mercantile installations, which were reserved for the sea trade long after the displacement of the limeburners.

The earliest information about the harbor of Julian and the aristocratic residences placed around the harbor of Julian is presented in the Notitia. According to the Notitia Urbis Constantinopolitanae, the *Portus Novus* (the harbor of Julian) was constructed along with *Porticum semirotundam, quae ex similitudine fabricate sigma Graeco vocabulo nuncupatur*; a semicircular portico, which given its shape is called after the Greek letter Sigma (Fig. I.7).⁸⁹

The Notitia lists the residences as follows; a *domum nobilissimae Arcadiae* (the house of nobilissima Arcadia who was the sister of Theodosius II) in the ninth region, a *domum Pulcheriae Augustae* (the house of Augusta Pulcheria) in the third region and *domum Augustae Placidiae* (the daughter of Theodosius I), *Eudociae* and *Arcadia* (the houses of Placidia, Eudocia who was the wife of Theodosius II and Arcadia) in the tenth region; all along the Marmara Sea.⁹⁰

⁸⁸ Magdalino ("The Maritime Neighborhoods of Constantinople", pp. 209-214) uses the term 'a cluster of aristocratic residences near the harbor of Theodosius' but it certainly enclosed the area by the harbor of Julian as they were extremely closed to each other.

⁸⁹ Anonymous, *Notitia Urbis Constantinopolitanae*, p. 232. Janin (*Constantinople Byzantine*, p. 398) explains that there were three Sigma in the city; an arcade semicircular in the imperial palace constructed by Theophilos, a western district named after an earthquake σεισμός= σιγμα next to today's Kocamustafapaşa and a semicircular portico that was cited in Notitia. I also should specify that this is sigma written 'C' rather than sigma written 'Σ', as a semirotundam.

⁹⁰ Anonymous, *Notitia Urbis Constantinopolitanae*, pp. 229-43, Magdalino, *Aristocratic Oikoi*, p. 55.

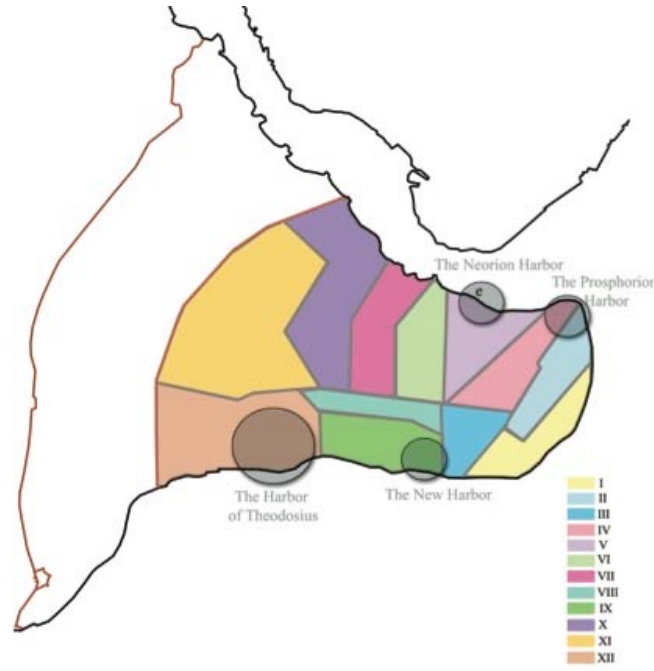


Fig. I.7. The regions and the harbors of the fifth century Constantinople according to the Notitia, drawn by Eda Yiğit.

In the year 509, the emperor Anastasius I dredged the harbor of Julian and added a new breakwater.⁹¹ The restoration work continued in the following years. Several decades later, Justin II renovated the harbor of Julian and renamed it after his wife Sophia as “the harbor of Sophia”.⁹² Watching the ships, sailing in the heavy sea from the upper terrace of her palace, the empress Sophia is said to have felt a deep pity for them and asked her husband Justin II to renovate the misused harbor of Julian.⁹³ The renovation of the harbor started under the supervision of Praepositus Narses and Protoresiarios Troilos, and as the Patria tells us, the statues of Sophia and Justin were also placed in the harbor.⁹⁴

⁹¹ Guiland, *Les ports de Byzance sur la Propontide*, p. 182; Müller-Wiener, *Istanbul'un Tarihsel Topografyası*, p. 62.

⁹² *Patria*, II 62, III 37; Janin, *Constantinople Byzantine*, p. 223.

⁹³ *Patria*, III 230; Janin, "Les ports de Constantinople sur la Propontide", p. 73. Another theory about the naming of the harbor by Petrus Gyllius (*The Antiquities of Constantinople*, p. 90) suggests that the harbor started to be known as Sophia after its fortification by Anastasius.

⁹⁴ Müller-Wiener, *Istanbul'un Tarihsel Topografyası*, p. 62; Anonymous, *Scriptores Originum Constantinopolitanarum*, p. 62.

According to Magdalino, Justin and Sophia's palace stood on the east side of the harbor, at *ta Eleutheriou*, where they also received the news of Justinian's death.⁹⁵ Cameron argues that the construction of this palace was at the same time or a little earlier than the renovation of the harbor as the historical sequence emphasizes.⁹⁶ The palace of Sophia subsequently named the Gate of Sophia opening to the harbor, which was also known as the *Porta Sidhera* and the gate of Kadirga Harbor.⁹⁷

The palace of Probus was among the residences surrounding the harbor of Julian in the Nika Riot.⁹⁸ Among the prosopographical records, there is one *patricius* named Probus who lived under the emperor Anastasius (ca. 491-518).⁹⁹ Probus who was believed to have built splendid palaces at Constantinople also founded the church of St. John the Baptist.¹⁰⁰ Later, this church was said to have been converted into a workshop under the reign of Constantine V.¹⁰¹

Apart from these aristocratic residences, Leo the Deacon describes a certain residence of Bardas Phokas, the father of the emperor Nikephoros II, in the tenth century. When Bardas Phokas, died in his nineties, Nikephoros II escorted

⁹⁵ Magdalino, "The Maritime Neighborhoods of Constantinople", p. 216; Averil Cameron, "Notes on the Sophiae, the Sophianae and the Harbor of Sophia." *Byzantion* 37 (1967), p. 12.

⁹⁶ *Ibid.*, pp. 13-15.

⁹⁷ Van Millingen, *Byzantine Constantinople*, p. 263.

⁹⁸ Theophanes the Confessor, *The Chronicle of Theophanes the Confessor*, p. 345; Anonymous, *Chronicon Paschale*, pp. 117-118. The neighborhood, where the palace of Probus was located, was also called 'Maurus' as we learn from the *Chronicon Paschale* and Theophanes the Confessor (Anonymous, *Chronicon Paschale*, pp. 151-2; Theophanes the Confessor, *The Chronicle of Theophanes the Confessor*, p. 514). Maurois who is not referred in Martindale's Prosopography of the Later Roman Empire was also said to be one of the eight patricians who came from Rome to Byzantium with Constantine the Great (Anonymous, *Patria*, II.63)

⁹⁹ John R. Martindale. *The Prosopography of the Later Roman Empire*. (Cambridge: Cambridge University Press, 2006) p. 1059.

¹⁰⁰ *Ibid.*, pp. 1058-1059.

¹⁰¹ Magdalino, "Constantine V and the Middle Age of Constantinople", p. 6.

his father's body from the palace as far as Bardas' residence where the harbor of Sophia was.¹⁰²

In the thirteenth century, there was a sudden imperial decision about the harbor of Julian. After 1261, Michael VIII Palaiologos renovated the harbor, then named it Kontoscalion, the dockyard and the principal station of the imperial navy.¹⁰³ As part of a renovation project carried out by Michael VIII Palaiologos, the harbor "was dredged and deepened and surrounded by large blocks" meaning that before the thirteenth century the harbor was possibly at a neglected state.¹⁰⁴ An inscription on a tower that stood on the western limits of the harbor about a repair by the emperor Andronicus II Palaiologos suggests that the restorations continued under the Palaiologoi.¹⁰⁵

The origin of the name Kontoscalion is obscure. According to Janin, the name originally might have come from a patron called Agallianos, yet whose nickname was *kontoscalion* meaning "short leg" that reminds "short pier" which designates a small-scaled harbor.¹⁰⁶

However, the Russian traveler Stephen of Novgorod describes the scale of the Kontoscalion harbor in 1350 as follows:

As you go along Contoscalion from the hippodrome, there are very large city gates with iron lattices. The sea is brought inside the city through these gates, and when there is an attack by sea up to three hundred ships and galleys are kept there. Some galleys have two hundred oars, others three hundred oars and the army travel by sea in these vessels. Others

¹⁰² Leo the Deacon. *The History of Leo the Deacon: Byzantine Military Expansion in the Tenth Century*. Trans. Alice-Mary Talbot and Denis F. Sullivan. (Washington, D.C.: Dumbarton Oaks Research Library and Collection, 2005.), p. 135.

¹⁰³ Van Millingen, *Byzantine Constantinople*, p. 293.

¹⁰⁴ Janin, "Les ports de Constantinople sur la Propontide", p. 78.

¹⁰⁵ Anonymous, *Scriptores Originum Constantinopolitanarum*, p. 230 and Van Millingen, *Byzantine Constantinople*, p. 294.

¹⁰⁶ Janin, *Constantinople Byzantine*, pp. 221-2; *Patria*, III 257.

(ships) flee and attack only when there is a wind; a ship has to stand waiting for the weather (but galleys do not).¹⁰⁷

The last intervention to the harbor under the Byzantine rule was likely to have been the dredging by the emperor John VIII Palaeologos in 1427 before the conquest of the city by the Ottomans.¹⁰⁸

Through the centuries, as time went on, the harbor of Julian, which can be considered the city's most long-lasting harbor, narrowed in scale and fell out of use.¹⁰⁹ A miniature from the Düsseldorf University Library considered to be a copy of Cristoforo Buondelmonti's original work depicts two harbors on the Marmara Shore (Fig. II.9).¹¹⁰

The two harbors depicted in the manuscript as they were in the fifteenth century are identifiable as the harbor of Theodosius, and the harbor known as "Kadırga". Kadırga, the galley harbor or the former harbor of Julian, was renovated after the conquest of Constantinople. A number of warehouses were added to accommodate the Ottoman fleet during the campaign against Lesbos, until the naval base was moved to Kasımpaşa in the first half of the sixteenth century.¹¹¹ The Düsseldorf manuscript depicts the Kadırga harbor in the seawalls having a circular form. A large gate on the walls provided access from inland to a wooden large scaled jetty where two different sized ships lay abreast. The harbor was surrounded predominantly on the eastern edges by a series of buildings identifiable as a row of warehouses reserved to shipbuilding.

¹⁰⁷ Stephen of Novgorod, *Russian Travelers to Constantinople in The Fourteenth and Fifteenth Centuries*, p. 38.

¹⁰⁸ Müller-Wiener, *Istanbul'un Tarihsel Topografyası*, p. 63.

¹⁰⁹ Ibid.

¹¹⁰ The original manuscripts of Cristoforo Buondelmonti, which were supposed to be completed after 1418 as a commission by Vitold of Lithuania, the father-in-law of the Byzantine Emperor John VIII Palaeologos did not survive (Manners, Ian R. "Constructing the Image of a City: The Representation of Constantinople in Cristopher Buondelmonti's *Liber Insularum Archipelagi*." *Annals of the Association of American Geographers* 87:1 (1997), pp. 73-88).

¹¹¹ Ibid., p. 88.

Eventually, in 1748, the debris of the Nuruosmaniye Mosque construction site was poured into the Julian harbor and the harbor was partly filled.¹¹²

The harbor of Julian was the first large-scale artificial harbor constructed on the Marmara Shore and as well as the longest lasting one. The importance of the harbor derives from the fact that it was not planned solely as a harbor but as a complex in which a “Sigma” market was implemented. Thus the symbolic meaning of the complex reflects the developing urban pattern of Constantinople and its perception both by the people living under the rule of the Byzantine Empire and by those who had an economic affiliation with the Empire’s centre. Due to the need for better infrastructure, a new harbor started to be constructed, that of Theodosius.

1. 3. 4. The Harbor of Eleutherius/ Theodosius

Following the construction of the harbor of Julian, at the end of the fourth century a second artificial harbor was constructed on the shore of the Propontis, at the mouth of the river Lycus, today’s Bayrampaşa Deresi in today’s Yenikapı (Fig. I.1). Widely known as the harbor of Theodosius, acquiring its name from the emperor Theodosius I, or the former harbor of Eleutherios, the harbor in Yenikapı has a complex history. This section of the chapter presents a brief historical overview of the harbor that will be discussed in detail in the next two chapters.¹¹³

¹¹² Müller-Wiener, *Istanbul'un Tarihsel Topografyası*, p. 63.

¹¹³ For the archaeological excavations in Yenikapı that have been conducted by the Istanbul Archaeological Museum since 2004 see Ed. Arzu Karamani Pekin. *Gün Işığında İstanbul'un 8000 Yılı: Marmaray, Metro, Sultanahmet Kazıları* İstanbul, Vehbi Koç Vakfı, 2007; Ed. Ufuk Kocabaş. *The 'Old Ships' of The 'New Gate': Yenikapı'nın Eski Gemileri*. İstanbul: Ege Yayınları, (2008); Ed. Ufuk Kocabaş. *1.Marmaray–Metro Kurtarma Kazıları Sempozyumu Bildiriler Kitabı 5-6 Mayıs 2008*, İstanbul, (2010).

The earliest primary source referring to the harbor in Yenikapı is the *Notitia Urbis Constantinopolitanae* that refers to the harbor in Yenikapı as *Portum Theodosiacum* (Fig. I.8).¹¹⁴

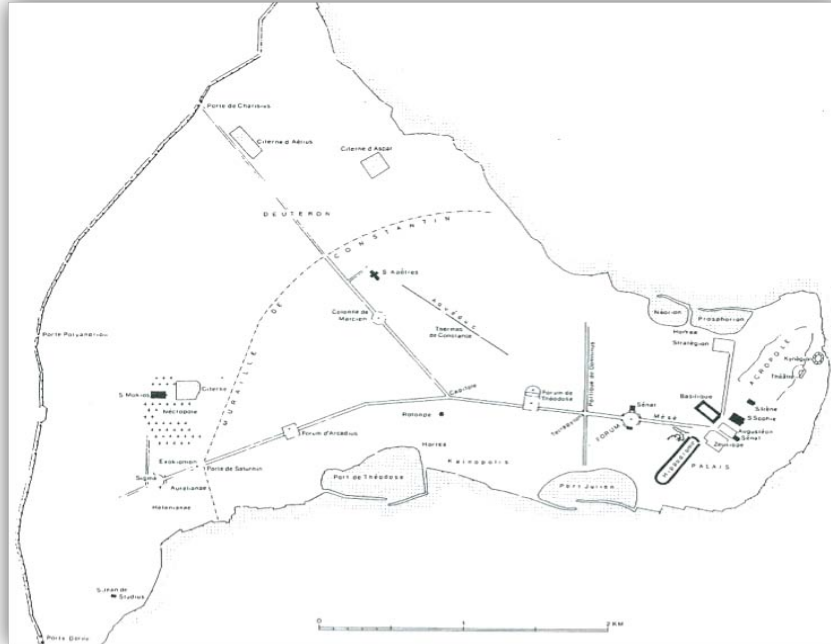


Fig. I.8. The *portus Theodosiacum* in the fifth century Constantinople by C.Mango.

Yet from later sources, such as the *Patria* and the *Parastaseis*, we learn that an earlier name “Eleutherius” was used for the harbor in Yenikapı. This name suggested an earlier harbor-like installation approximately on the same shore.

Eleutherius is said to have been one of the leading aristocrats who were invited to the newly found capital by Constantine I as benefactors.¹¹⁵ For the contributions that he made to the construction of the harbor in Yenikapı, Eleutherius the *asecretis*, the secretary of the imperial court later gave his name to

¹¹⁴ Anonymous. *Notitia Urbis Constantinopolitanae*. Ed. and trans. Otto Seeck. (Berlin, 1876), p. 239.

¹¹⁵ Janin, *Constantinople Byzantine*, p. 382.

the harbor in today's Yenikapı and to the neighborhood on the western coast of the harbor from the first half of the fourth century onwards.¹¹⁶

At the end of the fourth and the beginning of the fifth century, the harbor of Eleutherius was designated as the focal point of the capital's food supply. The convoys of ships carrying grain from Egypt to the city of Rome changed their destination soon after the foundation of Constantinople just as the main road axes crossing the empire from west to east.¹¹⁷ The arrangements of the shore as a harbor facility including huge warehouses made possible the free distribution of grain *frumentationes* for the inhabitants of Constantinople that started in 330, the day of the city's inauguration.¹¹⁸

Mango argues that after the reign of Constantius II, the urban development of Constantinople gained momentum as seen by the "augmentation of the harbor capacity, storage, parallel analogue augmentation of the water supply, new monuments and the extension of the city wall".¹¹⁹

Under the reign of Theodosius I, while constructing the forum of Theodosius and erecting his statue on a monumental column in the midst of the forum, the harbor of Eleutherius was also reconstructed on a larger scale including huge warehouses and renamed *Portum Theodosiacum* after the emperor.¹²⁰

Already at the beginning of the fifth century, the city had four harbors, five imperial warehouses and four large cisterns. The emperor Theodosius II subsequently ordered that "the walls be made in a circuit on the whole seaward side of Constantinople" thus the enlarged city was surrounded by a new wall

¹¹⁶ Ibid., p. 219.

¹¹⁷ Avramea, *Land and Sea Communications, Fourth-Fifteenth Centuries*, p. 57.

¹¹⁸ Bratianu, Georges. "La question de l'approvisionnement de Constantinople à l'époque Byzantine et Ottomane." *Byzantion* 5 (1930), p. 85.

¹¹⁹ Mango, *Le développement urbain de Constantinople*, p. 37.

¹²⁰ Anonymous. *Notitia Urbis Constantinopolitanae*, p. 239 and Anonymous, *Scriptores Originum Constantinopolitanarum*, pp. 184-185, p. 248.

system.¹²¹ Thus the focus of construction programs began to include the newly surrounded inhabited area lying between the line of Constantine's Forum and Theodosian Walls (Fig. I.8).¹²²

The monumental seawall system that surrounded the harbor in Yenikapı that is approximately 1,1 km, proves that for ideal maintenance of a harbor on a such scale a lot of financial investments, which would only have been operated by the imperial treasury required. In the seventh century, especially after the conquest of the territories in Egypt by the Persians, the empire permanently lost its main grain supply. In other words, the harbor of Theodosius lost the largest part of its *raison d'être* and its name was likely forgotten. Nevertheless, the harbor survived with a different function and a different name, possibly as Caesarius. The new archaeological evidence shows that the harbor in Yenikapı was not completely abandoned, and continued to be used through the eleventh century.¹²³

In the thirteenth century, the silted harbor site partly reserved to an anonymous monastery later became a tanning quarter operated by the Jews. In the sixteenth century, Petrus Gyllius, who visited the silted harbor in Yenikapı, which in those days was called "Vlanga", explains that the area lying between the walls was used as a vegetable garden in the name of "Vlanga Bostanı"; the Vlanga orchard as depicted in the miniatures of the same period. In other words, once a centre for grain storage, the harbor of Theodosius continued to supply food under the name of the Vlanga orchard and through the years became a residential area.

¹²¹ Anonymous, *Chronicon Paschale*, p. 72; Anonymous, *Notitia Urbis Constantinopolitanae*, pp. 242-3.

¹²² The so-called Theodosian Land Walls were built between 408-413 (Berger, "Streets and Public Places", p. 171).

¹²³ Kocabaş, Ufuk; Işıl Özsaıt Kocabaş. "Le port de Théodose: trésors de l'archéologie marine." *De Byzance à Istanbul: Un port pour deux continents*. (Paris: Réunion des Musées Nationaux, 2009), p. 145.

1. 3. 5. The Harbor of Caesarius

The identification of the harbor of Caesarius on the Marmara shore will always remain a controversial issue or an unresolved problem. This section identifies the harbor in question by exploring the emergence of the name given to this harbor from the primary sources and then places it among the other harbors in Constantinople according to its functions.¹²⁴

The harbor of Caesarius, the name of which does not appear before the sixth century, is believed to be on the eastern part of the harbor in Yenikapı.¹²⁵ The harbor is considered by some scholars as Van Millingen and Janin to be the same as the Heptascalon (seven skalai) harbor, which is frequently linked to the church of St. Acacius ‘εν τῷ Ἑπτασχάλῳ’ renovated by the emperor Basil the Macedonian (ca. 830-886).¹²⁶ Müller-Wiener argues that the harbor of Caesarius and Heptascalon have to have been the same harbor, and situated between tower no.57 and the Tülbentçi Hüsameddin Mosque between today’s Yenikapı and Kadirga (Fig. I.6).¹²⁷

On the other hand, there is a completely different identification for the harbor of Heptascalon, which places the harbor on the Golden Horn.¹²⁸ Also as an alternative to Müller-Wiener’s theory, Cyril Mango and Paul Magdalino propose that the harbor of Caesarius was the same harbor as the harbor of Theodosius or more specifically a later arrangement for the harbor in Yenikapı on the

¹²⁴ Theophanes the Confessor, *The Chronicle of Theophanes the Confessor*, pp. 347-8. The account that is discussed below emphasises the military function of the harbor of *Caesarius* amongst the other Constantinopolitan harbors.

¹²⁵ Müller-Wiener, *Istanbul'un Tarihsel Topografyası*, p. 61.

¹²⁶ Van Millingen, *Byzantine Constantinople*, p. 301; Janin, *Constantinople Byzantine*, p. 221.

¹²⁷ Müller-Wiener, *Istanbul'un Tarihsel Topografyası*, p. 61. According to Müller-Wiener, there is also another Heptascalon, a scala that stood next to the Neorion harbor on the Golden Horn (*Istanbul'un Tarihsel Topografyası*, p. 59).

¹²⁸ For the discussion on the arguments of A. Berger and A. Stavridou-Zaphraka, See Magdalino, "The Maritime Neighbourhoods of Constantinople", p. 221.

northeastern end.¹²⁹ In other words, the name Caesarius is a later name given to the harbor in Yenikapı. But the analysis of the origins of the harbor's name is still fundamental for its identification.

According to Martindale's *The Prosopography of the Later Roman Empire*, three persons named Caesarius existed in the history of Constantinople, one being *praefectus urbis* under the reign of the emperor Valentinian and the other two being *praetorian prefects* under the reigns of the emperors Theodosius I and Leo I.¹³⁰ Van Millingen emphasizes that in the fifth century account, the Notitia does not mention the harbor and he adds that Caesarius who gave his name to the harbor should be the one who lived under Leo I since he is the only one who lived after the compilation of the Notitia. Considering the prosopography, under Leo I (ca. 457-474 C.E.) the *praetorian prefect* Caesarius most likely gave its name to the neighborhood, which is definable as the eastern shore of the harbor of Theodosius. Therefore Mango's theory, which argues that the harbor of Theodosius had to be known as Caesarius, presents a chronological question. As the chronology suggests, the reign of the emperor Leo I goes back to the middle of the fifth century and the Notitia is only few decades before this date. Was it possible to change the name of a still intensively used harbor in such a short period?

I suggest that the name of the harbor changed not in the time of Caesarius but much later due to the survival of the neighborhood's name. In this case, the possibility of a later renovation for which we do not have any evidence at the

¹²⁹ Cyril Mango, *Le développement urbain de Constantinople*, p. 38; Magdalino, *Medieval Constantinople*, p. 20.

¹³⁰ Martindale, *The Prosopography of the Later Roman Empire*, pp. 258-9; Van Millingen, *Byzantine Constantinople*, p. 302.

moment should be taken into consideration. Such an arrangement would also change the name of the harbor in Yenikapı.

The harbor of Caesarius appears first during a council in 553, during which the envoys of pope Vigilius state that they visited the house of Germanus next to the harbor of Caesarius.¹³¹

Under the reign of Justinian I, on Wednesday, October 12 in the year 561 or 562, a large fire occurred in the quarter of Caesarius, as Theophanes writes. As a result, all shops and porticoes as far as the forum Bovis were burned down.¹³² Another passage from the same author narrates that under the reign of Constantine IV Pogonatus, in 673, the emperor placed ships bearing Greek fire to await the Saracen fleet coming from the Aegean Sea: “...The aforesaid Constantine, on being informed of so great an expedition of God's enemies against Constantinople, built large biremes bearing cauldrons of fire and dromones equipped with siphons, and ordered them to be stationed at the Proclianesian Harbor of Caesarius.”¹³³

According to prosopographical records dating to 528, “Proclianus” was likely to have been one of the Roman generals who went to meet the Persian invasion and subsequently died on the battlefield.¹³⁴ Yet his relation to the harbor remains obscure even if Janin expresses that he probably constructed or financially contributed to the restoration of the harbor as it also bears his name as “the Proclianesian harbor of Caesarius”.¹³⁵

Another argument about the same harbor comes from the beginning of the seventh century in connection with the overthrow of Phocas by Heraclius. In 610 the emperor Phocas ordered the circus factions to strengthen the imperial forces

¹³¹ Janin, “Les ports de Constantinople sur la Propontide”, p. 76.

¹³² Theophanes the Confessor, *The Chronicle of Theophanes the Confessor*, pp. 347-8.

¹³³ Ibid., p. 493.

¹³⁴ Martindale, *The Prosopography of the Later Roman Empire*, p. 1059.

¹³⁵ Janin, *Constantinople Byzantine*, p. 220.

by asking the Blues to guard the neighborhood of *Hormisdas* and the Greens to protect the harbors of *Sophia* and *Caesarius* against *Heraclius'* fleet.¹³⁶ The information given at this point reflects the theory about the harbors of *Caesarius* and *Theodosius* as proposed by Mango, Whitby and Magdalino.

In case of enemy attacks to the city, the harbors were known to be the weakest points of defense.¹³⁷ The ancient texts inform us that the emperor relied on the circus factions for the defense of the capital's main harbors, the harbors of *Caesarius*, *Sophia* and *Hormisdas* of which identification is still under discussion.¹³⁸ It is surprising that there is no mention of the harbor of *Theodosius*, which considering its visible limits today by looking at the seawalls, had to carry a major risk of being the weakest point on the seawalls in any attack to the city. At this point the harbor of *Caesarius* meant "the harbor in the vicinity of *Caesarius*" which lay on the eastern side of the harbor of *Theodosius*. Alternatively, the harbor of *Theodosius* was completely out of use, which is yet impossible on the grounds of today's evidence acquired from the ongoing archaeological excavations that will be discussed in the next chapter.¹³⁹

The majority of the accounts including *Theophanes'* confirm the same function; that the harbor called *Caesarius* was directly linked to the imperial navy. Later in the fourteenth century, the emperor *John VI Kantakouzenos* ordered the

¹³⁶ Anonymous, *Chronicon Paschale*, p. 151.

¹³⁷ Ahrweiler, *Les ports Byzantins*, pp. 272-6.

¹³⁸ Mango argues that the harbor of *Hormisdas* can be same as the harbor of *Boukoleon* ("The Palace of *Boukoleon*", p. 47)

¹³⁹ For comprehensive information about the archaeological excavations in *Yenikapı* see Ed. Arzu Karamani Pekin. *Gün Işığında İstanbul'un 8000 Yılı: Marmaray, Metro, Sultanahmet Kazıları* İstanbul, Vehbi Koç Vakfı, 2007; Ed. Ufuk Kocabaş. *The 'Old Ships' of The 'New Gate': Yenikapı'nın Eski Gemileri*. İstanbul: Ege Yayınları, (2008); Ed. Ufuk Kocabaş. *1.Marmaray–Metro Kurtarma Kazıları Sempozyumu Bildiriler Kitabı 5-6 Mayıs 2008*, İstanbul, (2010).

construction of a number of ships in the Caesarius Harbor, which was to be dredged after a few years.¹⁴⁰

The location and the history of the harbor of Caesarius will long remain as an unresolved problem. Most of the scholars describe the remains of a semi-circular construction identifiable as a harbor pier, which came to light in 1819 after a fire devastated all the areas next to the Tülbentçi Hüsameddin Mosque.¹⁴¹ Van Millingen argues that these remains are those of the harbor of Caesarius.¹⁴²

As in the case of neighborhoods, harbors bore various names through the centuries. The cluster of shipwrecks discovered in the archaeological excavations at Yenikapı proved that the northeastern part of the harbor at Yenikapı was still in use from the seventh century until the eleventh centuries.¹⁴³ Furthermore a large-scale construction program was undertaken in the eighth century, as the architectural remains show. An important question arises at this point: did the southeastern part of the Theodosian harbor have different names from the sixth century onwards? The next chapter will attempt to answer this question, among others.

1. 3. 6. Boukoleon Harbor: An Imperial Pier for the Imperial Palace

One of the terraces in today's Ahırkapı and Çatladıkapı overlooking the Sea of Marmara is linked to a still surviving monumental façade that was linked to a harbor (Fig. I.9). According to Mango, this structure that was part of the imperial palace was known as Boukoleon.¹⁴⁴

¹⁴⁰ Müller-Wiener, *Istanbul'un Tarihsel Topografyası*, p. 62.

¹⁴¹ Ibid., p. 61.

¹⁴² Janin, "Les ports de Constantinople sur la Propontide", p. 76.

¹⁴³ Kocabaş, "İstanbul Üniversitesi, Yenikapı Batıkları Projesi: Gemiler", pp. 23-35.

¹⁴⁴ Cyril Mango, "The Palace of the Boukoleon." *CahArch* 45 (1997): p. 41. For the terraces of Constantinople, see Crow, J. "The infrastructure of a Great City: Earth, Walls and Water in Late Antique Constantinople" *Technology in Transition A.D. 300-650* Ed. Luc Lavan and Zanini,E.;

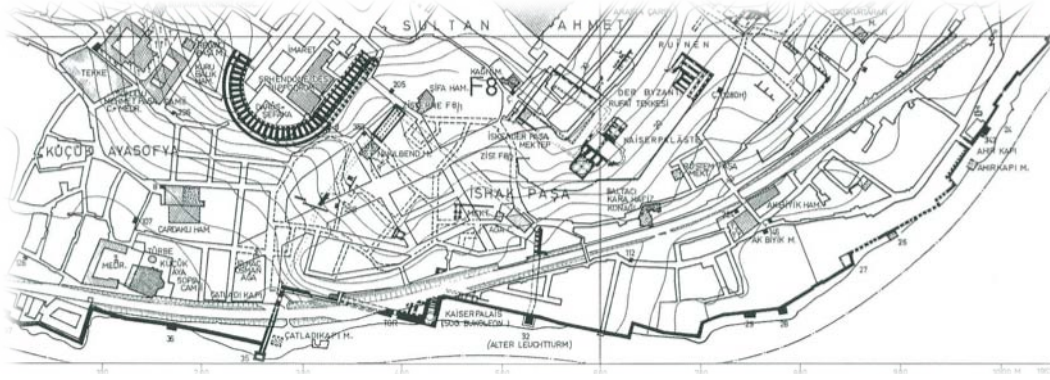


Fig. I.9. The *Boukoleon* Palace and its harbor by Müller-Wiener.

The earliest source that refers to this building complex as a palace is the *Patria*. The account states that the Boukoleon Palace was first constructed by the emperor Theodosius II, ὁ μικρὸς Θεοδοῦσιος, on the maritime walls.¹⁴⁵

According to Anna Comnena, the daughter of the emperor Alexios I Comnenus who reigned at the end of the eleventh century, the name *Boukoleon* given to the complex of the palace and the harbor is likely a combination of the two Greek words “βους” and “λεών” meaning, “bull” and “lion”. It characterized a group of statues that are known to have stood on the shore until the sixteenth century.¹⁴⁶

It was called Boucoleon for the following reason. Near its walls a harbor had been constructed in the old days of marble and concrete, where the stone lion catches its prey, an ox; it clings to the bull’s horn and having broken its neck has its teeth embedded, so to speak, in the animal’s throat. The whole place (the buildings on land and the harbor itself) has been called after it Boucoleon.¹⁴⁷

The Boukoleon complex had long been identified as the so-called “house of Justinian” or “the palace of Hormisdas”. Procopius states that the emperor

Sarantis, A., *Late Antique Archaeology* 4, Leiden (2006): pp. 251-285. For the most recent discussions on the Great Palace see *Visualisierungen von Herrschaft: frühmittelalterliche Residenzen: Gestalt und Zeremoniell: internationales Kolloquium 3.-4. Juni 2004 in Istanbul*. Ed. Franz Alto Bauer. *Byzas* 5. Istanbul: Ege Yayınları, 2006.

¹⁴⁵ Anonymous, *Scriptores Originum Constantinopolitanarum*, p. 256.

¹⁴⁶ Müller-Wiener, *Istanbul'un Tarihsel Topografyası*, p. 60.

¹⁴⁷ Anna Comnena. *The Alexiad*. Trans. E.R.A. Sewter. Baltimore: Penguin Books, 1969, p.105.

Justinian converted the palace of Hormisdas into a new imperial residence and incorporated it into the Great Palace.¹⁴⁸ Hormisdas, the brother of Shapur the First, was a refugee from the Persian Empire to whom, it is said, the emperor Constantine I gave a palace on the southeastern limit of the promontory.¹⁴⁹ An alternative interpretation in terms of the location of the Hormisdas palace indicates the western part of the ruins, which are identified as the Boukoleon Palace.¹⁵⁰

In the early eighth century, the relics of St. Euphemia were allegedly removed by the emperor Leo III to the Boukoleon complex and there thrown into the sea.¹⁵¹ In the year 969, the emperor Nicephoros Phokas was murdered in the palace of Boukoleon by John Tsimiskes who was hauled up from the harbor of Boukoleon to the palace in a wooden basket attached to ropes. Leo the Deacon narrates this incident as follows:¹⁵² “Then John arrived with his fellow conspirators, sailing along the shore in a light boat and disembarking on land where the stone lion is seizing the bull, whistling to his retainers, who were leaning out from the terrace above, he was recognized for this was the signal he had given to the murderers”. Another historical episode draws the picture of the empress Zoe who watched the fleet of Romanos Lekapenos from the same Boukoleon complex.¹⁵³

¹⁴⁸ Procopius, *On Buildings*, I.iv.1-4)

¹⁴⁹ Janin, *Constantinople Byzantine*, pp. 333-4.

¹⁵⁰ Müller-Wiener, *Istanbul'un Tarihsel Topografyası*, p. 225.

¹⁵¹ Mango "The Palace of the Boukoleon", p. 49. See also 'Halkin, Euphémie de Chalcedoine, *Subsidia Hagiographica* 41, 1965, p. 89' for further details.

¹⁵² Leo the Deacon, *The History of Leo the Deacon*, 87.7-8.

¹⁵³ Zonaras. *The History of Zonaras: from Alexander Severus to the Death of Theodosius the Great*. London: Routledge, 2009, p. 467.

During the Fourth Crusade, by the treaty of March 1204, both the palace of Blachernai and the Boukoleon complex were reserved to the Latin ruler Baldwin.¹⁵⁴

Later in the fifteenth century, the harbor of Boukoleon was referred to by a French traveler, Bertrandon de la Broquière. The traveler describes a harbor remain, which stood on the southern shore of the city next to a gate, which is likely to be today's Çatladıkapı.¹⁵⁵ Designating the Boukoleon harbor, Broquière adds that the capacity of the harbor was restricted only to three or four ships.¹⁵⁶

The harbor of Boukoleon, partly silted up and became a humble coastal facility after the abandonment of the palace complex. Today the Boukoleon is part of the well-preserved palace-harbor complex remains on the Propontis Shore before today's Çatladıkapı, which was largely destroyed by the construction of the railway route at the end of the nineteenth century.

1. 4. Harbors along the Bosphorus and along the Coast of the Constantinopolitan Suburbs

This section discusses a selection from the most well-known harbors lying in the vicinity of Constantinople. Presenting a series of cases as distinctive examples, this section investigates the links between a harbor city and its connection points to the other markets by identifying the functions and the meanings attributed to them.

The ancient city of Byzantium, later renamed Constantinople, is situated between the Black Sea and the Mediterranean that are separated by the strait known as the Bosphorus (Fig. I.10). The importance of the settlement originates

¹⁵⁴ George Akropolites. *The History*. Trans. Ruth Macrides. New York: Oxford University Press 2007, p. 378.

¹⁵⁵ Bertrandon de la Broquière. *Bertrandon de la Broquière'in Denizaşırı Seyahati*. Trans. İlhan Arda. (İstanbul: Eren, 2000), p. 216.

¹⁵⁶ Ibid.

from its position, which can be either a connection point or a barrier when desired, between these two different worlds, which are closely and unavoidably linked to each other. Similar to the position of Troy, linking the so-called east and west, the city of Byzantium emerged as a bridge, a connector city linking two continents and two seas around which diverse worlds settled.¹⁵⁷ Through the centuries, the dwellers of the settlement in Byzantium benefited from their control of the city and the Bosphorus by incomes such as tolls and harbor fees paid by the sailors.¹⁵⁸



Fig. I.10. The Bosphorus and the Asian shore.

¹⁵⁷ Dagron, *Constantinople Imaginaire*, p. 30.

¹⁵⁸ Freely, *Istanbul The Imperial City*, p. 11.

As the keystone of the sea traffic flourishing on the proximities of the Mediterranean and the Black Sea basins, Constantinople and its suburbs had long been on the naval trade routes. As a result, the shores of these naval routes and particularly the shores of the Bosphorus “are indented with numerous bays and harbors” of a variety of scales, at least at every 50-70 km as was required by contemporary naval technology.¹⁵⁹

Three major regions define the hinterland of Constantinople geographically: the Bosphorus, the Asian Shore and the Prince’s Islands, and finally the neighboring areas.

For instance, as Nikephoros explains Sykae, modern Galata, is one of these neighboring spots, which at the same time is considered as an annex to the city.¹⁶⁰ Another commercial and suburban harbor close to Constantinople was in the district known as St. Mamas, today’s Beşiktaş. The seventh century *Chronicon Paschale* narrates the construction of the harbor at St. Mamas following a huge fire that devastated the whole city as follows: “In this year there was a great conflagration in Constantinople, such as never before; for it was burnt from sea to sea. And Leo the emperor departed in terror to the far side to St. Mamas, and stayed in retirement there for six months, and he built there a little harbor and a portico, and the palace is named thus, New Portico.”¹⁶¹

As one of the closest areas to Constantinople, St. Mamas quarter housed the Russian traders. In the year 907, a treaty with Russian traders was signed as “exchange for peace”. Accordingly, “whosoever come as merchants shall receive

¹⁵⁹ Rickman, "The Creation of Mare Nostrum: 300 BC-500 AD." *The Mediterranean in History*. Ed. David Abulafia. Los Angeles, California: J. Paul Getty Museum, (2003), p. 135; Freely, *Istanbul The Imperial City*, p. 11.

¹⁶⁰ Nikephoros. *Short History*. Trans. Cyril Mango. (Washington D.C.: Dumbarton Oaks, 1990), p. §41, p. 99.

¹⁶¹ Anonymous, *Chronicon Paschale*, p. 91.

supplies for six months” and “such Russes as arrive here should dwell in the St. Mamas quarter. Our government will send officers to record their names, and they shall receive their monthly allowance. They may conduct business according to their requirements without payment of taxes”.¹⁶²

Ever since the ancient Greek world, the shore of the Bosphorus shore has been full of settlements and fortresses aiming to control the trade of the region (Fig. 1.11). The *Anapulus Bospori* of Dionysius of Byzantium, which was written in the third century, explains that the Bosphorus shore was surrounded by a variety of anchorages, harbors, sanctuaries and sacred places dedicated to anonymous or local heroes.

In the sixth century, Procopius’ *De Aedificiis* illustrates a small-scale local commercial harbor in *Anapulus* that built by Justinian along the Bosphorus and that was one of the shelters for the sailors to meet their market needs:

... There happened to be two sanctuaries dedicated to the Archangel Michael, standing opposite one another on either side of the strait, the one at the place called Anapulus...¹⁶³ He built the one at Anapulus in the following way. By a stone quay¹⁶⁴ he made the shoreline there curve inward to form a sheltered harbor and he transformed the sea beach into a market. For the sea at that point is very calm, and makes possible trading with the land. And the sea-traders tie up their skiffs along the stone quay and from their decks exchange their merchandise for the products of the land. Behind this shore market extends the court (aule) in front of the church...¹⁶⁵

In the fifteenth century, the sanctuary dedicated to the Archangel Michael was an important source of *spolia* in the construction of the fortress that the Ottoman Sultan Mehmet the Second built at the shore of today’s Anadolu

¹⁶² Scafuri, M.P. *Byzantine Naval Power and Trade: The Collapse of the Western Frontier*. MA Thesis. (Texas A&M University, 2002), pp. 37-38.

¹⁶³ Today’s Arnavutköy.

¹⁶⁴ *πετρον εμβολον*

¹⁶⁵ Procopius. *On Buildings*. I. VIII.1-9.

Hisari.¹⁶⁶ As Doukas narrates, the local people reacted against the despoliation of the sanctuary of the Archangel Michael and ended up being murdered.

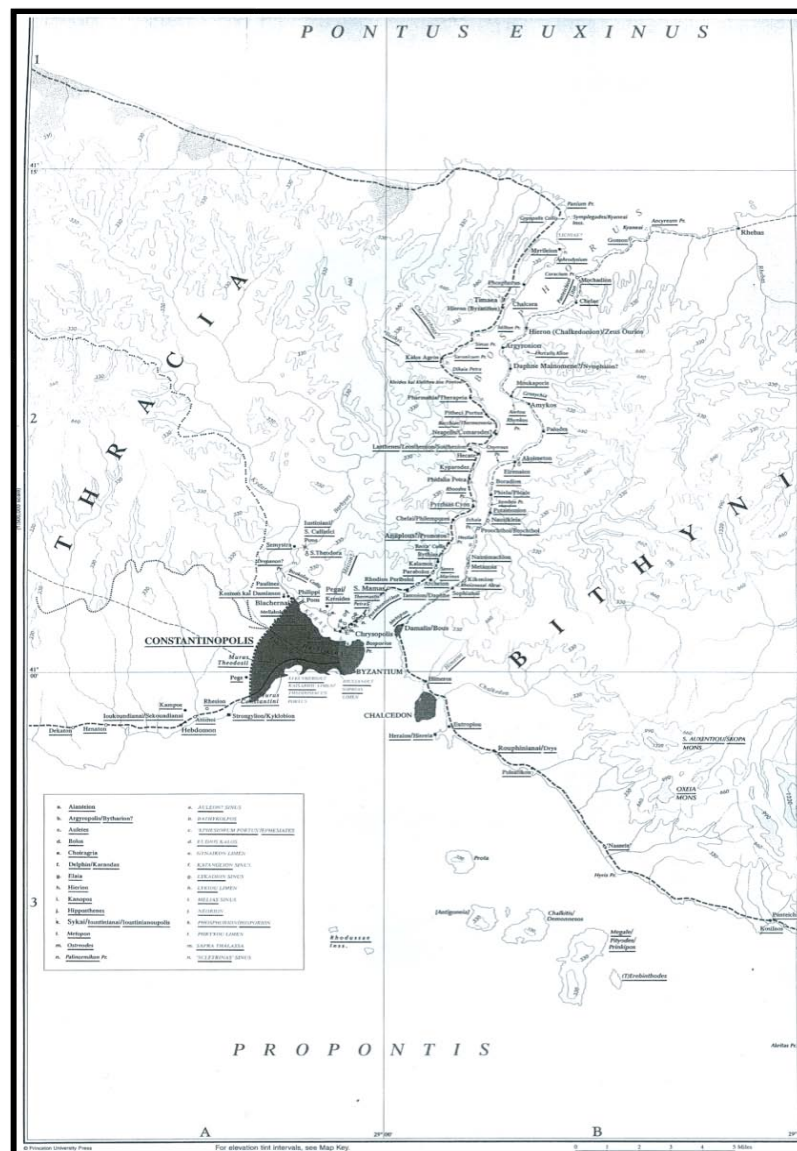


Fig. I.11. The Bosphorus map.

In the ninth century, Nicephoros writes about the existence of a harbor called *Sosthenion*, today's İstinye where the Arab fleet wintered in the early eighth century under the reign of Leo III.¹⁶⁷

¹⁶⁶ Michael Doukas, *Decline and Fall of Byzantium to the Ottoman Turks*, XXXIV.8.

¹⁶⁷ Nicephoros, *Short History*, p. 123.

The shoreline from Chalcedon to Nicomedia including the Prince's Islands was certainly a suitable destination for maritime traffic and was punctuated by a variety of harbors. Chalcedon was a key point even before the foundation of the Greek emporium Byzantium. This suggests that there had always been a harbor at Chalcedon and also a private pier in the Prosphorion harbor reserved for Chalcedon.¹⁶⁸

According to Janin, Chalcedon was built on a promontory that was surrounded by the sea on three sides. Each side was linked to a port, the first one in today's Pazaryolu was on the western side facing to the capital, the second one was Kuşdili-Kurbağalıdere on the eastern part of the promontory and the third one dating back to the sixth century was called *ta Eutropiou*.¹⁶⁹ Referring to Dionysius of Byzantium, Petrus Gyllius states that the harbors were two in number.¹⁷⁰ The sixth century Byzantine author Procopius writes that *Heraeum* lay on the further east of Chalcedon:

He also built palaces at various places, completely new ones, one at **Heraeum**, which they now call Hieron, and another at the place called Jucundianae... There too he skillfully contrived a sheltered harbor, which had not existed before. Finding a shore, which lay open to the winds from two directions and to the beating of the waves, he converted it into a refuge for voyagers in the following way.¹⁷¹

The passage continues with a detailed description of the building techniques implemented in the construction of the *Heraeum* harbor (*Hieron-Hieria* or today's Fenerbahçe). The narrative bears a unique importance, as it is

¹⁶⁸ Anonymous. *Chronicon Paschale*, p. 159.

¹⁶⁹ Janin, *Constantinople Byzantine*, pp. 228-9.

¹⁷⁰ Petrus Gyllius, *The antiquities of Constantinople*, p. 256.

¹⁷¹ Procopius, *On Buildings*. I, xi.16-20.

the only passage that gives detailed information about the underwater engineering techniques of Byzantine harbors.¹⁷²

Nicephoros writes that during the seventh-century siege of the city the Arab fleets landed “on the Bithynian side, the first at the harbor called *Kalos Agros* (near the mouth of the Gulf of Nicomedia), the second at the shore called “Satyros” as a precaution against the Greek Fire.¹⁷³ Another neighborhood that was also called *Kalos Agros* was further north on the Bosphorus, today’s Büyükdere, south of Sarıyer. The name *Satyros* attributed to an anchorage in the account is identifiable as the neighborhood that lies on the Asian side across from the Prince’s Islands, next to today’s Maltepe, Küçükyalı at the lower slopes of the Oxeia and St. Auxentiou/ Skopa mountains (Fig. I.10, 11).¹⁷⁴

The travelers’ accounts provide significant contributions to the identification of the surrounding features. In his narration of his journey on the sea leading to Constantinople, Bertrandon de la Broquière emphasized the harbors where he had stopped. Broquière approaches the city from the east and the first likely stop he describes is today’s Pendik known as *Pantichion* followed by today’s Kartal (κάρτου λιμὴν) before arriving to Chalcedon.¹⁷⁵ Given that *Poleaticon* is approximately in today’s Bostancı, there had to be another stop between Kartal and Chalcedon.¹⁷⁶

Even though the Prince’s Islands had been extensively used for exile, they and their monasteries were also frequently visited for religious purposes. This suggests that there had been a variety of harbors among which *Prinkipo* (today’s

¹⁷² Ibid., xi. 18-23.

¹⁷³ Nicephoros. *Short History*.123. For a detailed explanation of the Greek Fire, see Chapter II.

¹⁷⁴ Janin, *Constantinople Byzantine*, p. 230. For the most recent identification of the district, see Ricci, A., “The Road from Baghdad to Byzantium and the case of the Bryas Palace in Istanbul.” *Byzantium in the Ninth Century: Dead or Alive?* Ed. Leslie Brubaker, (1998), pp. 131-149.

¹⁷⁵ Bertrandon de la Broquière, *Bertrandon de la Broquière'in Denizaşırı Seyahati*, pp. 205-6.

¹⁷⁶ Janin, *Constantinople Byzantine*, p. 230.

Büyükkada) has been the most important one, due to various reasons including the existence of the monastery complex built by the emperor Justin II.¹⁷⁷

The bay lying on the western side of the city towards Thrace was undoubtedly an important spot since both the maritime and land routes passed by there. Another harbor close to the city was *Hebdomon* identified as modern Bakırköy. Procopius tells that the emperor Justinian built several churches next to the harbor in Hebdomon.¹⁷⁸

The harbors along the hinterland of Constantinople served to various functions and their locations determined their future role for the capital. Like *Hebdomon*, some harbors were reserved for the imperial residential complexes as *Centum Cellae*, which was a landing belonging to the Trajan's palace in Italy.¹⁷⁹ Depending on their use, some were simple constructions that provided shelter for sailing vessels or stood as small fish markets. Such harbors were certainly numerous and possibly a multitude of these are no longer standing. The *Book of the Prefect* explains that the fish sellers had to go to the points where the ships draw up in order to buy the fish that they would be selling in the city and the points in question can be one of the harbors out of the city walls of Constantinople.¹⁸⁰

1. 5. Conclusions

This chapter presented five main harbors of Constantinople: the harbor of Neorion, of Prosfhorion, of Julian, of Theodosius and of Boukoleon in their particular historical contexts by taking into account the prominent economic and

¹⁷⁷ Ibid., p. 231.

¹⁷⁸ Procopius. *On Buildings* I.iv.28, viii.15, ix.16.

¹⁷⁹ Pliny the Younger, *Letters I*, Book VI. XXXI.14-17.

¹⁸⁰ Anonymous. *Le livre du préfet, ou l'édit de l'empereur Léon Le Sage sur les corporations de Constantinople*. (Genève: Georg & Co., 1894), p. 67.

political events, as well as the natural disasters under the reign of the Byzantine Empire for over 1200 years. As the detailed account of each harbor manifests, it is hard to separate the urban history of Constantinople from the history of its harbors.

While presenting the specific characteristics of each harbor, this chapter relied on the primary sources written both by key figures and the travelers of the time. Where required, references have been made to today's names and locations in order to help the readers visualize the information presented.

One of the important conclusions to draw from this chapter is that while studying the harbors of Constantinople, it is important to consider the information presented as a series of links of causes and consequences. A harbor cannot be studied in isolation, separated from the rest of the harbors. The construction of one harbor can be the reason for abandonment of another. This was the case for the replacement of the harbors of Julian and Theodosius by the harbors of Kontoscalion and Caesarius.

Similarly, the neglect of one harbor can explain, as well as impact, on the general or the economic history of the Byzantine Empire. This was the case at the harbor of Theodosius, which was no longer used as a storage center for the grain supply after the conquest of the Egypt by the Persians in the seventh century.

In this context, the research presented has to be considered as an exercise for seeing the harbors of the capital as different microcosms related to each other. These microcosms manifest a paradigm of the political and economic conditions of the city of Constantinople.

It is also in this sense that this chapter should set the scene for the rest of the thesis, which will be devoted to discussions of the harbor in Yenikapı. Despite

sparse evidence, it is important to take into account all the harbors of Constantinople, in terms of both their locations and historical contexts, for a more accurate understanding of the harbor in Yenikapı.

Chapter II

Constructing the History of the Harbor in Yenikapı: From an Imperial Harbor to a Public Garden

Introduction

The following chapter has three main aims. The first aim is to define and explain specific names used both for the harbor in Yenikapı and the neighborhood in which the harbor lay throughout the centuries. This harbor was known by a variety of names such as Eleutherius, Theodosius, Caesarius and later on as *Vlanga* (Fig. II.1).¹⁸¹ However, rather than using one of these names in this research I will be referring to the harbor as “the harbor in Yenikapı”. By doing this, I aim to avoid the ambiguity that various names may cause, but rather focus on the fact that there was a harbor in today’s Yenikapı district where archaeological excavations have been carried out since 2004 under the supervision of the Istanbul Archaeological Museum.¹⁸²

The second aim of the chapter is to construct a comprehensive history of the harbor in Yenikapı starting from the fourth century up until modern times, which has not been attempted so far in the existing literature.

¹⁸¹ See Fig. 23. for the table of references about the harbor and how its name changes through centuries. A sixteenth century traveler Pierre Gilles is the first author arguing about the harbor of Eleutherius and Theodosius were the same. Scholars such as Berger, C. Mango, M.M. Mango and P. Magdalino who discussed the same matter built up their theories basing on this argument by adding that the unidentified harbor of Caesarius had to be also the same harbor with a different architectural and functional organization. However Van Millingen argues that the harbor of Caesarius had to be further east and same as the harbor known as Heptasclaon. On the other hand Müller-Wiener thinks that the harbor of Eleutherius must be on the eastern side of the harbor of Theodosius (*İstanbul Limanı*, p. 8).

¹⁸² For the information on the archaeological excavations see *Gün ışığında İstanbul'un 8000 yılı: Marmaray, Metro, Sultanahmet Kazıları* ed. Arzu Karamani Pekin, İstanbul: Vehbi Koç Vakfı, 2007 and *The 'Old Ships' of the 'New Gate': Yenikapı'nın Eski Gemileri* ed. Ufuk Kocabaş, İstanbul: Ege Yayınları, 2008 and the latest publication *1.Marmaray Metro Kurtarma Kazıları Sempozyumu Bildiriler Kitabı* 5-6 Mayıs 2008, ed. Ufuk Kocabaş, İstanbul: İstanbul Arkeoloji Müzeleri, 2010.

Century	Author	Title	Harbor's Name
4 th	Anonymous	The Codex Theodosianus	The Port
5 th	Anonymous or	Notitia Urbis Constantinopolitanae	<i>Portus Theodosiacus</i>
	Hesychios of Miletos		
6 th and 10 th	Anonymous	Patria Konstantinoupoleos	<i>Ὁ δε λιμην του Ἐλευθερίου</i>
7 th	Anonymous	The Chronicon Paschale	
7 th	Anonymous	The Miracles of St. Artemius	<i>Caesarius</i> (as district)
early 8 th	Anonymous	Parastaseis Syntomoi Chronikai	
9 th	Theophanes the Confessor	Chronographia	<i>Proclianesian Harbor of Caesarius</i>
12 th -13 th	Stephen of Novgorod	The Wanderer	The Jewish Gate
12 th -13 th	Niketas Choniates	The Annals	<i>Ta Eleutherion</i>
13 th	Maximos Planoudes	Epistulae	<i>Vlangu</i>
15 th	Michael Doukas	Historia	<i>Vlangu</i>
16 th	Pierre Gilles	The Antiquities of Constantinople	<i>Vlangu</i>

Fig. II.1 The table that lists the primary sources referring to the harbor in Yenikapı, by Ercan.

A renewed focus on the historical evidence including accounts from sources such as the Notitia, the Patria, the Chronicon Paschale, the Parastaseis and Theophanes Confessor with reference to recent archaeological findings provide important insights about the reasons for the construction of the harbor, its main function, the scope of the renovation projects as well as the reason for its abandonment and reuse as settlement and vegetable garden after it was silted up.

The historical investigation of the harbor, which is tentative rather than definitive, will proceed based on a close examination of the Byzantine sources and the visual accounts of the Ottoman periods. In this study, the main concern is the Byzantine period, and particularly, the earlier periods when the harbor was in heavy use. The Ottoman periods will only be discussed in a general approach for the visualization of the harbor during the late Byzantine times and the early Ottoman period.

In order to provide a clear understanding of the historical turns, the history of the harbor will be analyzed in three periods. The first period goes from the fourth to the seventh centuries when the harbor was first constructed, then renovated according to the growing needs of the capital and finally partly abandoned. The second period is between the seventh and the fifteenth centuries during which the harbor changes its character and was used for different purposes. The third period starts with the first depictions of the Vlanga Gardens that was used only as vegetable gardens.

This research constructs an historical framework for the selected newly-discovered architectural remains that will be discussed in the next chapter. Yet in the scope of this research, the study of the material remains had to remain limited considering that the area of the archaeological investigation does not enclose the whole harbor area but only a small section of it.¹⁸³ Another two major reasons for the limitations of this study are first of all, the timing of the thesis, which was submitted before the completion of the archaeological excavation project and secondly the access to the excavated remains which were partly covered for their conservation before the restoration.

2.1. From the Fourth to the Seventh Century: The Period of Construction, Renovation and Change

2.1.1. *Kainopolis*: A New City and the Lycus River

Dating back to the Classical and Hellenistic periods, the recently discovered archaeological evidence such as amphorae and pottery shards gives new insights about the bay in Yenikapı that was in use long before the fourth

¹⁸³ See (Fig. 48, 49) for the architectural plan of the archaeological excavations in Yenikapı, taken from Gökçay p. 167.

century.¹⁸⁴ Before the fourth century, there was no major coastal facility along the bay in Yenikapı. The ships could be just pulled up on the shore as shown in a mosaic from the Bardo Museum that depicts an unloading scene of a ship by men wading through the water (Fig. II.2).¹⁸⁵



Fig. II.2. Mosaic from the Bardo Museum North, ca. 250 C.E., showing a beached merchant vessel.

However after years, due to the insufficiency of adequate harbor facilities, the Byzantine government had to reorganize the shore in Yenikapı for a large-scale shipment.

Stretching about 1,1 km in length, the bay in Yenikapı was in the borders of the twelfth and ninth regions of Constantinople that was administratively divided into fourteenth regions, following the tradition of Rome (Fig. I.7).¹⁸⁶

According to the Notitia, the twelfth region of Constantinople, which formed the western shore, was adjacent to the ninth region in which “a church in

¹⁸⁴ Kızıltan, "Marmaray Metro Projeleri Kapsamında Yapılan Yenikapı, Sirkeci, Üsküdar Kazıları", p. 9.

¹⁸⁵ Ibid; Rickman, "Towards a Study of Roman Ports", p. 109; George Houston, "Ports in Perspective, Some Comparative Materials on Roman Merchant Ships and Ports." *AJA* 92.4 (1988), p. 561. On the western end of the harbor, there is a multitude of amphorae from Samos, Chios and Thasos dating back to the fifth-third centuries B.C.

¹⁸⁶ The earliest account referring to the administrative divisions is in fact the Notitia Urbis Constantinopolitana, which is compiled under the reign of Theodosius the Second, which will be discussed in the following part of the chapter. It is still unknown when the regional division started first but the tradition was adapted from the city of Rome (Berger, "Regionen und Strassen im frühen Konstantinopel", p. 352; Bratinau, "La question de l'approvisionnement de Constantinople", p. 85).

Kainopolis, the Alexandrian and Theodosian Granaries (Horrea Alexandrina and Theodosianum) and the domus of Nobilissima Arcadia” were situated.¹⁸⁷

The Kainopolis district, meaning the “new city” in Greek, took its name from the fact that it was situated out of the Severian old city walls and was settled relatively later.¹⁸⁸ At the beginning of the sixth century, Zosimus writes how Constantine I filled the bay at the mouth of the Lycus River as follows:¹⁸⁹ “...They permitted dwellings to be chockablock, so that the city’s inhabitants, both stay-at-homes and marketers are pressed for space and proceed at risk owing to the plethora of men and animals. In addition, no mean part of the surrounding sea has become land, where stakes were driven and edifices raised upon them, edifices, which by themselves are enough to make up a goodly city.”¹⁹⁰

Zosimus’ account explains how the shore was filled became a new city, Kainopolis.¹⁹¹ The district was situated in the ninth region, on the eastern side of the harbor of Theodosius at the mouth of the Lycus River (Fig. II.3).¹⁹²

The name of the Lycus River, was derived from “λυκος, ό” meaning wolf in Greek, and was a common name for geographical features such as valleys (as in the Lycus Valley in Ancient Caria). Constantinople’s Lycus River flowed between gardens and *philopatia*, hunting parks from north to south through its valley, which lay between the sixth and the seventh hills.¹⁹³ The river reached the

¹⁸⁷ See *Notitia* pp. 237-239 for the content of the ninth and twelfth regions.

¹⁸⁸ Janin, R. *Constantinople Byzantine*, pp. 53-337.

¹⁸⁹ About Kainopolis, see: Cyril Mango, *Le développement urbain de Constantinople (IVe-VIIe siècles)*, p. 18.

¹⁹⁰ Zosimus, *Historia Nova*.II.35.

¹⁹¹ Mango, *Le développement urbain de Constantinople*, p. 18.

¹⁹² Ibid.; Janin, *Constantinople Byzantine*, 26; Magdalino, "The Maritime Neighborhoods of Constantinople", p. 18. Kainopolis was later referred in the *Chronicon Paschale* due to the damages caused by a severe thunderstorm in the sixth century and emphasizes the close connection of the Kainopolis to the Forum of Theodosius (Anonymous, *Chronicon Paschale*, p. 60).

¹⁹³ Niketas Choniates, *O City of Byzantium*, (8) I. 10, Maguire, "Gardens and Parks in Constantinople", p. 252.

Sea of Marmara from the bay, which would be used as the largest harbor of the capital at later periods, the harbor in Yenikapı (Fig. II.3).

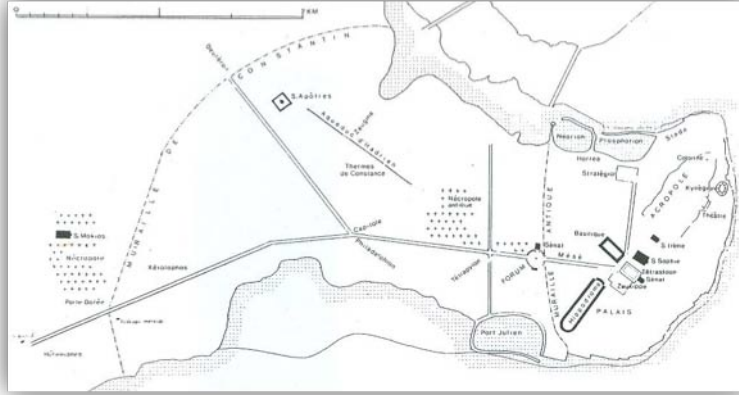


Fig. II.3. The map of the fourth century Constantinople by Cyril Mango showing the silted up bay into which the river Lycus flowed.

Silts carried by the Lycus River played an important role in the destiny of this harbor. Starting approximately from ten thousand years ago as was proved by the geological strata samples, a slow process of silting started for the harbor, which became a vegetable garden called Langa Bostanı, the Vlanga Gardens from the twelfth century onwards according to historical evidence.¹⁹⁴ From the thirteenth century onwards, a ruined church in Vlanga was used as cemetery and became a neighborhood where mainly Jews and Armenians were settled.¹⁹⁵

Despite the maintenance problems caused by its location, constructing a harbor at the mouth of a river can be advantageous and disadvantageous at the same time. For instance, Ostia, the main harbor and warehouse of Rome, the capital of the Roman Empire, was constructed at the mouth of Tiber for practical

¹⁹⁴ Algan et al. "Antik Theodosius Yenikapı Limanı'nın Jeoarkeolojik Önemi: Geç-Holosen Ortam Değişimleri ve İstanbul'un Son Onbin Yıllık Kültürel Tarihi", pp. 242-245. İstanbul: Vehbi Koç Vakfı, 2007, p. 243; The Vlanga Gardens will be discussed in the following part of the thesis in relation to the miniatures. For further information see Berger, A., "Der Langa Bostanı in İstanbul." *IstMitt* 43/1993, pp. 467-477. For the date of the silting of the harbor: Kocabaş et Kocabaş, "Le port de Théodose." *De Byzance à İstanbul*, p. 145.

¹⁹⁵ Maximus Monachi Planudis, *Epistulae*, Ed. Maximilianus Treu, Amstelodamum : Apud A.M. Hakkert, 1960, pp. 50-52; Eremya Çelebi Kömürcüyan, *İstanbul Tarihi, XVII. Asırda İstanbul*, (İstanbul: Eren Yayıncılık, 1988), p. 3; Ortaylı, "Langa", p. 195; Kocabaş et Kocabaş, "Le port de Théodose", p. 144.

purposes (Fig. 99, 100). Goods from all over the Roman world reached Ostia where they were transferred from bigger ships to small ones. Small vessels, which had the advantage of being able to float on the Tiber, carried the goods to the horrea or warehouse complexes in Ostia.¹⁹⁶ They were all constructed for the *navicularii* sea traders who were asked to pay certain amount of taxes to the government as a rental fee.¹⁹⁷

Two first century B.C. descriptions by Dionysius of Halicarnassus and by Strabo present a dilemma about the harbors at the river's mouths. Dionysius of Halicarnassus argues that the best harbors were constructed at river mouths as they presented safe anchorage facilities for smaller ships but not for larger vessels.¹⁹⁸ On the other hand, Strabo disagrees and suggests that silting up was a major problem, as in the case of Tiber that was "fed by numerous small streams" and that this would subsequently cause serious problems to Ostia.¹⁹⁹ Just a few centuries later, he turned out to be right when Ostia fell into complete disuse, as did the harbor in Yenikapı. Leptis Magna on the southern Mediterranean shore, in Libya, is another example of the rapid deposit of silts since it was built on the mouth of Wadi LebDAH and completely fell in disuse in a short period of time (Fig. 101).²⁰⁰

Nevertheless we do not know exactly whether the Lycus River offered transport facilities like the Tiber did for Ostia. Yet, the fact that it flowed into a bay deep enough that was ideal for the construction of an artificial harbor constitutes a major fact in the choice of the location of the harbor. A major

¹⁹⁶ Meiggs, *Roman Ostia*, pp. 292-3.

¹⁹⁷ For further information about Ostia, see Meiggs, R. *Roman Ostia*. Oxford: Oxford University Press, 1977.

¹⁹⁸ Dionysius of Halicarnassus.iii.44.

¹⁹⁹ Strabo. *Geography*. V-VI 231-2.

²⁰⁰ Ken. D. White, *Greek and Roman Technology*, (New York: Cornell University Press 1984), p. 109.

difference was the geographical setting, which differentiated Ostia from the harbor in Yenikapı. Ostia had been on a flat terrain whereas the topography of Yenikapı was steep.

On the other hand, mainly due to the Lycus River that emptied into the bay in Yenikapı, the harbor required regular maintenance in order to preserve the depth by dredging the harbor.²⁰¹ For this reason, after several centuries possibly in the tenth century “the harbor of Theodosius was allowed to silt up completely”.²⁰²

2.1.2. Eleutherion and Ο δε λιμήν του Ἐλευθερίου

The earliest historical evidence about Yenikapı is the *Codex Theodosianus*. One of its articles dating to 384 declares that “all men shall contribute their work and shall zealously urge forward the restoration of the Port and the aqueduct” without any privileges.²⁰³ According to scholars, the harbor in question was an already existing harbor in Yenikapı that was restored and renamed after the emperor in 390, few years after the declaration of the article.²⁰⁴

The *Patria* of Constantinople writes about the bay at today’s Yenikapı naming the shore as *Eleutherion* and explaining the construction work of the harbor by Constantine I and its subsequent renovation by Theodosius I:²⁰⁵

Concerning the harbor of Eleutherius: The Harbor of Eleutherius was constructed by Constantine the Great. Standing there was a statue of Eleutherius, the asecretis, carrying a kapoulion over his shoulders and a fan (palm?), both of stone. When the monument of Theodosius was set up

²⁰¹ Oleson, J.P. "The Technology of Roman Harbours." *IJNA* 17:2 (1988), p. 148.

²⁰² Magdalino, "The Maritime Neighborhoods of Constantinople", p. 215.

²⁰³ *Codex Theodosianus* XV.1.23.

²⁰⁴ Guillard, *Etudes de topographique de Constantinople Byzantine*, p. 93; Mango, "The Development of Constantinople as an Urban Centre", p. 121.

²⁰⁵ Anonymous. *Scriptores Originum Constantinopolitanarum*. Ed. Theodore Preger. New York: Arno Press, 1975. The anonymous account originally written in the sixth century as a sole part and later revised and extended in the tenth century (Mango, "The Triumphal Way of Constantinople and the Golden Gate", p. 180. See also Dagron. G. *Constantinople Imaginaire. Etudes sur le recueil des Patria*. Paris, 1984. for further discussions).

in the Forum Tauri, the building debris was thrown into the harbor and it was filled in.²⁰⁶

According to the *Patria*, during the renovation work at the Forum Tauri, the emperor Theodosius I ordered the debris from the setting up of the column bearing his statue to be thrown to “the harbor of Eleutherius” in “the Eleutherion district”.²⁰⁷ The harbor in the Eleutherion district is argued to be the same as the harbor of Theodosius even if some scholars disagree by stating that there had to be two different coexisting harbors in the same neighborhood.²⁰⁸

The *Parastaseis Syntomoi Chronikai*, an eighth century account, writes about a certain Eleutherius who built a palace at the Senate.²⁰⁹ Eleutherius was executed by the emperor and subsequently “commemorated in statue”.²¹⁰

According to Martindale, Eleutherius was a eunuch appointed as *cubicularius* and *patricius* in the seventh century under the reign of Heraclius.²¹¹ Considering the period in which he lived, this individual cannot be related to the early stages of the harbor in Yenikapı.

But if Eleutherius, who also named the neighborhood, really existed in the fourth century, what kind of construction programs did he commission as *asecretis*, the secretary of Constantine’s imperial court? The *Parastaseis* writes that Eleutherius built a palace by the Senate in the proximities of the first region

²⁰⁶ *Patria*, II 63. See also Magdalino, "The Maritime Neighborhoods of Constantinople", p. 212. The original Greek text had been translated into English by Adrian Saunders who enriched my understanding of the text by his comments.

²⁰⁷ A similar action took place first in Kainopolis and long after during the Ottoman periods in 1760, under the reign of Ahmed III. Mango, "The Shoreline of Constantinople in the Fourth Century", pp. 17-20; See the Fig. 45a-b, 46, 47 for the change of the shoreline in recent years.

²⁰⁸ Mango, *Le développement urbaine de Constantinople*, p. 38; Janin, "Les ports de Constantinople sur le Propontide", pp. 74-5; Guiland, *Etudes topographique*, p. 92; Gökçay, "Yenikapı Kazılarında Ortaya Çıkarılan Mimari Buluntular", p. 166.

²⁰⁹ *Parastasis Syntomoi Chronikai* is still a controversial text due to the fact of being almost impossible to date it. Cameron and Herrin (p. 1) in their introduction to the translation of the original texts emphasize that the text is only preserved in an 11th century manuscript which is likely late for the original dating. They argue that due to the linguistic reasons, the text dates to the eighth century C.E. (Cameron and Herrin, p. 27).

²¹⁰ Anonymous, *Parastasis.7.*: Preger p. 67.

²¹¹ Martindale, *The Prosopography of the Later Empire*, p. 436.

that is next to today's Sultanahmet.²¹² This palace is different from the residence of the empress Eirene in *ta Eleutheriou* where Theophanes Confessor had been imprisoned in 815 by the Emperor Leo the Fifth.²¹³ According to Janin and Mango, this residence was next to today's Aksaray.²¹⁴

As part of Eleutherius' construction program, the *Patria* illustrates a statue of Eleutherius that carried "a kapoulion²¹⁵-a basket- over his shoulders and a fan, both of stone". The *Patria* explains that this statue stood in "the harbor of Eleutherius" or "the harbor in Eleutherion": "Constantine the Great constructed the Harbor of Eleutherius when he founded the city. The patrician Eleutherius was placed in charge of the construction work. A marble statue of Eleutherius was placed in the harbor carrying a fan and a woven basket."²¹⁶ Van Millingen argues that this statue was erected on the northern edge of the harbor where the oldest remains of the harbor's walls were situated.²¹⁷

According to the *Patria* the harbor in Yenikapı, named as Eleutherius, was constructed under the reign of Constantine I as part of the construction of the new capital.²¹⁸ The emperor enlarged the old Byzantium, developed its infrastructure and renovated the city by constructing an imperial palace, a senate, a circular

²¹² Two Senate houses were known in Constantinople; the first one was in the forum of Constantine and the other in the first region next to the harbor of Julian.

²¹³ Magdalino, "Maritime Neighborhoods of Constantinople", p. 216; Mango, *Le développement urbaine de Constantinople*, xlix.

²¹⁴ Janin, *Constantinople Byzantine*, p. 13; Mango xlix nn 25. The palace Eleutherius and the empress Irene are narrated in several historical sequences in Theophanes account (pp. 641, 648, 656) where she one day assembles with the officers of the *tagmata*, or she hides herself, and finally she asks Nicephoros to leave her palace.

²¹⁵ The real meaning of kapoulion is unclear but two possibilities for 'Kapoulion' can be proposed: a wooden basket or a cloth. The attributes of the statue of Eleutherius could refer to the construction of the harbor or the function of the harbor as the main center for the storage of grain.

²¹⁶ *Patria*, III 91. As the translator of the passage Adrian Saunders refers to Pierre Gilles' statement to explain that the statue carried a marble basket and a marble palm' which would explain the gloss *amphotera lithina* in the previous passage (*Patria*, II 63). Saunders suggests that then the word here would yield some such sense as "a kind of basket with six radial ribs".

²¹⁷ Van Millingen, *Byzantine Constantinople*, p. 297.

²¹⁸ Bassett, *The Urban Image of Late Antique Constantinople*, p. 22-23.

forum, a church, and also a harbor, which did house mainly the grain supply of the city just like in Rome.²¹⁹

Grain was hoarded in huge warehouses, *horrea* built next to the harbor, *Horrea Theodosianus* and *Horrea Alexandrina*. Later these *horrea* were enlarged by Valens, few years later by Theodosius I and later renovated by Theodosius II.²²⁰

The population of Constantinople had reached 70-80,000 already in the fourth century.²²¹ Under the reign of Valens at the mid fourth century, the capital was no longer able to fulfill the needs of the growing urban population. The emperor Valens temporarily resolved the problem of water storage and its distribution by restoring the aqueducts and cisterns.²²²

After the reign of Valens, just several decades later, Theodosius I renovated the harbor in Eleutherion by filling the harbor with the debris of his monumental statue that was placed in the forum of Theodosius.²²³ In the scope of the renovation project, Theodosius I probably remodeled the harbor complex in 384-390 by enlarging the harbor complex on the southern shore to supply more grain for *annona*.²²⁴

By a decree dating back to 394, under the reign of Theodosius I, officials of the Byzantine court were no longer allowed to give their names to the restored

²¹⁹ Dagron, *Naissance d'une capitale*, pp. 92-102.

²²⁰ Bratianu, "La question de l'approvisionnement de Constantinople", p. 86; Müller-Wiener, *Istanbul Limanı*, p. 9; Mango, M.M., "The Commercial Map of Constantinople", p. 190; Mango, "The Development of Constantinople as an Urban Centre", p. 121; Gilbert Dagron, "The Urban Economy, Seventh-Twelfth Centuries." Ed. Angeliki E. Laiou. *The Economic History of Byzantium From Seventh Through The Fifteenth Century*, Washington, D.C.: DOS (2002), p. 90

²²¹ Jacoby, "La population de Constantinople à l'époque Byzantine", p. 82.

²²² Nikephoros, *Short History*, p. 85.

²²³ Anonymous, *Parastesis*.7.: Preger p. 67.

²²⁴ Mango, "The Development of Constantinople as an Urban Centre", p. 121.

buildings. Ammianus writes that a contemporary city-prefect of Rome inscribed his name on buildings as “non ut veterum instaurator sed conditor”.²²⁵

Long before of the decree in 394, the harbor in Yenikapı was named after *Eleutherius the asecretis*. But after the decree in 394 and the renovation of the harbor in 390s, the harbor in Yenikapı did not bear the name of an official Eleutherius but that of the emperor Theodosius.

2.1.3. The Twelfth Region of Constantinople and *Portus Theodosiacus*

After the reign of Constantine the Great and the filling of the harbor under Theodosius I, the *Notitia Urbis Constantinopolitanae* writes about the harbor in Yenikapı under the reign of Theodosius II. Dating back to the mid fifth century C.E., the Notitia is the earliest account about the harbor referring to it as *Portum Theodosiacum*, the harbor of Theodosius.²²⁶

According to this account, fifth century Constantinople had fourteen regions that were defined on the basis of geographical and administrative criteria (Fig. I.7). The location and the borders of each region are known through the reference points provided by specific buildings.²²⁷ At least three of these regions (Kainopolis, Eleutherius and Caesarius) correspond to the district where the harbor in Yenikapı lay.

In the twelfth region, which comprises partly today's Yenikapı, Aksaray and Laleli and the southern part of the Fatih districts on the south coast of Istanbul, the inventory lists the monuments as follows: “...the Golden Gate, the

²²⁵ Downey, "Imperial Building Records in Malalas", p. 13; *Codex Theodosianus*.XV.1,3.

²²⁶ Also known as the *Notitia*, the account was compiled under the reign of Theodosius II as an anonymous Latin description of the city of Constantinople (Alexander Kazhdan "*Notitia Urbis Constantinopolitanae*" *The Oxford Dictionary of Byzantium*). The account was compiled as an inventory listing basically all public and imperial institutions and buildings by categorizing them according to the administrative regions in which they were situated during the fifth century C.E.

²²⁷ The location of the fourteenth region is still discussed; see Berger's 'Regionen und Strassen im frühen Konstantinopel' pp. 374-5 and Cyril Mango, "The Fourteenth Region of Constantinople" VIII in *Studies on Constantinople* for further discussions.

Troadesian porticoes, the Theodosian Forum, the column there with an internal staircase, the mint, the harbor of Theodosius (*portum Theodosiacum*), 11 streets, 363 houses, 3 great porticoes, 5 private baths, 5 private bakeries, 9 distribution centers, 1 curator, 1 vernaculus, 17 collegiati, 5 vicomagistri.”²²⁸

Surrounded by a variety of structures, The *Notitia* leaves no doubt that there was a harbor which had been named after the emperor Theodosius, “the harbor of Theodosius”, and it was located somewhere on the shore of Propontis next to today’s Yenikapı on the southern slopes of the seventh hill.

2.1.3.1. The Fifth Century Urban Layout and Surroundings of the Harbor According to the Notitia

The *Notitia Urbis Constantinopolitanae* is at the same time an incomparable source for drawing a picture of the urban fabric of Constantinople in which the harbor of Theodosius lay in the fifth century C.E. The city depended on its harbors just as the harbor depended on the city. This mutual relationship offered the harbor the opportunity for the improvement of its infrastructures by creating special networks where trade goods coming to the harbor could be marketed and presented to the public. The shops, which were scattered all around the city, were an indispensable part of ancient urbanism. They could be found everywhere particularly in the porticoes constructed in monumental ways.

The *Notitia* states that the *Troadesian porticoes* (οἱ Τρωαδήσιοι ἐμβολοὶ) lay in the same region as the harbor of Theodosius.²²⁹ The name of the portico probably came from the construction material, violet granite, which once covered

²²⁸ Anonymous, *Notitia Urbis Constantinopolitanae* in *Notitia Dignitatum*, ed. O. Seeck (Berlin 1876) p. 239, translated from Latin into English by the author of the thesis.

²²⁹ According to Cyril Mango, the portico lay in today’s Cerrahpasa (Mango, *Le Development Urbain*, p. 28).

the Troadesian portico.²³⁰ The urban texture, which includes porticoes leading to the harbors, reflects the design of the harbor complex of Julian with Sigma.

The harbor in Yenikapı was also surrounded by a variety of practical buildings, such as shops, *mitata* (special lodging houses for merchants) and warehouses and fora.²³¹ The ninth century account *Book of the Prefect* illustrates a picture of the economic arrangements designed for each forum and district (Fig. II.4).

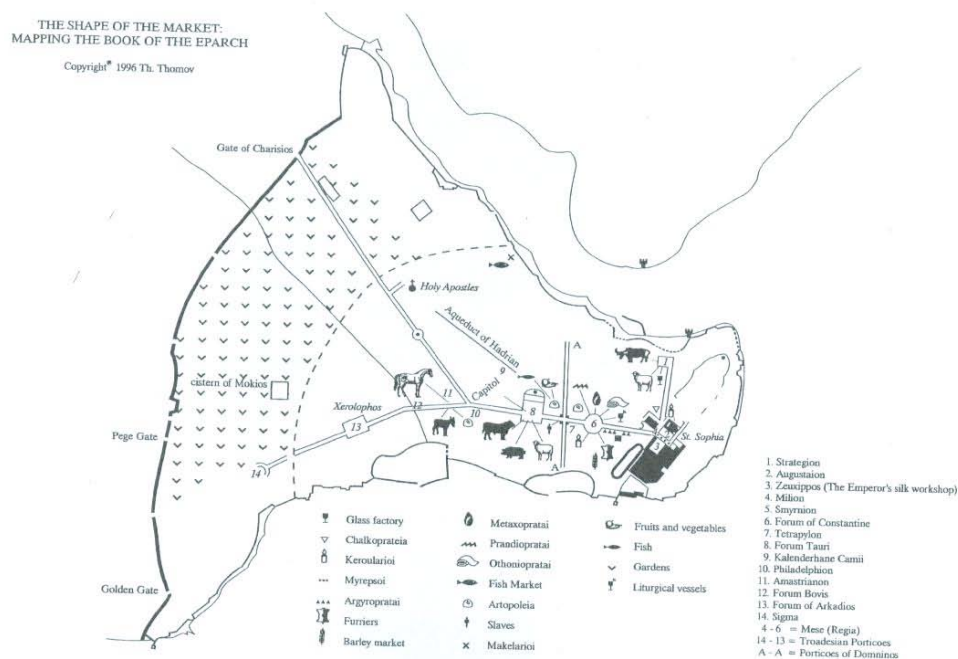


Fig. II.4. Fora's functions according to Thomov and Ilieva.

A forty-day earthquake in the year 480 destroyed the Troadesian porticoes together with the statue of Theodosius the Great that stood in the Forum Tauri.²³²

Yet the porticoes must have been restored afterwards, since the Chronicon Paschale states that in the early seventh century the emperor Phocas entered the

²³⁰ Jean Pierre Sodini, "Marble and Stoneworking in Byzantium Seventh to Fifteenth Centuries" *The Economic History of Byzantium*. Dumbarton Oaks Studies 59 (2002), p. 131; Janin, *Constantinople Byzantine*, p. 95.

²³¹ Scafuri, *Byzantine Naval Power and Trade*, p. 35.

²³² Guidoboni, Emanuela. *Catalogue of Ancient Earthquakes in the Mediterranean Area up to the 10th Century*. Trans. Brian Phillips. (Rome: Istituto Nazionale di Geofisica, 1994): pp. 302-303.

city from the Golden Gate after his proclamation in Hebdomon, and that he subsequently traversed the Troadesian Portico and reached Hagia Sophia in the early seventh century.²³³ Considering the processional way followed by the emperor, Janin argues that the portico was on the west of the forum of Arcadius.²³⁴

Despite being recognized as the center of the grain supply, the harbor in Yenikapı had a number of other functions. Clues to one of these functions are in the Notitia, which writes that one of the two mints of the capital was situated in the same region as the harbor of Theodosius.

As an economic point of origin, the mint in the capital was an important center where most of the golden and copper coins were stamped.²³⁵ The mints were not haphazardly situated next to the harbors; on the contrary, the fact that they lay next to the harbor facilitated the transportation and the diffusion of the minted coins. For instance, other important minting centers through the empire were Thessalonica, Kyzikos, Nicomedia, Antioch and Alexandria, all of which were port cities like Constantinople likely for practical reasons.

2.1.3.2. Yenikapı as An Ostia for Constantinople: The Grain Supply for the Byzantine Capital

Grain remained the main imported staple for the harbor in Yenikapı just like in Ostia, which served the city of Rome in earlier periods.²³⁶ In the first half of the fourth century the emperor Constantine I, foreseeing that the urban population would increase in a short time with new dwellers, organized food supply resources.

²³³ Anonymous, *Chronicon Paschale*, I. 693; Marcellinus Comes PL LI 932 D.

²³⁴ Janin, *Constantinople Byzantine*, p. 95.

²³⁵ Whittow, Mark. *The Making of Byzantium 600-1025*. (Berkeley: University of California Press, 1996), p. 60.

²³⁶ As previously discussed in the Patria, the attributes in question are a basket and a spade.

Having been inspired by Rome's model of *annona civica*, the taxation for supplying grain, all commodities from Africa and Egypt started to be transferred to Constantinople, which soon enabled the free distribution of grain *frumentationes* to the inhabitants of the newly founded city.²³⁷ According to the *Codex Theodosianus*, laws compiled under the reign of Theodosius II in the mid fifth century stated that:

To no person at all shall grain from the public storehouses be furnished instead of annona, not even to anyone of Our own divine household, but all the regular tribute shall be consigned to the supervisors, and the annona shall be furnished to households in the form of cooked bread. For thus must the regular tribute expended, as it was established by Constantine of glorious memory and increased by the sainted grandfather of My Piety, since want increases if the grain assigned to the annona is put to other uses, and the people are forced to buy for themselves from the public supplies that which they would have been able to sell to others.²³⁸

Grain of which distribution was banned without having been processed came primarily from Egypt but also from various other regions under the control of the Byzantine government.²³⁹ The eight main grain crops were maize, sorghum, rice, oats, rye, millets barley and wheat, among which the last two were the mostly known crops since antiquity.²⁴⁰ The Val di Chiana in Etruria, the Leontini region in Sicily, the Nile Valley and the Black Sea were also important centers for higher yields by economical dry farming.²⁴¹ But Egypt's fertility from

²³⁷ Andrew J. Cappel "Annona" in The Oxford Dictionary of Byzantium (e-reference edition); Rickman, "The Grain Trade under the Roman Empire." *MAAR* 36: The Seaborne Commerce of Ancient Rome: Studies in Archaeology and History (1980), p. 263.

²³⁸ *Codex Theodosianus* XIV.16.2.

²³⁹ Jacoby, "La population de Constantinople", p. 88.

²⁴⁰ Rickman, "The Grain Trade under the Roman Empire", p. 261.

²⁴¹ Ibid., p. 261. From the eighth century B.C. onwards, The Black Sea and Egypt were both the grain growing regions (Rathbone, Dominic. "The Grain Trade and Grain Storages in the Hellenistic East." *Trade and Famine in Classical Antiquity*. Ed. Peter Garnsey and C.R. Whittaker. Cambridge (1993), pp. 50-51.)

the overflowing Nile was incomparable, and it demonstrated high productivity and a large surplus of grain as a result.²⁴²

In Alexandria, a large amount of the grain crop was collected and stored in great granaries called *horrea*, which were situated in the districts named Neapolis and Mercurium. Seneca wrote that the transfer of the grain was conducted by the *classis* of grain-carrying Alexandrian freighters whose capacity reached to 1,200 tons.²⁴³

Egypt, which was able to feed 600,000 people per year, had long remained the main source of grain supply for Rome and from the fourth century onwards for Constantinople, and was also the main transfer point until its conquest by the Persians and later the Arabs in the seventh century.²⁴⁴ Already at the time of Augustus, a service headed by the *praefectus annonae* was created to be responsible for the grain import.²⁴⁵ The prefect of Egypt controlled the exports and the shipments of grain from Alexandria.²⁴⁶ The *praefectus annonae* also controlled the sale prices of grain as a precaution against the private dealers (*negotiatores* or *mercatores frumentarii*) who were involved in the grain trade.

In Constantinople, free distribution of grain *frumentationes* started in 330, the day of the city's inauguration.²⁴⁷ Constantine I envisaged the number of

²⁴² Lewis, Arthur.R. *Naval Power and Trade in the Mediterranean A.D. 500-1100*. (Princeton: 1951), p. 8.

²⁴³ Rickman, "The Grain Trade under the Roman Empire", pp. 265-6; Durliat, "L'approvisionnement de Constantinople", p. 30.

²⁴⁴ Durliat, "L'approvisionnement de Constantinople", p. 21; Averil Cameron, *The Mediterranean World in Late Antiquity AD 395-600*. London; New York: Routledge, 1993, pp. 99-100. After the conquest of Egypt, the Byzantine Empire turned to the Sicilian supplies but right after in the ninth century, Sicily was also conquered and the Black Sea took the position of the main supply, as it was relatively more secure (Teall, "The Grain Supply of the Byzantine Empire, 330-1025" *DOP* 13 (1959), pp. 89-90).

²⁴⁵ Russell Meiggs, *Roman Ostia*. Oxford: Oxford University Press, 1977. 2nd ed, p. 55; Rickman, "The Grain Trade", p. 263.

²⁴⁶ Lionel Casson. "The Role of the State in Rome's Grain Trade." *MAAR* 36 (1980), p. 22.

²⁴⁷ Bratinau, "La question de l'approvisionnement de Constantinople", p. 85. According to Teall ("The Age of Constantine", p. 26), an eastern fleet to serve Constantinople was created in 334, thus much more later.

possible inhabitants as 25,000, which became the approximate population of the city only in 430.²⁴⁸ Following this, the emperor changed the route of the fleets carrying grain from Alexandria to Rome in 334 by creating an eastern fleet, which was planned to serve Constantinople. He also promoted the people who were involved in this business by offering them tax exemptions since the grain became vital to the city's existence.²⁴⁹ In addition to the maritime axes, the road axes were moved to Constantinople, which also enriched the lands and the towns lying on the periphery of Constantinople such as Thrace.²⁵⁰

Grain and therefore bread remained always the main dietary staple for the citizens from the lower classes.²⁵¹ Bread was sold in the *artopolia* quarter, which particularly lay in the area between the Forum of Constantine and the forum of Theodosius as the Book of Ceremonies states.²⁵² The owners of the shops selling bread or the people involved in the grain storage and distribution business always benefited from grim years such as food shortage or sieges, which added to their profits. The price of the grain varied in a short time depending both on the private and imperial stocks.

The Chronicon Paschale states that in 463, in the time of the consulship of Vivianus and Basilius "under the reign of Leo I, there was a shortage of bread, so one loaf was sold for three *folles* (for a coin)".²⁵³ Occasionally the government took a leading or more controlling position in grain storage. In the sixth century, after the Nika Riot, Justinian I, while rebuilding the damaged buildings, also

²⁴⁸ Durlat, "L'appvisionnement de Constantinople", p. 20.

²⁴⁹ Teall, "The Age of Constantine", p. 26; *Codex Theodosianus* XIII. 5.7 (p. 334). Johnson and West, *Byzantine Egypt*, pp. 160-2.

²⁵⁰ Avramea, "Land and Sea Communications, Fourth-Fifteenth Centuries", p. 57.

²⁵¹ Rickman, "The Grain Trade under the Roman Empire", p. 262.

²⁵² Mango, *Le développement urbain de Constantinople*, p. 31.

²⁵³ Anonymous, *Chronicon Paschale*, p. 85. The Chronicon Paschale writes that people suffering from the shortage revolted against the government in 421 when 500 pounds of gold were devoted to famine relief following a "bread riot" (Anonymous, *Chronicon Paschale*, p. 62. (nn 412); *Codex Theodosianus* xiv.16.1.)

ordered the construction of granaries and bakeries inside the palace for reasons of both security and control.²⁵⁴

Agricultural lands as the sources of the local products played a major strategic role and took a central place during the sieges.²⁵⁵ When an enemy attacked and besieged the capital, the main aim was to test the endurance of the city either by blocking the harbors, which limited contact with outside world or by establishing military camps in the agricultural lands.

The history of the capital witnessed countless military strategies depending on political conditions. For instance in 987 Bardas Sclerus and Bardas Phocas blocked the entrance of the Hellespont and the Dardanelles, condemning Constantinople to starvation.²⁵⁶ At a much later time, but with a similar principle, under the reign of Manuel II Palaiologos, between 1391-1402, the Ottoman fleet under the command of Beyazıd I blocked access to the capital's harbors.²⁵⁷ During the days of siege, the maritime grain supply was certainly the only source for feeding people. If the stocks were not sufficient, the emperors as Manuel II Palaeologos sought other sources of supply such as Venetian merchants who, in spite of Ottoman ships somehow, possibly by sharing their surplus, reached the capital and brought grain to the Byzantines.²⁵⁸

All these military strategies used during the sieges are indications of the grain's importance for the capital. From the tenth century onwards and probably

²⁵⁴ Ibid., p. 127 (years 527-532).

²⁵⁵ Casson, "The Role of the State in Rome's Grain Trade", p. 21.

²⁵⁶ Teall, "Grain Supply", p. 119.

²⁵⁷ Nevra Necipoğlu, *Byzantium Between the Ottomans and the Latins: Politics and Society in the Late Empire*. Cambridge: Cambridge University Press, 2009, p. 149.

²⁵⁸ Ibid., p. 149.

earlier on, the Mediterranean or the islands such as Tenedos and Crete were still significant for the storage of capital's grain.²⁵⁹

In the fourth century, the statue of Eleutherius had to be the main figure that the fleet of vessels carrying the grain from Egypt first faced when approaching to the harbor in Yenikapı. Standing at the entrance of the harbor, the colossal statue probably dominated all the shipping and trade carried out in the harbor by facing the monumental granaries.

With or without the statue of Eleutherius or irrespective of its name being Eleutherius, Theodosius or Caesarius, the main function of the harbor was the shipment of the architectural raw materials and the shipment and the storage of grain until the seventh century. With the loss of Egypt, the seventh century became a critical period for the survival of both the empire and the harbor in Yenikapı, which started to subsist on the grain produced in Thrace, Anatolia and in the lands surrounding the Aegean Sea.²⁶⁰

In addition to grain and food products such as wine and olive oil, other kinds of trade were handled in the harbor in Yenikapı.²⁶¹ In the course of the fifth century and particularly from the sixth century onwards, the city extended to the west, outside Constantine's Walls and therefore building materials like timber,

²⁵⁹ Teall, "Grain Supply", p. 120.

²⁶⁰ Paul Magdalino, "The Grain Supply of Constantinople, Ninth-Twelfth Centuries." *Constantinople and Its Hinterland: Papers from the Twenty-seventh Spring Symposium of Byzantine Studies*, Oxford, April 1993. Ed. Cyril Mango and Gilbert Dagron. Aldershot: Variorum, (1995), p. 36; Lopez, "The Role of Trade", pp. 70-72; Teall, "The Age of Constantine", p. 28.

²⁶¹ Wine was also counted in the Annona system (Marlia Mundell Mango, "Byzantine Trade: Local, Regional, Interregional and International" *Byzantine Trade, Fourth to Twelfth Centuries The Archaeology of Local, Regional and International Exchange. Papers of the Thirty-Eight Spring Symposium of Byzantine Studies*, St. John College, University of Oxford, March 2004. Ed M.M. Mango, Burlington: Ashgate (2009), p. 8.).

bricks and Proconnesian marble were needed for the implementation of great construction programs.²⁶²

Already from the reign of Theodosius I, there were large building programs of which the marble mainly came from the island of Proconnesos.²⁶³ Given the topography of the harbor as being the closest harbor to the area lying between the Constantine and the Theodosian Land Walls, the harbor was in an ideal place for the shipment of marble, bricks and wood that was extensively used in the capital's construction programs.

Starting from 2004, the archaeological excavations in Yenikapı revealed countless evidence for the shipment of the construction materials. Amongst the findings, dating back to the first half of the fifth century, the assemblages of stamped bricks spilled on the seabed presents the clearest evidence (Fig. 73, 74).²⁶⁴ A roughly carved marble capital discovered at Yenikapı can be cited in this group of construction materials (Fig. II.5).



Fig. II.5. A raw marble capital discovered in the Yenikapı excavations, now at the entrance of the Istanbul Archaeological Museums, Ercan 2009.

²⁶² See the article by Asgari for further information about the Proconnessos quarries: Asgari, N. "The Proconnesian Production of Architectural Elements in Late Antiquity, Based on Evidence from the Marble Quarries." *The Twenty-Seventh Spring Symposium of Byzantine Studies*. Ed. Cyril Mango, Dagron, G. Oxford: Variorum Ashgate Publishing, 1993. pp. 263-289; about the trade at the harbor see Magdalino, "The Maritime Neighborhoods of Constantinople", pp. 211-212.

²⁶³ Sodini, "Marble and Stoneworking in Byzantium", p. 130.

²⁶⁴ Jonathan Bardill. *Brickstamps of Constantinople*. 2 vols. (Oxford; New York: Oxford University Press, 2004), p. 308.

2.2. From the Seventh to the Fifteenth Century: Searching the Traces of the Harbor in Yenikapı

The history of the harbor in Yenikapı, its surroundings, the kind of trade that was handled in the harbor are more or less identifiable. The harbor in Yenikapı underwent a turn in its destiny from the sixth century onwards due to several political factors, and silted up through the years and partly abandoned.

In the sixth century, a series of severe earthquakes in 554, in 555 and in 557 damaged the city walls and the southern coast of Constantinople particularly Hebdomon and Yenikapı.²⁶⁵ Shortly afterwards, in the seventh century, political struggles such as “the Lombard invasion of Italy, the Avar invasion of the Balkans and the concurrent Slavic colonization of the peninsula, the Persian and Arab conquests of the eastern provinces and North Africa” affected the empire.²⁶⁶ The Byzantine Empire lost forever its main grain supply, Egypt and its harbor, Alexandria.

During this period, the written sources about both the neighborhood and the harbor became less in number and notoriously inadequate. Especially after the religious disputes of the eighth century, during the iconoclasm, large-scale building came to a halt and there is no evidence about the construction of a new harbor in the capital.²⁶⁷ Yet subsequent to a severe drought in 766, the aqueducts of Constantinople were repaired under the reign of Constantine V, which “marks the beginning of a recovery”. According to Magdalino, Constantine V’s reign was underestimated and misinterpreted due to opposing clergy, who “ensured that no

²⁶⁵ Guidoboni, Emanuela. *Catalogue of Ancient Earthquakes in the Mediterranean Area up to the 10th Century*, pp. 336-337; Downey, "Earthquakes in Constantinople", p. 598; Dagron, "Urban Economy", p. 396; Mango, *Le développement urbain*, p. 53.

²⁶⁶ Magdalino, "Constantine V and the Middle Age of Constantinople", p. 1.

²⁶⁷ Charles Bouras. "Aspects of the Byzantine City, Eighth-Fifteenth Centuries" *The Economic History of Byzantium*, DOS 59 (2002), p. 511.

literature survives from his reign".²⁶⁸ The remaining written sources about Constantine V's reign states that the emperor's construction and restoration work was concentrated on the Marmara shore, particularly the southwestern part of the city next to today's Yenikapı district.²⁶⁹ In addition, the empress Eirene had a palace in *ta Eleutheriou*, on the eastern part of the harbor of Theodosius.²⁷⁰

According to excavators, there is a serious lack of artifacts at Yenikapı dating from the seventh century, mainly because of political conditions (Fig. 50).²⁷¹ But starting with the late eighth century economic revival, archaeological artifacts became more plentiful possibly as a result of a Notos storm that sank twenty-two ships in the tenth century.²⁷²

Because it is in an earthquake zone, Constantinople was affected by countless earthquakes that caused numerous deaths, sometimes the collapse of the city walls and of the dome of St Sophia during the tenth century.²⁷³ Two earthquakes in 948 and 989 affected the harbor area, the latter being more harmful since it caused the collapse of many churches in Constantinople and the western dome of Hagia Sophia.²⁷⁴ In addition, another earthquake in 869, which lasted forty days, is one of the natural disasters that could have harmed the ships moored to the piers in the harbor at Yenikapı.²⁷⁵

In fact considering this evidence, the early Byzantine scheme of the harbor in Yenikapı including its architecture, its economic income and its trading sources changed its character after the seventh century. In addition to the

²⁶⁸ Magdalino, "Constantine V and the Middle Age of Constantinople", pp. 3-4.

²⁶⁹ Ibid., pp. 6-10.

²⁷⁰ Magdalino, "The Maritime Neighborhoods of Constantinople", p. 216.

²⁷¹ Kocabaş, "Life at the Theodosian Harbor, Wrecks and Rapid Silting", p. 36.

²⁷² Ibid., p. 34.

²⁷³ Glanville Downey, "Earthquakes at Constantinople and Vicinity A.D. 342-1454." *Speculum* (1955), pp. 598-600.

²⁷⁴ Ibid.

²⁷⁵ Ibid., p. 599.

meagerness of written sources about the iconoclastic period, the harbor in Yenikapı was possibly reorganized in a different architectural arrangement, becoming a completely different complex than the early Byzantine model as a result of the name change and entire organization. The harbor was still partly in use probably under a different name, “Caesarius”.

2.2.1. The Seventh Century Quarter Caesarius and *The Proclianesian Harbor of Caesarius*

Caesarius, a name of an urban district on the southern shore of the city, appears first in a seventh century anonymous account entitled *The Miracles of St. Artemios* as follows: “There was a certain man, named Sergios, an Alexandrian by birth, who was a guard at the granary which was nicknamed “Lamia” or “Glutton” in the district of Kaisarios. He was about 60 years old and had a hernia, which was cured by St. Artemios”.²⁷⁶ The district was situated on the eastern part of the harbor in Yenikapı and on the west of the harbor of Sophia and was named “Caesarius” from the late sixth century onwards.²⁷⁷

According to the fifth century *Notitia*, two monumental warehouses stood on the eastern part of the harbor of Theodosius in the ninth region.²⁷⁸ Sergios in the *Miracles of the St. Artemius* who was responsible for a warehouse in the district of “Kaisarios” was probably appointed to guard one of these fifth century granaries, likely the *Horrea Alexandrina* that became later *Horion Lamias*.²⁷⁹ The Lamia warehouse complex that continued to function during the ninth century,

²⁷⁶ Anonymous, *Miracles of St. Artemius*, (16) p. 107.

²⁷⁷ *Miracles of St. Artemios* is the earliest account about the Caesarius Quarter. Berger thinks that the name of the district appears first in the sixth or the seven centuries but there is no reference about Caesarius as a district or as a harbor in the primary sources before seventh century (“Der Langa Bostani”, pp. 468-469). Janin suggests that the eponym of the quarter is Caesarius who appears in 468 (Janin, *Constantinople Byzantine*, p. 337).

²⁷⁸ *Notitia Dignitatum*, p. 237.

²⁷⁹ Magdalino, *Medieval Constantinople*, p. 23. The Greek word Λαμιά, ἡ is ‘the name of a female monster who is said to feed on man’s flesh’ (Liddell&Scott p. 464; Janin, *Constantinople Byzantine*, p. 352).

was “between the Amastrianon Square and the Palace of Eleutherius that was also attributed to Eirene”.²⁸⁰

Theophanes Confessor, refers to a harbor in this district called “the *Proclianesian harbor of Caesarius*” that existed in 671 and 672, under the reign of Constantine IV: “The aforesaid Constantine, on being informed of so great an expedition of God's enemies against Constantinople, built large biremes bearing cauldrons of fire and dromones equipped with siphons, and ordered them to be stationed at the Proclianesian harbor of Caesarius”.²⁸¹

The historical evidence derived from these two sources suggests that from the late sixth century onwards, the harbor in Yenikapı or probably the western section of it that is close to the granary was known as Caesarius. The harbor of Caesarius, the former harbor of Theodosius, was reserved for warships carrying the Greek fire (“large biremes bearing cauldrons of fire and dromons equipped with siphons”) and the flame-throwers, *siphones* or *siphonia* in 671 or 672.²⁸²

Considering the size of the harbor and the date of the first Muslim attack on the capital, the harbor in Yenikapı or its eastern part could have been

²⁸⁰ Magdalino, *Medieval Constantinople*, p. 24. The name *Lamia* given to the warehouse in the miracle, is related to a female monster that was superstitiously believed to dwell in the *Modion* and also to other monuments in Constantinople. And the monuments called ‘Lamia’ are a *triclinos* constructed by the empress Eirene, the warehouse in Caesarius and a monument in the *Modion*, which in the tenth century stood on the Mese between the *Philadelphion* and the Forum of Theodosius, probably in front of the *Myraleion* (Magdalino, *Medieval Constantinople*, p. 24; Janin, *Constantinople Byzantine*, p. 352). Taking into consideration its location close to the granary, the monument in the *Modion* is commented to be some sort of ‘apparatus for weighing corn’ by Magdalino (*Medieval Constantinople*, p. 24).

²⁸¹ Theophanes the Confessor, *The Chronicle*, p. 493. Berger (“Der Langa Bostani”, pp.468-469) argues that the harbors of Theodosius and Caesarius were the same. Theophanes writes also about a fire that occurred in this district under the reign of Justinian (Theophanes the Confessor, *The Chronicle*, pp. 347-348.).

²⁸² Theophanes the Confessor, *The Chronicle*, p. 494. The Greek fire, which was first invented by Kallinikos an artificer from Heliopolis in Syria and used against the Arab fleet that attacked a Lycian city, was long kept a secret and gave numerous victories to the Byzantine navy. (John. H Pryor. "Greek Fire." *The Age of the Dromon: the Byzantine Navy ca. 500-1204*. Ed. John H. Pryor and Elizabeth M. Jeffreys. (Leiden; Boston: Brill, 2006), p. 607.)

temporarily converted into a military harbor since the import of the grain also ended at that period.

In the eighth century, Constantine V moved the cattle market to the forum of Theodosius that lay on the northern part of the harbor in Yenikapı and subsequently started a series of restorations and constructions on the southern shore which was followed by the favorite residence of the empress Eirene in *ta Eleutheriou*.²⁸³ Accordingly, I suggest that the harbor in Yenikapı, then called Caesarius, could be part of one of these construction projects and rearrangements.

2.2.2. The Silted Harbor as the Vlanga Gardens

From the ninth century onwards, there is no mention about the harbor in Yenikapı in historical sources until the twelfth century. In the twelfth century, for the first time, the chroniclers as Niketas Choniates start to refer the district of the harbor as Vlanga as “the House of Vlangas” as “the designation of the residence of Andronikos Komnenos”.²⁸⁴ The etymology of the name Vlanga, which is the only name for the silted harbor area in Yenikapı, remains still obscure.²⁸⁵

Maximos Planoudes, in the late twelfth and early thirteenth centuries, wrote about the Vlanga to an imperial officer Autoreianos, the *exisotes* of Constantinople, who was responsible for property problems.²⁸⁶ Planoudes asked him to rectify a situation about an unfinished house in the Vlanga, of which

²⁸³ Magdalino, "Constantine V and the Middle Age of Constantinople", p. 10.

²⁸⁴ Niketas Choniates, *O City of Byzantium*, p. 74 (IV.130); Van Millingen, *Byzantine Constantinople*, p. 299.

²⁸⁵ According to a theory the name Vlanga or Ulanka means ‘outside’. (Ortaylı, Langa in Istanbul Ansiklopedisi p. 195, Basaran, "Iron Ways and an ancient harbor on the Mediterranean Coast", p. 21 in *Old Ships of the New Gate*.) Another argument suggests that Vlanga comes from ‘αυλαχχα’ meaning the naval port (Janin, *Constantinople Byzantine*, p. 304).

²⁸⁶ Maximi Monachi Planudis, *Epistulae*, pp. 50-52.

owner was looking for a buyer. In this way, a property dispute started between another individual and a church in the Vlanga who were both claiming rights on this unfinished building.

According to Planoudes, this church in the Vlanga, which was dedicated to St. John the Forerunner and was recently built there, was also asking for another grant about a ruined church that was situated in the Vlanga.²⁸⁷ If this ruined church was granted to the church of St. John the Forerunner, they would use the building as cemetery since it was inconvenient for two churches very close to each other to function simultaneously. Another argument of Planoudes is that there was no more space for Christian community to be buried in the Vlanga, because of the Jews who were permitted to settle there and started to conduct tanning.²⁸⁸ Planoudes asked also that the Jews could be located elsewhere because of “the foul smell of their leather tanning”.²⁸⁹

The archaeological excavations at Yenikapı revealed the remains of a three-apsed church, which measures 11.5 meters long and 9.5 meters wide (Fig. II.6).²⁹⁰ From the southwest side, four cells that were possibly storage rooms surround the structure.²⁹¹ The structure, which had been clearly built on the sediments deposited by the Lycus River and the Sea of Marmara, is dated to the thirteenth century according to the excavation team in Yenikapı.²⁹² The exploration of twenty-three burials and the cluster of human bones that were

²⁸⁷ Ibid.

²⁸⁸ Ibid.

²⁸⁹ Ibid.

²⁹⁰ Gökçay, "Yenikapı Kazılarında Ortaya Çıkarılan Mimari Buluntular", p. 174.

²⁹¹ Ibid., p.175.

²⁹² Ibid.

found in and around the structure suggests that when the building was no more in use as a religious complex turned into a funerary monument.²⁹³



Fig. II.6. The view of the Middle Byzantine church.

This newly discovered building has to be one of the churches referred by Maximos Planoudes. Considering the burials surrounding the structure, the remain in Yenikapı can be the ruined church in Vlanga claimed by the church of St. John the Forerunner. The archaeological evidence complete the historical evidence and shows that after the letter of Planoudes the ruined church was granted to the church of St. John the Forerunner and was subsequently used as cemetery.

According to Bouras, the lands of an abandoned monastery in Vlanga were taken over by the Jewish minority to be used as tannery.²⁹⁴ There is no specific information about the coexistence of the Jewish community and the members of the ruined church discovered at Yenikapı.

Members of the Jewish community that were referred by Maximos Planoudes were engaged in crafts such as “second class silk, weaving, dye,

²⁹³ Ibid.; Toksoy, "Yenikapı'da İnanc", p. 233.

²⁹⁴ Bouras, "Aspects of the Byzantine City", p. 519.

finishing and making of garments”.²⁹⁵ Some were dealing with the processing of leather, particularly tanning as referred by a twelfth century traveler Benjamin of Tudela as follows: “No Jews live in the city, for they have been placed behind an inlet of the sea. An arm of the sea of Marmora shuts them in on the one side, and they are unable to go out except by way of the sea, when they want to do business with the inhabitants”.²⁹⁶

The inlet had to be the Golden Horn but the Vlanga gardens was also “ideal for a tannery since the district was far from the city and had a big harbor into which waste liquids could have been spilled” as outlined by a fourteenth century traveler Stephen of Novgorod.²⁹⁷ It is interesting that the remoteness of the Jewish quarter almost turned to isolation since they could not leave their neighborhood by land as stated by Benjamin de Tudela.

Placing tanneries next to the shore was a practical solution since large amount of water was needed to process leather. In Ottoman times, the tanneries of Thessaloniki were also near the ancient harbor, close to the city walls just as in Yenikapı.²⁹⁸ The tanneries were also intentionally kept far from the inhabitants of the city so as not to distract them. Benjamin of Tudela narrates the social conditions of the Jews as follows:

For their condition is very low, and there is much hatred against them, which is fostered by the tanners, who throw out their dirty water in the streets before the doors of the Jewish houses and defile the Jews' quarter (the Ghetto). So the Greeks hate the Jews, good and bad alike, and subject them to great oppression, and beat them in the streets, and in every way treat them with rigor.²⁹⁹

²⁹⁵ Benjamin of Tudela, *The World of Benjamin de Tudela*, p. 130.

²⁹⁶ Ibid., p. 14.

²⁹⁷ Majeska, *Russian Travelers to Constantinople in the Fourteenth and Fifteenth Centuries*, p. 268; Akyalçın, *The Jewish Communities in the Making of Istanbul Intra Muros*, p. 5.

²⁹⁸ Evangelia Balta. "La tannerie pré-industrielle en Grèce." Ed. Kornilia Zarkia, Athens: Piraeus Bank Group Cultural Foundation, (1997), p. 39.

²⁹⁹ Benjamin of Tudela, *Itinerary*, p. 14.

Stephen of Novgorod, fourteenth century traveler, writes that a gate on the eastern part of the Vlanga Gardens was named the Jewish Gate, and according to Majeska this gate is the same as Yenikapı “the New Gate”.³⁰⁰

In the fifteenth century, Mehmed II resettled the Jews who dwelt in Vlanga, in the quarter of Balat on the Golden Horn shore.³⁰¹ This information suggests that one of Maximos Planoudes’ claims, the removal of Jews from the Vlanga, did not happen until the Ottoman reign.

An in depth research has to be conducted for the middle Byzantine and late Byzantine periods of the harbor in order to illuminate the history of the monastery and of the Jews that lived in the Vlanga. The future research can be focused on the following questions: Where is this unfinished house? Did the Jews and the community of the ruined church coexist?

2.3. From the Fifteenth Century Onwards: The Vlanga Gardens in the Eyes of the Travelers and of Miniaturists

2.3.1. Yenikapı before the Conquest in Cristoforo Buondelmonti

There is neither visual nor textual evidence about the harbor in Yenikapı for a long time. Cristoforo Buondelmonti, in a fifteenth century miniature, illustrated the silted harbor in Yenikapı as an empty field.

Born at the end of the fourteenth century in Italy, Buondelmonti traveled from his native city Florence to Constantinople in the years 1420-1422.³⁰² Sailing through the Aegean Sea, he wrote a book entitled as *Liber Insularum Archipelagi*, The Book of the Islands of the Archipelago. Among the various maps of the region, he reserved one to the capital of the Byzantine Empire, Constantinople

³⁰⁰ The visit of Stephen to Constantinople was dated to the years 1348-49 by Majeska (*Russian Travelers to Constantinople in the Fourteenth and Fifteenth Centuries*, p.17). Ibid., pp. 268-269.

³⁰¹ Jacoby, "Les quartier Juifs", p. 218.

³⁰² For further information: Manners, "Constructing the Image of a City", pp. 72-73; Berger, "Der Langa Bostan", p. 470; Tanney, *Istanbul vu par Matrakçı*, p. 97.

that depicts the city during the last days of the Byzantine rule. Buondelmonti's earliest manuscripts are particularly significant since they are the earliest visual accounts that had been drawn by an artist who personally visited the ruins.³⁰³

Liber Insularum Archipelagi of Buondelmonti has been copied several times with a variety of modifications and additions. Three of the best-preserved copies of Buondelmonti are kept in Venice, in Düsseldorf and in Paris (Fig. II.7-12). The variants of Buondelmonti's manuscript include numerous sharp distinctions and features that did not exist. The reason for the multitude of dissimilarities is the involvement of artists who probably never visited the city in the reproduction process of the miniatures or the focus of the works.³⁰⁴

The original work of Buondelmonti, which depicts the last days of the Byzantine rule in Constantinople, is the manuscript kept in Venice (Fig. II.7, 8). On the southern shore of the peninsula, the manuscript shows two harbors that are both at the mouth of rivers. The legend on the map that was later added, proves that the harbor situated on the north is "*cadoscali*" the harbor of Kontoscalion.³⁰⁵ *Portus Volanga*, the Vlanga harbor or the harbor in Yenikapı is the harbor on the southwest identifiable with two main features: the monumental breakwater extending to the Sea of Marmara and the river Lycus. An inscription in the miniature leaves no doubt that "out of the wall, there is a field called Vlanga that once belonged to a harbor".³⁰⁶

Measuring approximately 3.75 meters long, the ancient breakwater extended from the Davudpaşa gate and long guarded the harbor until it was

³⁰³ Ayşe Y. Kubilay, *Maps of Istanbul-Istanbul Haritaları*. (Istanbul: Denizler Kitabevi, 2010), p. 32.

³⁰⁴ Tanney, *Istanbul vu par Matrakçı*, p. 104.

³⁰⁵ Guillard identifies the harbor of Kontoscalion as the harbor in Yenikapı (Blanga or Vlanga) (*Etudes topographique*, p. 107). But the miniature of Buondelmonti opposes the theory by depicting two harbors as different ones.

³⁰⁶ Berger, "Der Langa Bostanı", pp. 470-471.

completely covered by the Lycus River.³⁰⁷ During the archaeological excavations, a section of a breakwater was uncovered at the far western end of the harbor where it was joined to the fifth century city walls (Fig. III.54). However the breakwater depicted in the miniature of Buondelmonti has to be further south and close to the Davudpaşa gate. Therefore the newly discovered archaeological remain is another structure, which dates earlier than the fifth century walls.

The other feature for the identification of the harbor in Buondelmonti's miniature is the river Lycus. The river that partly became an underground-subterranean river is not shown in most of the later miniatures that were attributed to Vavassore, Piri Reis and Matrakçı.³⁰⁸ Accordingly, the river Lycus, which was still partly visible on the ground at the beginning of the fifteenth century, had already dried up in the first half of the sixteenth century.³⁰⁹

In the depictions, the harbor was divided into two sections, with the inner part on the northeastern side and the outer part on the southwest. The inner part, which stood on the mouth of Lycus, silted up first.³¹⁰ According to Janin, the outer part had been used from the ninth until to the tenth century.³¹¹

In the Buondelmonti's Venice variant, the Vlanga Gardens are not surrounded with the city walls, which is not the case for later manuscripts (Fig. II.12). Some scholars explain the absence of the inner walls by the fact that the

³⁰⁷ The number is proposed by Pierre Gilles after a visit that he made to the silted harbor; Dirimtekin, *Fetihten Önce Marmara Surları*, p. 59.

³⁰⁸ Tanney, *Istanbul vu par Matrakçı*, pp. 97-98.

³⁰⁹ The possible date of the Matrakçı manuscript is the year 1537; Manners, "Constructing the Image of a City", p. 77.

³¹⁰ Dirimtekin, *Fetihten Önce Marmara Surları*, p. 59.

³¹¹ Janin, "Les ports de Propontide", p. 75.

harbor was later incorporated in the city walls.³¹² Another argument is that the inner walls were later added.³¹³

Düsseldorf version of Buondelmonti's manuscript, illustrates the same neighborhood in a fairly different way that is more compatible to the reality (Fig. II.9). The seven towers that dominate the vicinity are emphasized by their size and inscription and followed by the basilica plan church, the Studion. On the eastern part of these structures, Yenikapı is depicted as an abandoned field surrounded with the city walls. On the northeastern part the harbor stands the former harbor of Julian, known as Kadirga harbor in the fifteenth century Constantinople, which was still in use for small vessels. The river Lycus flows from the city walls to the south and disappears without reaching to the Peripleptos Church. The tower depicted on the southwestern limit of the harbor is "the tower of Belisarius".

The tower took its name from Belisarius who was one of the emperor Justinian's commanders, who were sent to meet the Persian invasion and took part in the suppression of the Nika riot in 532 and defeated the Vandals one year later.³¹⁴ Pierre Gilles, who visited Constantinople at the beginning of the sixteenth century, described the same tower as "a fortress in ruins surrounded by the sea".³¹⁵ During the construction of the railway in 1863, the tower was completely demolished.³¹⁶

³¹² Berger and Bardill, "The Representation of Constantinople", p. 13; Berger, "Der Langa Bostani", pp. 467-68.

³¹³ Berger, "Der Langa Bostani", p. 471.

³¹⁴ Martindale, *The Prosopography of the Later Roman Empire*, 1059. Walter Emil Kaegi, Anthony Cutler "Belisarios" *The Oxford Dictionary of Byzantium*. Ed. Alexander P. Kazhdan. © 1991, 2005 by Oxford University Press, Inc.. *The Oxford Dictionary of Byzantium*: (e-reference edition). Oxford University Press. Koc University. 26 January 2010 <http://0-www.oxford-byzantium.com.libunix.ku.edu.tr:80/entry?entry=t174.e0707>.

³¹⁵ Pierre Gilles. Book IV.VIII. See also Grelot for a better depiction (Fig 18).

³¹⁶ See Stolpe's plan for the last recording of the tower.

From the mid fifteenth century onwards, not long after the visit of Buondelmonti, in the year 1453, the Ottoman navy attacked the Vlanga quarter and entered the Byzantine capital through the silted harbor.³¹⁷

2.3.2. Yenikapı during the Ottoman Period

Schedel

At the end of the fifteenth century, following the conquest of Constantinople, the silted harbor in Yenikapı was depicted in a gravure in *Liber Chronicarum* of Hartmann Schedel, which was published in 1493 in Nuremberg (Fig. II.13).³¹⁸ Being the second earliest visual record of Constantinople, the view shows Constantinople prior to the Ottoman conquest as a ruined and depopulated city. There are Byzantine arms on the city walls, which were carried to the Istanbul Archaeological Museum in 1870.³¹⁹

Schedel's miniature illustrates Constantinople with the sole inscription as "Church of Saint Sophie" engraved on the centre of the miniature. A number of honorific columns arise among the ruins of the city. The Seven Towers on the southern extremity of the Theodosian Walls dominate the urban panorama. The first figure on the eastern part is a castle kind of structure with a monumental gate opening to the Sea of Marmara, which has to be the harbor in Yenikapı with its monumental harbor's walls.

Lamy

Peronet Lamy's illustration of Constantinople made for the *Notitia Dignitatum* shows a disproportionate view in which two harbors are depicted in the seawalls (Fig. II.15). One of them, emphasized with a wooden *scala*, is likely

³¹⁷ Akyalcın, *The Jewish Communities in the Making of Istanbul Intra Muros*, p. 5.

³¹⁸ Berger and Bardill, "Representations of Constantinople", p. 2.

³¹⁹ Kubilay, *Maps of Istanbul/ Istanbul Haritaları*, p. 34.

the harbor in Yenikapı. The depiction of the mid fifteenth century does not present interesting details about the harbor.

Vavassore

Giovanni Andrea Vavassore, a Venetian cartographer, came to the Ottoman capital Constantinople at the end of the fifteenth century and made his gravure sometime before the year 1505 (Fig. II.16).³²⁰ According to Berger, his depiction of Constantinople, which illustrates the city in 1480, had been copied from a late fifteenth century original attributed to Bellini.³²¹ The engraving acquires has been copied several times by later artists such as Braun, Hogenberg, Munster, Sadler and Ballino.³²²

The harbor in Yenikapı is indicated as *Lauulacha* and lay on the western side of *Arsenale* that is the harbor of Kontoscalion, which was still in use during the sixteenth century. The silted harbor in Yenikapı is accurately depicted as a field but without specific details. Surrounded by city walls from both inner and outer sides, the harbor is prominently divided into two sectors. These two sectors are later named as Küçük and Büyük Langa Bostanı. There is no reference to the river Lycus.

Sadler

In the second half of the sixteenth century, Marco Sadler illustrated the harbor in a miniature in *Viaggio da Venetia a Constantinopoli*. Compared to Vavassore's miniature, the city gives an impression of a less populated city (Fig.

³²⁰ Tanney supports the argument by presenting a *terminus ante quem* that is the nonexistence of the Beyazıd Mosque in the engraving since the monument had been constructed in 1505.

³²¹ Berger, "Der Langa Bostani", p. 473; Berger and Bardill, "The Representation of Constantinople", p. 10.

³²² Kubilay, *Maps of Istanbul/ Istanbul Haritaları*, p. 44. For the copies of the miniature of Vavassore see Fig. 34-37 where I selected different views of Yenikapı for presenting a specific comparison material.

II.18). The harbor in Yenikapı is depicted in the same way as a field divided into two parts and surrounded by city walls. The river Lycus no longer exists and the city walls are much farther inland because of the silted shore.

Piri Reis

In the early sixteenth century, Piri Reis wrote *Kitab-ı Bahriye*, the Book of the Sea that is a detailed description of the shores along the Aegean and the Mediterranean Seas.

The Book of the Sea that includes the bird's eye views of Constantinople has been copied several times. The Paris variant does not show the harbors of the city (Fig. II.21). However the version kept in Berlin provides clues about the harbors of Constantinople (Fig. II.22). There is no evidence about the harbor in Yenikapı and the harbor's walls that were described in historical accounts.

One of these accounts is *The Antiquities of Constantinople* written by a French traveler, Pierre Gilles, who visited Constantinople in the sixteenth century. Pierre Gilles described the silted harbor in Yenikapı, the Vlanca Gardens, which was enclosed by city walls as follows: "The gardens, which are very spacious, abound with salads and potherbs but have very few fruit trees. These gardens are watered with pools that they have in them and that are the remains of the old port. I discovered from the pier and the location of the place that it was over a mile in extent."³²³

The archaeological excavations revealed a number of wells at Yenikapı that were depicted in the miniatures. At first sight the upper layers of the excavation area are discernable by the existence of the Ottoman period wells,

³²³ Pierre Gilles. Book IV. VIII.

which were constructed unwittingly on the Byzantine shipwrecks using spolia from the Byzantine period (Fig. II.26).



Fig. II.26. View of an Ottoman period well constructed with spolia blocks, Ercan 2009.

The Ottoman inscriptions on Piri Reis' miniature provide primarily with the name of the gates on the seawalls and not the harbors. According to the Ottoman inscriptions in the Paris variant, the name of the gates are as follows: "Narlikapu, Samatya, Davudpasa Kapusu, Yenikapu, Kumkapu, Catladikapu and Ahirkapu". Between the gates Davutpaşa and Yenikapı, a shorter inscription "Langa" appears. There is no evidence about the city walls or the tower of Belisarius that are important landmarks in the panorama of Yenikapı.

In the Berlin version, the Ottoman inscriptions differ from the Paris version in terms of having a different order. It lists the gates as follows: "Bab-ı Narlı, Bab-ı Samatya, Bab-ı Yeni, Bab-ı Davutpaşa, Bab-ı Kum, Bab-ı Catladı. Bab-ı Ahır". The order of the gates in the Berlin variant is misleading in determining the location of the silted harbor in Yenikapı since the Gate of Davutpaşa had to be before the Gate of Yenikapı.

Matrakçı Nasuh

The work of Nasuh al-Silahi or better known as Matrakçı presents a perspective of sixteenth century Constantinople's citizen.³²⁴ The depiction illustrates the harbor in Yenikapı on the southeast of the harbor in Kadırga (Fig. II.23). The harbor is depicted as a garden, the Vlanga Gardens, as a sole unit. The warehouses that surround the Kontoscalion harbor emphasize that the harbor was still used as an arsenal. Depicted with the mechanical systems standing next to them, wells for watering the gardens are used for the identification of Vlanga.

Veli Can, Hünername

At the end of the sixteenth century, Veli Can, an Iranian miniature artist, depicted the harbor in Yenikapı in a clearer way. In his work *Hünername*, the Book of Accomplishments ordered by Murad III, among the harbors of Constantinople, the harbor in Yenikapı is shown as an empty space surrounded by city walls (Fig. II.24).³²⁵ There is no evidence about the Lycus River, which must have been partially covered by then. The harbor was represented, as a marshy field divided into two sectors, Küçük Langa and Büyük Langa Bostanı.

The harbor in Yenikapı that was already completely silted up by the thirteenth and fourteenth centuries was in use as a vegetable garden as many of the open-air cisterns that were filled because of the disuse.³²⁶ Both visual depictions and archaeological excavations confirm the existence of a number of wells, which had been built in order to water the field. The late nineteenth century onwards, the Vlanga Gardens had been long used for a long time as a garden

³²⁴ Jonhston, "Urban World of Matraki Manuscript", p. 161.

³²⁵ Tanney, *Istanbul vu par Matrakçı*, p. 92. Another version is copied by Seyyid Lokman in a similar way (Fig. 42).

³²⁶ Magdalino, *Medieval Constantinople*, p. 20.

before the urbanization of the district, which destroyed part of the surrounding city walls and the tower of Belisarius.

2.2. Conclusions

Based on the newly discovered archaeological evidence and a close analysis of the primary sources which are the Notitia, the Codex Theodosianus, the Miracles of St. Artemius, the Patria, the Chronicon Paschale, the Parastaseis and Theophanes Confessor, this study analyzed the history of the harbor in Yenikapı. By providing evidence from the primary sources, this chapter discussed also the food supply problem of the Byzantine Empire that is directly related to the harbor in Yenikapı, which functioned for a long time as the storage center for grain.

As a matter of fact, the history of the harbor in Yenikapı is much more complex than it is presented in the existing literature. The shore in Yenikapı emerged as a simple coastal facility in the hinterland of Byzantium, at the mouth of the Lycus River, from the fifth century onwards. It was located in a relatively well-protected coast from the waves and the winds of the Sea of Marmara and was used in good weather conditions for the transportations of goods.³²⁷

After the battle of Chrysopolis in 324 C.E. Constantine I decided the construction of a new capital in Byzantium, which would be named after the emperor as Constantinople. For realization of the costly construction project, he invited several aristocrats from Rome who were expected to contribute to the constructions in the newly founded city. Eleutherius has to be one of those aristocrats who particularly choose to rehabilitate the coast lying in today's

³²⁷ Kızıltan, "Marmaray Metro Projeleri Kapsamında Yapılan Yenikapı, Sirkeci, Üsküdar Kazıları", p. 9.

Yenikapı.³²⁸ In turn, the neighborhood and its harbor were named after Eleutherius. Subsequently, he erected a statue in the harbor that depicts him carrying a woven basket at his back and a plow in his hand.³²⁹ The attributes were not haphazardly chosen, since the harbor was particularly reserved to the grain storage that came primarily from Alexandria. Through the years, the harbor in Yenikapı was transformed into what Ostia had been for Rome.

By the reign of the Theodosius I, the capital had already enlarged rapidly in terms of urban extent and population. By the end of the fourth century, Constantinople was considered more secure compared to Rome that was repeatedly threaten by the Barbarian attacks. Theodosius issued a law dated to 384, promoting contributions to the restoration of the aqueducts and the harbor of Eleutherius.³³⁰ Soon afterwards, the harbor was named after the emperor who enlarged the harbor including the rehabilitation of the two warehouses: Horrea Alexandria and Theodosianus.

The seventh century came with a number of political struggles both on the borders and within the territories of the empire. From east, the Persians conquered Alexandria, the Avars, the Slavs and Persians reached as far as Constantinople and besieged the city several times.³³¹ The loss of Alexandria was a turning point in the history of the capital since the empire lost its largest grain supply and the warehouses of the harbor in Yenikapı would be no longer crammed with grain. In the seventh century, the number of the warehouses surrounding the harbor

³²⁸ Janin, *Constantinople Byzantine*, p. 382.

³²⁹ *Patria*, III 91.

³³⁰ *Codex Theodosianus* XV.1.23.

³³¹ Herrin, *Byzantium, Suprising Life of a Medieval Empire*, p. 15.

decreased to one and the only warehouse, Horrea Alexandria changed its name to Lamia.³³²

The less known part of the history of the harbor starts with the seventh century disruptions. Before the archaeological excavations, scholars suggested that the harbor had fallen into disuse by this time. However, the continuation of the warehouse as Lamia and the appearance of a new name given to the neighborhood Caesarius when combined to the newly discovered archaeological evidence explained that the harbor continued to exist under a new name, the harbor of Caesarius in the seventh century.³³³

In the eighth century, possibly under the reign of Constantine V who also commissioned the restoration of the aqueducts, a restoration work started in the harbor's neighborhood where several years later the empress Eirene resided in a suburban palace in *ta Eleutheriou*.³³⁴ In my view, the religious disputes during the iconoclasm, which later caused the destruction of the literature that provides information about some iconoclastic emperors' deeds, gives ground for suspicion that the rehabilitation of the harbor had been carried during this period.³³⁵ Accordingly, the harbor in Yenikapı could be restored as a part of the construction projects related to the empress Eirene's residence or another unknown project.

After the eighth century, the primary sources about the harbor in Yenikapı are lacunose. But considering the archaeological evidence, the shore was used as a harbor until the eleventh century before it was seriously blocked due to the siltation.³³⁶

³³² Magdalino, *Medieval Constantinople*, p. 23.

³³³ Theophanes the Confessor, *The Chronicle*, p. 493.

³³⁴ *Codex Theodosianus* XV.1.23; Magdalino, "Constantine V and the Middle Age of Constantinople", pp. 3-4.

³³⁵ Timothy E. Gregory, *A History of Byzantium*. (Malden: Blackwell Publishing: 2005), p. 195.

³³⁶ Kocabaş, "İstanbul Üniversitesi Yenikapı Batıkları Projesi", p. 23.

Then in the thirteenth century, the Jewish tanners took over the lands of a monastery of which the substructure of the church had been discovered in the archaeological excavations.³³⁷ The church in question was dated to the twelfth and thirteenth century but this information suggests that the structure was older than has been argued by the excavation team of Yenikapı.³³⁸

The existence of the tanneries is demonstrated both by the primary sources and archaeological excavations. From the fifteenth century onwards, the harbor now completely silted up, was used as gardens under the name of the Vlanga Gardens. The miniatures prove the complete silting up of the harbor. Through the years, the shoreline changed drastically and the remains of the harbor were completely covered by the silts until they were unearthed for the first time in 2004.

The next chapter explores the most significant remains that were discovered in the archeological excavations conducted by the Istanbul Archaeological Museum. In comparison with the harbor's history that was presented in this chapter, the selected architectural remains will be discussed and compared to other examples from different harbors of the antiquity.

³³⁷ Bouras, "Aspects of the Byzantine City", p. 519.

³³⁸ Gökçay, "Yenikapı Kazılarında Ortaya Çıkarılan Mimari Buluntular", p. 175.

Chapter III

The Archaeology of the Harbor in Yenikapı: Combining Archaeology with Historical Context

Introduction

The archaeological excavation project, which is conducted under the supervision of the Istanbul Archaeological Museums since 2004, had been published several times with a special focus on the shipwrecks that constitute a significant part of the discoveries.³³⁹ This current study differs from previous research particularly through its focus on the architectural remains of the harbor in Yenikapı and investigates its newly discovered remains.

The harbor's architectural remains in Yenikapı correspond to a long time frame that starts approximately from the fifth century and extends as far as the late Ottoman period. Nevertheless, rather than covering the whole period, this study focuses on a representative selection of the late antique and middle Byzantine remains. In order to analyze of the vast harbor area, the chapter focuses on the harbor's walls and piers selected among a variety of architectural remains discovered in the archaeological excavations.

By doing this, this chapter also reinterprets the historical evidence about the harbor presented in the previous chapter. By placing the remains of the harbor in Yenikapı into a hypothetical architectural layout, it offers a vivid picture of the harbor in operation by presenting comparisons from the well-known harbors of antiquity and late antiquity.

³³⁹ The previous publications on the archaeological excavations see *Gün Işığında İstanbul'un 8000 Yılı: Marmaray, Metro, Sultanahmet Kazıları* ed. Arzu Karamani Pekin, İstanbul: Vehbi Koç Vakfı, 2007 and *The 'Old Ships' of the 'New Gate': Yenikapı'nın Eski Gemileri*. Ed. Ufuk Kocabaş, İstanbul: Ege Yayınları, 2008 and the latest publication *1.Marmaray Metro Kurtarma Kazıları Sempozyumu Bildiriler Kitabı* 5-6 Mayıs 2008, Ed. Ufuk Kocabaş, İstanbul: İstanbul Arkeoloji Müzeleri, 2010.

The reason for comparing a Byzantine harbor to earlier periods is in the fact that the knowledge about the harbors of the Byzantine period is rather meager. At this point, the harbor in Yenikapı becomes more significant since the study of the harbor will also contribute to the understanding of the late antique and middle Byzantine harbors.

There are also limitations for this study. For instance, the data acquired from the archaeological excavations are limited to the archaeological rescue project's borders, defined by the construction site. The remains lying in the excavation site borders, which cover an area about 58,000 square meters, represent a fairly limited section of the whole harbor area and its periphery.³⁴⁰

Ultimately, one of the main limitations of this chapter is the issue of access to the remains since the so-called 100 ADA was covered against the damage by nature.³⁴¹ The 100 ADA is at the southwestern limit of the harbor where a majority of the architectural remains such as harbor's walls, piers, workshops, a *hypogeum* and a *cryptoporticus* are situated. I had to limit the scope of the research by choosing some of the remains, and go on with the drawings and photographs that were kindly provided to me by the excavation team at the Istanbul Archaeological Museum.

3.1. Yenikapı Before the Archaeological Excavations

Stretching about 1,1 km in length, the harbor's inner and outer walls have been the main features that scholars' studies have focused on (Fig. I.2, I.6). Alexander van Millingen, Feridun Dirimtekin and Albrecht Berger are among the

³⁴⁰ Sait Başaran, "Iron Ways and an Ancient Harbor on the Marmara Coast." *The 'Old Ships' of The 'New Gate': Yenikapı'nın Eski Gemileri*. Ed. Ufuk Kocabaş. Istanbul: Ege Yayınları, (2008), p. 9.

³⁴¹ The term 'ADA' designates insula and became a term used by the excavation team to name the sector excavated on the southwestern part of the harbor.

urban extension, Dirimtekin's photographs, sketches and detailed descriptions about the harbor show the conditions of the towers and the walls in a comprehensive manner without proposing a detailed dating for the walls (Fig. III.28).

According to Dirimtekin's comprehensive and descriptive study, the harbor's walls can be grouped into two primary categories: the inner and outer walls. The harbor in Yenikapı is the only harbor in the capital that was fortified by two lines of walls. Having been repaired and restored several times through years, the inner walls must have been the oldest constructions according to Dirimtekin. Along these inner walls several gates with relieving arches stood, dominated by a number of towers such as "Belisarius" or "Papas Tower" that no longer exist.³⁴⁶ Through the years, the gates on the harbor's walls could be closed or opened according to the needs of the city. For instance, one, known as Bostan Kapı, the Garden Gate, was opened at the fifteenth century by the Ottomans following the conquest of Constantinople.³⁴⁷

During the early 1950s, the remains of the earlier walls, the gates and towers of the inner walls were still standing in a relatively good condition. For instance, Dirimtekin states that a gate stood between the towers no. 64 and 65, as he numbered (Fig. III.28).³⁴⁸ Today, nothing remains of this gate due to the destruction caused by modern urbanism. The location is significant since during the excavations, a pier, which will be discussed in the following part, was found next to this gate; in other words, the gate seems to lead directly to the newly found structure in question.

³⁴⁶ Ibid., pp. 38-39.

³⁴⁷ Ibid.

³⁴⁸ Ibid., p. 39.

One of the towers that Dirimtekin describes still survives in a relatively good condition. Almost lost in the urban fabric, it is surrounded by modern shops (Fig. III.29). This tower has to be the one numbered Tower 66 by Dirimtekin.³⁴⁹ The structure was built with an alteration of brick bands and rubble that consisted of four bricks and nine lines of stones. With respect to its masonry, the tower has to have been built later than the fourth century and has to be one of the original components of the construction program put forward by Theodosius II in the fifth century.³⁵⁰

The southern walls of the harbor and the towers on the wall were substantially demolished in the late nineteenth century during the construction of the railway line that follows the Marmara shore starting from Sirkeci continuing to Thrace. According to Dirimtekin, in the 1950s, there were still remains of substructures, windows and a postern leading to the seaside, which can be identified with restorations in the Palaeologean and the Ottoman periods.³⁵¹

Among the scholars dealing with the harbor's historiography and architecture, in more recent times, Albrecht Berger proposed a revised plan based on Dirimtekin's work.³⁵² Berger's study describes the existing remains by putting them into two main categories, the walls and the gardens and adds that the dating of the harbor's walls will remain hypothetical.³⁵³

According to Berger's plans, during the fourth century, the number of the towers surrounding the harbor was eleven (Fig. III.2). He assumes that all the towers on the southern part were built later, apart from towers 69 and 71, which

³⁴⁹ See the plan that was proposed by Dirimtekin: Fig. 56.

³⁵⁰ There are also inscriptions about the fifth-century repairs along the walls on the eastern part of Yenikapı (Janin, *Constantinople Byzantine*, p. 281).

³⁵¹ Dirimtekin, *Fetihten Önce Marmara Surları*, pp. 41-42.

³⁵² See the article of Albrecht Berger, "Der Langa Bostanı" for further information.

³⁵³ Berger, "Der Langa Bostanı", p. 476.

served as watchtowers or lighthouses from early Byzantine times onwards and guided the ships towards the entrance of the harbor (Fig. III.13).³⁵⁴

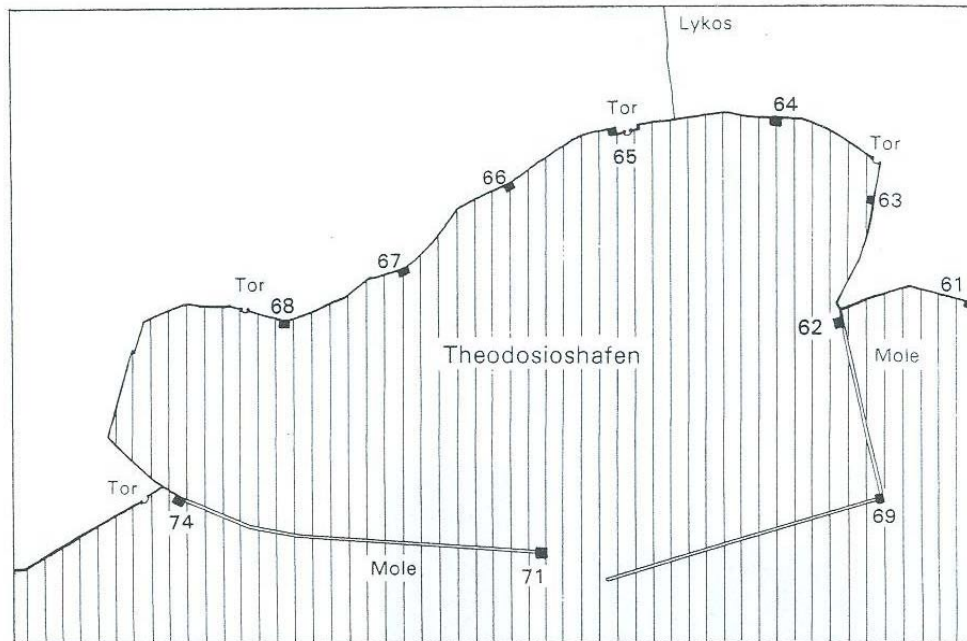


Fig. III.2. Plan of the harbor around 400 C.E., from Berger.

These towers that were carried by breakwaters could be linked to the defense system as in Caesarea Maritima that lay on the eastern Mediterranean shore: "...this portion was called the breakwater, while the remainder supported a stone wall encircling the harbor. From this wall arose, at intervals, massive towers..."³⁵⁵.

Unfortunately, we have meager evidence about the breakwaters and the lighthouse of the harbor in Yenikapı that were likely situated out of the archaeological excavations' borders. Instead, the archaeological excavations have unearthed three large stone docks, two of which date back to the eighth century.³⁵⁶

³⁵⁴ Ibid.; Kocabaş, "Life at the Theodosian Harbor, Wrecks and Rapid Silting", p. 25.

³⁵⁵ Josephus, *The Jewish War*. (Cambridge: Harvard University Press, 2004) Books 1.411-13.

³⁵⁶ Gökçay, "Yenikapı Kazılarında Ortaya Çıkarılan Mimari Buluntular", pp. 166-180. Few fragments of the harbor's walls, which are partly visible from the surface, partially survive today due to the railway construction project at the end of the nineteenth century and also due to uncontrolled modern urbanization (Fig. 60, 61).

3.2. The Archaeological Excavations in Yenikapı

3.2.1. The Description of the Excavated Sectors

The Yenikapı neighborhood derives its name from one of the gates on the southern sea walls, the former Jewish Gate. Today's neighborhood, invaded by industrial installations and unplanned urbanism, remained overlooked until 2004 and was subjected to deliberate destruction of ancient remains.

Shortly before this date, the Metropolitan Municipality of Istanbul and the Ministry of Transportation made a decision to implement a subway station in Yenikapı, which constitutes a project of approximately 58000 m².

According to the law of the High Council of Preservation issued in 1995, within the borders of the ancient city walls of Istanbul, any construction project should be first approved by the High Council, which has to collaborate with the Istanbul Archaeological Museum for the interpretation and the value of the archaeological site.³⁵⁷ In this regard a rescue archaeology project was started in 2004 at Yenikapı under the supervision of the Istanbul Archaeological Museums within the borders of the subway construction site.

The overall area of the archaeological excavations at Yenikapı, which corresponds exactly to the construction site limits are named after two different sectors of the subway projects, Metro and Marmaray which are funded by two different institutions (Fig. III.20, 21).³⁵⁸

The Metro sector forms the northeastern limit of the archaeological excavation area and corresponds to the inner harbor area that was once covered

³⁵⁷ The Law for the Protection of Cultural and Natural Heritage (No. 2863/ Part 1-Article 8, Part 4)

³⁵⁸ Being of a project of the Istanbul Metropolitan Municipality, the Metro Section corresponds the last station of the subway line starting from the northern part of the city, Taksim (<http://www.ibb.gov.tr/tr-TR/SubSites/raylisistemler/Pages/taksim-yenikapi.aspx>). And the Marmaray project that forms a different line is a project of the Ministry of Transportation and Communication (<http://www.marmaray.com.tr/>).

with the waters of the Sea of Marmara where the archaeological excavations revealed numerous shipwrecks.

The so-called 100 ADA sector, which forms the southwestern limit both of the harbor in Yenikapı and of the Marmaray sector is where most of the architectural remains came to light (Fig. III.13). This sector corresponds to the boundary where the city walls curve towards northeast by forming a corner next to Davutpaşa Gate. The 100 ADA is particularly important for the archaeology and the architecture of the harbor since it presents a wide range of sections from the harbor's history starting from late antiquity to the Ottoman period (Fig. III.4). Parts of these sectors were expropriated for a future regeneration project, which primarily aims to create a large-scale urban archaeology project planned together with the subway stations.³⁵⁹

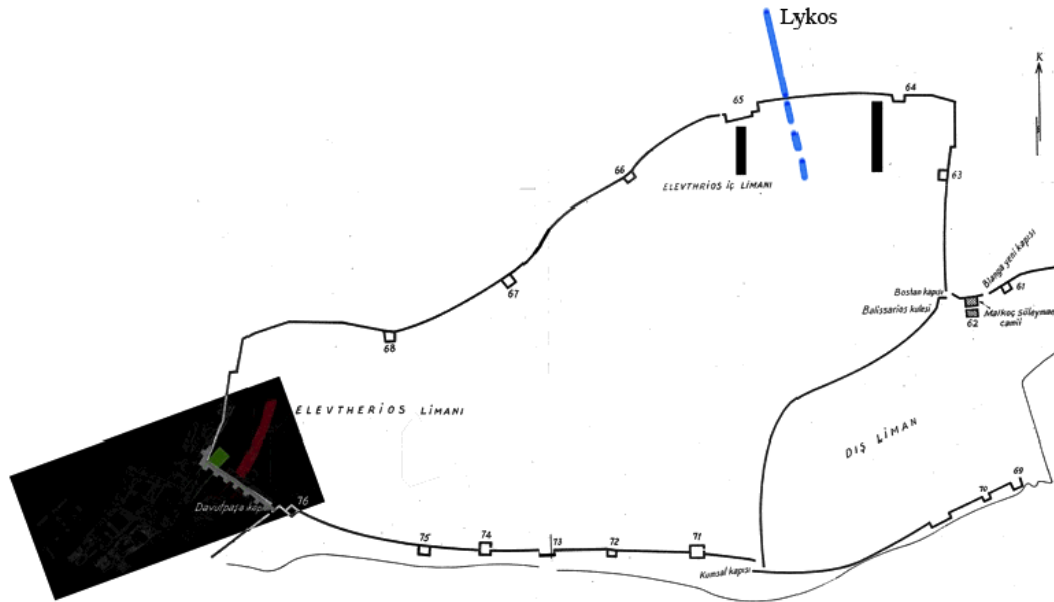


Fig. III. 13. The plan of the harbor by Dirimtekin, showing the remains in 100ADA on the western side and two piers with black on the northern limit.

³⁵⁹ For recent news, see the official websites of the Metropolitan Municipality of Istanbul and Istanbul 2010.

3.2.2. The Geoarchaeological History of Yenikapı: The Coastal Changes and the Stratification in the Harbor

The archaeological excavations in Yenikapı offered countless findings from a wide-range of periods: the earliest known prehistoric settlement remains of Istanbul, the prehistoric wooden tools, the well preserved wooden artifacts and about shipwrecks from different periods. The shipwrecks are the artifacts that have been the most widely discussed by scholars and the public.³⁶⁰ The geology of the harbor, which analyzes the earth deposit of the silted harbor, still needs further examination for a better understanding of the harbor.

According to studies conducted so far, the harbor's stratification comprises a period of approximately 8000 years during which coastal regression and transgression have been observed several times (Fig. III.22).³⁶¹ In particular, three major changes can be observed in the geological history of the harbor.

During the late Neolithic period when the Sea of Marmara was still not connected to the Black Sea or the Aegean Sea, there was a settlement on the Yenikapı shore, at the mouth of a river.³⁶² Discovered 6.30 m below the actual sea level, the remains of this Neolithic settlement are constructed in circular form by wattle and daub, which is the traditional Thracian prehistoric architectural

³⁶⁰ For the publications about the archaeological excavations see *Gün ışığında İstanbul'un 8000 yılı: Marmaray, Metro, Sultanahmet Kazıları* ed. Arzu Karamani Pekin, İstanbul: Vehbi Koç Vakfı, 2007 and *The 'Old Ships' of the 'New Gate': Yenikapı'nın Eski Gemileri* ed. Ufuk Kocabaş, İstanbul: Ege Yayınları, 2008 and the latest publication *1.Marmaray Metro Kurtarma Kazıları Sempozyumu Bildiriler Kitabı* 5-6 Mayıs 2008, ed. Ufuk Kocabaş, İstanbul: İstanbul Arkeoloji Müzeleri, 2010.

³⁶¹ Algan et al, "Antik Theodosius Limanı'nın (Yenikapı) Geo-Arkeolojisi ", p. 175. See Fig. 50-53 for a general understanding of the stratigraphy of the harbor in Yenikapı

³⁶² Kızıltan, "Marmaray Metro Projeleri Kapsamında Yapılan Yenikapı, Sirkeci, Üsküdar Kazıları", pp. 9-11. The Neolithic period for Anatolia expands to a period between ca. from 10.000 to 3000 B.C. The findings in Yenikapı are dated to a period between 6000-4800 B.C. (Gülbahar Baran Çelik, Yenikapı'da Günlük Yaşam." *Gün Işığında İstanbul'un 8000 Yılı: Marmaray, Metro, Sultanahmet Kazıları*, Ed. Arzu Karamani Pekin. İstanbul: Vehbi Koç Vakfı, (2007), pp. 218-219).

technique.³⁶³ The prehistoric wooden tools and burials, both the inhumation and cremation, are among other evidence of prehistoric life on today's Yenikapı shore.³⁶⁴

Through centuries a slow process that had embedded the Neolithic settlement in Yenikapı into the marshy deposits and into the waters of the Sea of Marmara started. And long after the Neolithic Period, approximately in the seventh century B.C., the Neolithic Yenikapı shore was no more part of the land but part of the sea and started to be used as a coastal facility. At the time a new settlement was already founded at the tip of the promontory, which took the name Byzantium, and would be later renamed Constantinople in the fourth century C.E.

In the sixth century C.E. there was a sudden alteration in the “marine sedimentation”, due to a possible natural disaster and subsequently led the harbor to become shallower –the layer is numbered 4 (Fig. III.23).³⁶⁵ According to analysis, from the eleventh century onwards, as defined by layer 6, the sedimentation type turned to “fluvial” that are derived from the silts carried by the river Lycus (Fig. III.24).³⁶⁶ By this time, the period of the regression of the Sea of Marmara seems to have happened and the silted harbor became part of the land again long after the late Neolithic Period and began to be reused not as a harbor but as the Vlanga Gardens –layer 7 and above.³⁶⁷

Siltation, which was a major problem for the harbor in Yenikapı as the stratification shows, has been the main problem of all artificial harbors since antiquity. Dredging a harbor was expensive, short-lived and could not be

³⁶³ Çelik, "Yenikapı'da Günlük Yaşam", p. 219.

³⁶⁴ Gökçay, "Yenikapı Kazılarında Ortaya Çıkarılan Mimari Buluntular", pp. 168-69.

³⁶⁵ Algan et al, "Antik Theodosius Limanı'nın (Yenikapı) Jeo-Arkeolojisi", 179. For a detailed survey on the formation of each strata see the article of Perinçek in *1.Marmaray-Metro Kurtarma Kazıları* pp. 191-217.

³⁶⁶ Ibid.

³⁶⁷ Perinçek, "Yenikapı Kazı Alanı'nın Son 8000 Yıllık Jeoarkeolojisi ve Doğal Afetlerin Jeolojik Kesitteki İzleri", p. 191.

satisfactory as experienced in the dredging of the Ephesus harbor in the second century B.C.³⁶⁸ There was a specialized group of workers named *collegia* who conducted dredging of harbors “by using scoops and baskets on ropes drawn by hand or windlass from a special bargelike craft”.³⁶⁹

In order to prevent the risk of silting, a variety of solutions were incorporated in the architectural design of harbors especially during Roman times. These included measures such as making two entrances to harbors, as was done at the harbor of Tyre or making artificial islands across the shore like the one in Centum Cellae, for allowing currents to enter the harbor.³⁷⁰

None of these solutions were applied to the architectural design of the harbor in Yenikapı although it was artificially built on a river mouth. Instead it had to be periodically dredged with imperial and private funds. But so far no historical documentation about dredging work in the harbor in Yenikapı exists.

Within the scope of this chapter, particular attention will be paid to the second period of the geological formation, which is identified particularly by layers 4 and 6 and which lasted approximately from the fourth century to the eleventh century. During this period, the defined area was covered by the waters of the Sea of Marmara and was in use as the largest harbor of Constantinople.

3.2.3. The Archaeological Evidence From the Fourth to the Thirteenth Century: The Newly Discovered City Walls, Brickstamps and Structures

The 100 ADA sector forms the southwestern edge of the harbor where the harbor's walls meet with the southwestern seawalls stretching to the Seven Towers. In this particular section the archaeological excavations revealed

³⁶⁸ D.J. Blackman, "Ancient Harbours in the Mediterranean. vol. 2." IJNA 11 (1982), p. 199.

³⁶⁹ Oleson, "The Technology of Roman Harbors", p. 148.

³⁷⁰ Blackman, "Ancient Harbors 2", pp. 198-199.

numerous architectural remains that represent both the inner and outer part of the harbor and also both the earlier and later phases of the harbor area (Fig. III.3).



Fig. III.3. The plan of 100ADA, from the Archive of Yenikapı Excavations, colored by Eda Yiğit (the fourth century wall shown with purple, the city walls with grey and the quay with blue)

The sector corresponds to a cluster of unidentified or identified, intersecting, overlapping and juxtaposing wall fragments that continue beneath the modern constructions (Fig.III.4). Their functions, periods and masonries differ from each other. In addition to this diversity, the partiality of this sector multiplies the challenges to identify these wall fragments.



Fig. III.4. The General View of 100ADA from north facing south, (photo. by Köşker)

In addition to the unidentifiable wall fragments, the remains that constitute this particular sector are remains of a *hypogeum* and a *cryptoporticus* that lay on the western limit of the 100 ADA (Fig. III.3).

The hypogeum, which is situated on the northwestern limit of the 100 ADA sector, consists of four rectangular rooms that were covered with vaulted ceilings.³⁷¹ In the northwestern room of this hypogeum, the excavations revealed a burial that is followed by 11 others discovered outside the structure on the above levels.³⁷² Considering the masonry of the walls and the burials, the excavation team dated this burial complex to the twelfth century.³⁷³

Maximos Planoudes wrote that there was a ruined church in Vlanga in the thirteenth century, for which the church of St. John the Forerunner in Vlanga asked to be used as cemetery.³⁷⁴ In the Yenikapı excavations, the remains of a church were discovered with a number of burials in and around the structure (Fig. II.6). These remains may belong to the ruined church that Planoudes wrote about. In this regard, having been built at a certain distance to this church, out of the ancient harbor's walls, the hypogeum may also be part of this burial complex that included also the ruined church that was granted to the church of St. John the Forerunner in Vlanga.

Measuring 1,80 in height and 1,60 in width, the cryptoporticus gave access from the coast inside the city walls and continues out of the excavation site's borders.³⁷⁵ Sixteen oil lamps, which were used to illuminate this passage, were

³⁷¹ Gökçay, "Yenikapı Kazılarında Ortaya Çıkarılan Mimari Buluntular", p. 173.

³⁷² Ibid., p. 174.

³⁷³ Ibid.

³⁷⁴ Maximi Monachi Planudis, *Epistulae*, pp. 50-52.

³⁷⁵ Gökçay, "Yenikapı Kazılarında Ortaya Çıkarılan Mimari Buluntular", p. 173.

discovered in the structure during the excavations.³⁷⁶ No specific dating could be made for this structure.

Among the remains unearthed in 100 ADA, there are three groups that constitute the harbor's architectural form: harbor walls, harbor piers, insitu brickstamps and assemblages of brickstamps.

Dendrochronological analysis dates the earliest wall fragment discovered in 100 ADA back to the fourth century C.E. (Fig. III.5, 40).³⁷⁷ Measuring about 4,40 m in width, 1,90 m in height and 54 m in length, the wall fragment stretches from northwest to southeast direction.³⁷⁸ It lies below another wall that is identified as the southwestern corner of the harbor's inner walls (Fig. III.3, 13).³⁷⁹ Having been constructed of shapely cut stones, the fourth century wall fragment is conserved only as substructure.



Fig. III.5. Structure No.2, the so-called 'wall of Constantine', view from southeast, from Gökçay.

³⁷⁶ Ibid.

³⁷⁷ The results of the dendrochronological analysis are not published yet. The information is provided from the public lecture 'Yenikapı 2005-2010, Aegean Dendrochronology Project' given by Prof. Peter Kuniholm in June 28, 2010.

³⁷⁸ Gökçay, "Yenikapı Kazılarında Ortaya Çıkarılan Mimari Buluntular", p. 172.

³⁷⁹ The fourth century wall is shown with purple, the fifth century city wall fragment with grey on the plan.

By taking the masonry and the dendrochronological analysis into account, archaeologists speculate that this wall fragment, dated to 320s, is the southern limit of the so-called Constantinian Wall.³⁸⁰ However, a few years' deviation in dendrochronological results and the reuse of the wooden beam should be also taken into consideration.

Before the battle of Chrysopolis in 324 and the defeat of Licinius, it is unlikely that Constantine would have ordered any construction on this site since the decision about building his city in Byzantium had not been made yet.³⁸¹

However, Constantinople of Constantine I must certainly have had a defense system from both sea and land.³⁸² According to Mango, the construction of the Constantinian walls could be only completed under Constantius II or Julian who placed his statue on the gate of Eugenius, next to the Yalıköşk Kapısı, on the shore of the Sea of Marmara.³⁸³

Zosimus writes that the Constantinian land walls lay "at a distance of fifteen furlongs beyond the old wall, with a new one that cut off the entire isthmus from sea to sea".³⁸⁴ The walls were still standing in 747, partly collapsed following the earthquake in 860 and substantially demolished under the reign of Bayazıd II in the year 1509.³⁸⁵ The last remains of the walls were standing next a masjid known as Isakapısı, the gate of Jesus that belonged to a small Byzantine church before its conversion into a mosque.³⁸⁶ Currently, as far as academic research is concerned, no remains of the Constantine walls survive on the surface.

³⁸⁰ Ibid.

³⁸¹ Averil Cameron, *The Byzantines*. (Malden, MA: Blackwell Publishing, 2006), p. 18.

³⁸² Another theory suggests that the Constantinian defence system did not have the maritime walls, which were later built in 439 (Cyril Mango. "The Triumphal Way of Constantinople and the Golden Gate." DOP 54 (2000): p 179.)

³⁸³ Mango, "The Triumphal Way of Constantinople and the Golden Gate", pp.176-178.

³⁸⁴ Zosimus. *New History*, Book II 30.

³⁸⁵ Mango, *Le développement urbain de Constantinople*, pp. 24-25.

³⁸⁶ Semavi Eyice, *Son Devir Bizans Mimarisi*. (Istanbul,1980), p. 39; Mango, "The Triumphal Way of Constantinople and the Golden Gate", p. 176.

Furthermore, the line that was followed by the Constantine city walls can be barely traced.

For that reason the discovery of the fourth century wall fragment in 100ADA and its final dating became significant since, if the wall discovered in the archaeological excavations in Yenikapı is part of the Constantinian Walls, the real limits of the Constantine's city and the line that the walls followed will be known.³⁸⁷

Another wall fragment in 100 ADA is dated back to the fifth century C.E. given its similarity to the masonry the so-called Theodosian Land Walls (Fig. III.6). Built by the order of Theodosius II against the Barbarian attacks, the Land Walls were completed in 413.³⁸⁸ They were "built of bonded masonry with bands of brick (five successive courses going right across the wall) alternating with bands of cut-stone facing, enclosing a core of mortared rubble".³⁸⁹



Fig. III.6. The wall fragment from the harbor's inner walls, (photo. by Köşker)

³⁸⁷ The only dendrochronology reports are published in the website of the Cornell University (<http://dendro.cornell.edu/reports/>) and do not provide information about the remains that are discussed in this study.

³⁸⁸ Cyril Mango, *Byzantine Architecture*, (London: Electra, 1978), p. 28.

³⁸⁹ Cyril Mango, Katherine M. Kiefer, William Loerke "Constantinople, Monuments of" *The Oxford Dictionary of Byzantium*. Ed. Alexander P. Kazhdan. (e-reference edition).

This fifth century wall fragment in 100 ADA was constructed with five successive courses of brick lines and bands of stones measuring 1, 35 to 2.75 m in width.³⁹⁰ The fact that the substructure of the wall that was constructed with hydraulic concrete sustained by wooden beams explains the structure's close distance to the sea.

Just as emphasized on general maps of the harbor, the wall coming from the north-south direction curves and continues to the eastern direction by enclosing the harbor.³⁹¹ This wall fragment must therefore belong to the sea walls built in 439 under the reign of Theodosius II.³⁹² Another fragment of the same wall discovered in 100 ADA can be seen on further north (Fig. III.32).

This wall probably gave access to the inner side with small gates built along the wall; one of them that was later closed can be still seen today above the so-called Constantine Wall (Fig. III.5).



Fig. III. 78. General view of 100 ADA, the city walls, the dock and the fourth century wall, (photo. by Köşker)

³⁹⁰ Gökçay, "Yenikapı Kazılarında Ortaya Çıkarılan Mimari Buluntular", p. 171.

³⁹¹ See Fig. 97 for the imaginary view of the harbor and its walls in the fifth century. It is important to say that the view does not include the gates on the walls and the piers that were discovered during the excavation.

³⁹² Mango et al., "Constantinople, Monuments of" *The Oxford Dictionary of Byzantium* (e-reference edition).

Another structure of sixth century in 100ADA, which stands further west of the two wall fragments, is dated by insitu brickstamps (Fig. III.7). The remaining wall of this structure that measures 2,60 m at its highest point, does not present a specific plan and cannot be linked to any other remains.

Similar to the need for the Proconnesian marble, the typical stamped bricks for the fifth and the sixth centuries were in high demand for the capital's construction programs that were largely clustered on the western part of the city from the reign of Theodosius I onwards.³⁹³



Fig. III.7. View of a sixth century wall fragment in 100 ADA, (photo. by Köşker)

In the earliest stage of the research on brick stamps, Mango argues that the production of stamped bricks continued through centuries since a relatively large amount of stamped bricks exist among the tenth and eleventh century ruins.³⁹⁴

Jonathan Bardill, in a recent study on brick stamps, proposed a different approach to the bricks used in later constructions. He claimed that these bricks could be exported after having been removed from the buildings and could be

³⁹³ Sodini, "Marble and Stoneworking in Byzantium", p. 130; Bardill, *Brickstamps of Constantinople*, p. 300.

³⁹⁴ Cyril Mango, "Byzantine Brick Stamps", *AJA* 54.1 (1950): p. 21.

reused as seen in several matching examples in Bulgaria.³⁹⁵ Considering this, before analyzing the brickstamps from Yenikapı, it is important to note the fact that the brick stamps alone cannot offer sufficient evidence for dating an architectural feature.

The first insitu stamped brick discovered in 100ADA on the same fragment of wall inscribed as “ΜΑΓΝΟΥ ΠΙΠΕ(C)ΣΒ(ΥΤΕΡΟΥ)Σ” with the *indicatio* is dated back to the first half of the sixth century by Bardill (Fig. III.33).³⁹⁶ Other examples of these bricks coming from the same workshop -or traded by the same merchant- can be found in Tokludedede Mescidi, Hagia Eirene, Hagia Sophia and among the remains of the Great Palace, all datable to the sixth century. If the bricks in 100ADA are not reused construction materials, they bricks have an important meaning for the study of these wall fragments since it is possible to date these remains in the harbor to the mid-sixth century. Another example of brickstamps in 100ADA possibly stamped under the name of “ΤΡΟΦΙΜΟΥ” is also a genre used in Hagia Sophia and the Great Palace but also in Kalenderhane Camii, which can be interpreted as reused material or an earlier structure below the church (Fig. III.34, 35).³⁹⁷

Among the examples, one group of stamped bricks is particularly interesting since they were not insitu, instead discovered as an assemblage in the midst of the harbor, in the so-called Metro section (Fig. III.37). Their inscription on the stamp reading “INBBAMAP” or “INBIBAMAP” is datable to an earlier period, the first half of the fifth century (Fig. III.36).³⁹⁸ Other examples of these bricks were used in the construction of the Byzantine drains in Mese, in the vaults

³⁹⁵ Bardill, *Brickstamps of Constantinople*, vol.1. 30.

³⁹⁶ Ibid., p. 305.

³⁹⁷ Ibid., p. 351.

³⁹⁸ Ibid., p. 308.

of the drains in the Forum of Constantine and also in St. Polyeuktos Church, one of the closest buildings to the harbor in Yenikapı.³⁹⁹

This assemblage of stamped bricks was discovered on the seabed close to a wooden pier. It is highly possible that these bricks were spilled around while they were transferred from a moored ship to the dock and left in the sea for an unknown reason and never collected again (Fig. III.8). This evidence supports the theory about the use of the harbor for the shipment of construction material. Bardill suggests that the stamped bricks could be shipped from any of the Constantinopolitan harbors according to the location of the warehouses in which they would be stored until the transport to the construction site.⁴⁰⁰ Considering this evidence, the harbor in Yenikapı was undoubtedly one of these shipment stations for the construction materials.



Fig. III.8 Spilled stamped bricks next to a wooden dock looking south, (photo. by author)

A possible explanation for leaving these bricks after they were spilled can be an earthquake. The layer above the bricks is identified by the geological analysis as a “tsunami” layer, as called by the researchers, and related to the

³⁹⁹ Ibid.

⁴⁰⁰ Bardill, *Brickstamps of Constantinople*, p. 4.

earthquake in 553 (Fig. III.8).⁴⁰¹ Among the historical records about Constantinople there is no evidence about a major earthquake in 553 but three other earthquakes were recorded in the years 554, 555 and finally in 557.

Between 535 and 545, under the reign of Justinian there were climatic catastrophes, which caused a universal famine.⁴⁰² Subsequently, the period between the years 554 and 558 witnessed a series of serious earthquakes, which caused uncountable loss of human life and property from North Africa to Constantinople and also a strong seismic sea-wave in the Aegean Sea, particularly in the island of Cos.⁴⁰³ The effects of the earthquakes got worse following the plagues and the shortage of grain in 555 and the plague of 558 that caused the death of the majority of the population.⁴⁰⁴

Agathias describes the devastation from an earthquake in December of 557: "Constantinople was once more almost completely razed to the ground by a terrible earthquake".⁴⁰⁵ It devastated many churches, large part of the city walls and damaged the Hebdomon district that is today's Bakırköy.⁴⁰⁶

Considering this account, the harbor in Yenikapı and its surrounding walls have to be among the areas that were affected by the earthquake in 557. The onsite comparison about this earthquake is commented by Perinçek to be the remains of the shipwrecks that come from the layer "4" that are less preserved compared to the shipwrecks coming from different layers.⁴⁰⁷

⁴⁰¹ Algan et al., "Antik Theodosius Yenikapı Limanı Jeolojisi", p. 243.

⁴⁰² Mitchell, *A History of Later Roman Empire*, pp. 371-377.

⁴⁰³ Guidoboni, *Catalogue of Ancient Earthquakes in the Mediterranean Area up to the 10th Century*, pp. 336-345.

⁴⁰⁴ Stathakopoulos, *Famine and Pestilence in the Late and Early Byzantine Empire*, (Burlington: Ashgate, 2004), pp. 303-305.

⁴⁰⁵ Ibid., p. 341.

⁴⁰⁶ Downey, "Earthquakes in Constantinople", p. 598.

⁴⁰⁷ Perinçek, "Yenikapı Kazı Alanı'nın Son 8000 Yıllık Jeoarkeolojisi ve Doğal Afetlerin Jeolojik Kesitleri", p. 204. The layer 4 is approximately dated to the same period as earthquakes; the sixth century.

The other layers that confirm the evidence of possible earthquakes are layers “6a” and “6b”, which measure 70 to 130 cm in thickness.⁴⁰⁸ The remains from twenty-two shipwrecks that were sunken at the same time were discovered in these layers.⁴⁰⁹ Considering the high number of the shipwrecks, this natural disaster, which caused the ships to sink, was interpreted as a *Notos* storm or the earthquake in 989 or in 1010.⁴¹⁰

From the eleventh century onwards, the silted marshy harbor turned into an abandoned neighborhood that was used for a number of purposes as discussed in detail in the previous chapter. Archaeological evidence confirms the textual evidence and the upper layers of 100ADA present remains of the workshops of the later periods from the late Byzantine to the early Ottoman periods. The existing fifth and sixth century remains were reused in these workshops by a number of interventions such as plastering rooms for liquid storage and adding steps to each unit (Fig. III.39).

Considering that from the thirteenth century onwards Yenikapı was reserved for Jews who were involved in tanning, these workshops and the cisterns discovered during the excavations could have been used as a tannery.⁴¹¹ These plastered rooms were probably used for soaking leather in a special liquid. The Jewish minority who at the beginning coexisted with a Christian community in Vlanga, who had a monastery and a small church there, dominated the Vlanga Gardens until their removal by Mehmed II.

⁴⁰⁸ Ibid., p. 209.

⁴⁰⁹ Ibid.; Kocabaş, "İstanbul Üniversitesi Yenikapı Batıkları Projesi: Gemiler", p. 25.

⁴¹⁰ Ibid. In the earthquake of 989, the dome of Hagia Sophia collapsed (Guidoboni, *Catalogue of Ancient Earthquakes*, pp. 404-405).

⁴¹¹ Bouras, "Aspects of the Byzantine City", p. 519.

3.2.4. A Unique Evidence about the Byzantine Underwater Construction Technique: The Scalae and Piers

Harbors are open-air complexes, which bring together specific architectural components regarding the harbor's function. The hypothetical view of the harbor of Caesarea illustrates how a harbor could be designed and organized; ships could be docked in or out waiting for their shipment turn (Fig. III.63). In bad weather conditions, piers constructed in the harbor played an important role as shelters for vessels.

The archaeological excavations in Yenikapı revealed a number of these piers and also unique evidence about the Byzantine underwater construction technique: a stone pier that was discovered with its still surviving wooden formwork (Fig. III.9).

Large-scaled stone docks, like the one in Yenikapı, were constructed for large ships that carried heavy cargoes. In order to prevent the damage of trade goods in the course of loading and unloading, these were constructed in a much more durable and costly way. In this manner, compared to wooden ones, these large docks could carry more weight that was carried occasionally by animals. The excavations in Yenikapı shows that horse were particularly used in the carriage process.⁴¹²

Three of the stone docks were discovered during the excavations, one on the southern limit of 100ADA and two others in the Metro section lying parallel to each other (Fig. III.9, 10, 43).

⁴¹² Kızıltan, "Marmaray Metro Projeleri Kapsamında Yapılan Yenikapı, Sirkeci, Üsküdar Kazıları", p. 10.



Fig. III.9. View of the dock in 100ADA from southwest, (photo. by Köşker)

Measuring 25,50 m in length, 2, 80 m in width, the pier in 100ADA differs from the two others for several reasons (Fig. III.9).⁴¹³ Lying in a southwest-northeast direction, the two lines of clear-cut stones chosen for its construction are not standard in terms of size and material (Fig. III.54). Some wrought blocks are reused bossaged blocks, some are plainly carved local stones. This structure sits directly on the sand that constituted the seabed when the structure was constructed.

Among the latter types of blocks used in the construction of this pier, is an inscribed spolia block that the excavation team dates to the fourth century C.E; however in my opinion it can be dated to the earlier centuries –the second and the third centuries- considering the typology of the inscription (Fig. III.53).⁴¹⁴ The two lines of the stoichedon Greek inscription can be read as “ΔΑΜΟ...ΑΘΑΝΑΙΩΝΟ...” or “ΔΑΜΟ[Σ]...ΑΘΑΝΑΙΩΝΟ...”, meaning “the

⁴¹³ Gökçay, "Yenikapı Kazılarında Ortaya Çıkarılan Mimari Buluntular", p. 170.

⁴¹⁴ Ibid.

people of Athens” in Doric dialect and not in Attic.⁴¹⁵ Commemorating the people of Athens, the spolia block gives no clues about the harbor’s architecture.

Lying in a north-south direction, one of the two piers on the northeastern part of the excavation area is particularly important as a unique discovery about the Byzantine underwater engineering (Fig.III.10). The excavated part of this structure measures 35 m in length and 4 m in width and continues to the north out of the excavation site’s limits, underneath the modern constructions.⁴¹⁶ It was constructed with clear-cut stones that were joined with bronze clamps (Fig. III.44, 45).

Spolia frieze blocks were placed on the stone line that defines the water level (Fig. III.46, 47). Being three in number, these floral frieze blocks, are in typical late Roman architectural order, with three bands; an acanthus frieze placed between a Lesbian cymatium and an Egg and dart frieze. One of them being upside down, they are likely to have been taken from an earlier building and placed there for aesthetic reasons.



Fig. III.10. View of the dock from southeast, (photo. by author)

⁴¹⁵ I am grateful to Prof. Magdalino for the identification and interpretation of the inscription.

⁴¹⁶ Gökçay, "Yenikapı Kazılarında Ortaya Çıkarılan Mimari Buluntular", p. 170.

This structure is dated to the eighth century by the dendrochronological analysis.⁴¹⁷ This suggests that an earlier phase of the harbor, particularly the fourth century constructions of Theodosius I lie further north underneath the unexcavated part.

The northeastern dock in Yenikapı acquires its importance also from the wooden beams discovered around the structure (Fig. III.11). The wooden beams correspond to the formworks into which the hydraulic concrete or “pozzolana” concrete was poured in with aggregate. Subsequently the hydraulic concrete in the wooden formworks was shaped into rectangular units with the help of the aggregate and formed the substructure for the construction of the dock. These rectangular underwater units, five of which have been excavated so far, can still be seen below the shapely cut stones in a well-preserved state (Fig. III.48).⁴¹⁸ Above the shapely cut stones are remains of bricks with plaster, which suggests that there was a brick construction above this structure, probably for joining these units with arches.



Fig. III.11. View of the formworks in Yenikapı, (photo. by author)

⁴¹⁷ The dendrochronological analysis result was not published so far but declared in a talk by Prof. Peter Kuniholm given at the Istanbul Archaeological Museums in 28.06.2010. According to the analysis, the pier is dated to 786.

⁴¹⁸ From north to south, the elevations of these five excavated units are respectively; +1,57m, +1,42m, +1,15m, +1,21m and +1,15m.

3.2.4.1. The Underwater Construction Technique Applied in Yenikapı

In *De Architectura*, Vitruvius explains the underwater construction technique that was also applied in Yenikapı in the following way: “Next, in the designated spot, formwork enclosed by stout posts and tie beams is to be let down into the water and fixed firmly in position. Then the area within it at the bottom, below the water, is to be leveled and cleared out, (working) from a platform of small crossbeams. The building is to be carried on there with a mixture of aggregate and mortar, as described above, until the space left for the structure within the form has been filled.”⁴¹⁹

The earliest evidence of the same pozzolana concrete technique has been discovered in the Cosa harbor, in Italy. The excavation team of Cosa unearthed five piers parallel to each other that were constructed with pozzolana being a variation of the pier in Yenikapı (Fig. III.68).⁴²⁰ These five piers in Cosa, just as the two parallel northern piers in Yenikapı, were used for docking larger vessels.

In the underwater excavations in Caesarea Maritima, evidence similar to that of Yenikapı came to light. In the excavated part, which corresponds to the breakwaters, similar formwork samples were discovered (Fig. III.12).

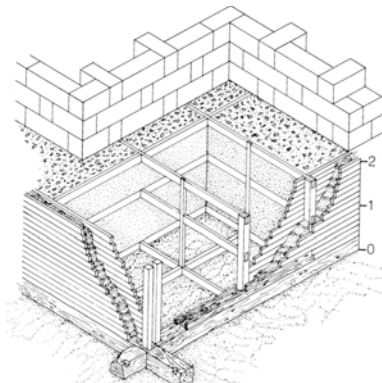


Fig. III.12. Reconstruction of the formwork discovered in Caesarea Maritima.

⁴¹⁹ Vitruvius, *On Architecture*, 5.12.3.

⁴²⁰ Anna Marguerite McCann, "The Harbor and Fishery Remains at Cosa", *Harbour Archaeology. Proceedings of the First International Workshop on Ancient Mediterranean Harbours, Caesarea Maritima 24.-28.6.83* (1985), p. 394.

According to the analysis of the hydraulic concrete, the volcanic materials were imported from Italy and the Aegean region and the timber imported from the Levant.⁴²¹ The provenance of the timber represents a practical choice since it was imported from a spot closer to the site. But the volcanic materials used in the hydraulic concrete had to come from a specific spot in Italy, Pozzuoli near Naples.⁴²² The powdery volcanic ash, pozzolana, which appeared from the late third century B.C. was the only raw material that could be used in the making of hydraulic concrete as Vitruvius states.⁴²³

Another underwater construction technique is described by the first century Roman author Suetonius who narrated the construction of breakwaters in Ostia under the reign of the emperor Claudius: “He constructed the harbor at Ostia by building curving breakwaters on the right and left, while before the entrance he placed a mole in deep water. To give this mole a firmer foundation, he first sank the ship in which the great obelisk had been brought from Egypt, and then securing it by piles, built upon it a very lofty tower after the model of the Pharos at Alexandria, to be lighted at night and guide the course of ships.”⁴²⁴

Harbor engineering in the Roman period was at the apogee since Roman engineers brought several innovations to artificial harbor construction such as the experience in large-scale construction and hydraulic concrete, which would set underwater.⁴²⁵ With these innovations, they were no longer bound to natural features but they could construct satisfactory artificial harbors almost wherever they liked.

⁴²¹ Oleson, "The Caesarea Ancient Harbor Excavation Project", p. 298.

⁴²² White, *Greek and Roman Technology*, p. 106.

⁴²³ Oleson, "The Technology of Roman Harbors", p. 148.

⁴²⁴ Suetonius, *The Lives of the Caesars, Claudius*, (Cambridge, Mass.: Harvard University Press, 2001): V.xx.

⁴²⁵ Blackman, "Ancient Harbors 2", p. 197.

During the course of the sixth century Procopius narrated the construction of a harbor in Heraeum or Hieron as follows:

*...He prepared great number of what they called 'chests' or 'cribs', of huge size, and threw them out for a great distance from the shore along oblique lines on either side of the harbor, and by constantly setting a layer of other chests in regular courses upon those underneath he erected two very long walls, which lay at an angle to each other on the opposite sides of the harbor, rising from their foundations deep in the water up to the surface on which the ships float. Then upon these walls he threw rough-cut stones, which are pounded by the surf and beat back the force of the waves; even when a severe storm comes down in the winter, the whole space between the walls remains calm, a single entrance being left between the breakwaters for the ships to enter the harbor.*⁴²⁶

The passage of Procopius is the only passage that refers to the construction of a harbor during the Byzantine period.⁴²⁷ And the harbor in Yenikapı, particularly the northeastern pier is the only evidence about the harbors' construction and underwater engineering of the Byzantine times (Fig. III.11). As a matter of fact, the discovery of the harbor in Yenikapı stands as a supplement particularly for the already known technique explained by Procopius.

The passage indicates that the harbor was constructed by a technique similar to the other earlier Roman examples that were previously discussed, by using the formworks, "chests or cribs" as Procopius calls them. On the exterior sides of the wooden formworks that were filled with hydraulic concrete, rough cut-stones were placed to consolidate the structure.⁴²⁸ Shapely cut stones were placed on top of the formworks, as seen in Yenikapı (Fig. III. 46). And on top of the structure, brickwork could be used for building arches and the like as seen from the insitu brick remains in Yenikapı (Fig. III.44). The Roman technique was still applied during the sixth century and Yenikapı's archaeological findings

⁴²⁶ Procopius, *Buildings*, I.xi.18-19.

⁴²⁷ Hohlfelder, "Building Harbors in the Early Byzantine Era", p. 369.

⁴²⁸ *Ibid.*, p. 371.

constitute good evidence for the late antique underwater construction techniques.⁴²⁹

The hypothetical view of the Yenikapı pier had to look like the Roman breakwater depictions of the Puteoli harbor (Fig. III.64). The square blocks that were unearthed in the excavations in Yenikapı had to be jointed with brick arches to form a sole massive unit on which heavy cargoes could be shipped and unloaded by stevedores or carriages by using human or animal forces.⁴³⁰

3.3. A Comparative Study for the Harbor of Yenikapı: Harbor's Architecture and Sailing for Grain

Harbors are more than shelters for vessels. According to Leonard, they can be studied in various groups such as natural, artificial, private, public, military, commercial harbors, anchorages or naval stations and they might have distinct names such as *emporion*, *limen*, *epineion*, *hormos*, *hyphormos*, *prosormos*, *portus* and *station* according to their nature and function.⁴³¹ Among this multitude of harbor types, the harbor in Yenikapı was an artificially built commercial harbor, which was maintained by imperial, public and private funding as the Codex Theodosianus proves.⁴³²

Being directly exposed to the sea, like the topographical setting of the harbor in Yenikapı, harbors are the weakest points in a city's defense. Accordingly, they were predominantly installed in the city walls or occasionally outside of these walls. For harbors placed outside of the city, supplementary architectural solutions could be applied like building walls on the breakwaters that

⁴²⁹ See the list of references for Hohlfelder's articles on Caesarea Maritima for the discussions on the underwater constructions.

⁴³⁰ Oleson, "The Technology of Roman Harbors", p. 147.

⁴³¹ John R. Leonard, "Harbor Terminology in Roman Periploi. " *Res Maritimae. Cyprus and the Eastern Mediterranean from Prehistory to Late Antiquity. Proceedings of the Second International Symposium "Cities on the Sea"*, (Nicosia, October 18 - 22, 1994) p. 163.

⁴³² *Codex Theodosianus* XV.1.23.

guarded the harbor or covering the entrance of the harbor by huge iron chains. Among a multitude of depictions, two coins are significant since they depict the ideal Roman port with the curving breakwaters (Fig. III.61, 62).

A Roman wall painting from Stabiae depicting the Puteoli (Pozzuoli) harbor on the Bay of Naples, which was built by the emperor Augustus, gives a clear idea about how a harbor would have looked like (Fig. III.60).⁴³³ Accordingly, the harbor is depicted with arched breakwaters, warehouses and a number of statues placed along the shore on top of the monumental columns that were the main visual elements of the Greek and Roman harbors. The lighting technique of the Roman harbors was simply the placement of terracotta jars along the roof of the quay (Fig. III.61, 62).⁴³⁴

Compared to Puteoli, warehouses, shops, fora and a mint surrounded the harbor in Yenikapı.⁴³⁵ These urban components were definitely not the only establishments surrounding the harbor. Large harbor complexes could contain a variety of buildings like religious complexes, workshops, boathouses, baths, inns and shops for the sailors' use.⁴³⁶

3.3.1. The Grain Shipment at the Harbor in Yenikapı

During the Roman and Byzantine periods, naval traffic in general and commercial shipping in particular depended on weather conditions more than it

⁴³³ Rickman, "The Creation of Mare Nostrum", p. 140.

⁴³⁴ Aline A. Boyce, "The Harbor of Pompeiopolis." *AJA* 62.1 (1958), p. 169.

⁴³⁵ *Notitia Urbis Constantinopolitanae*, pp. 297-299.

⁴³⁶ See Blackman, D.J. "Ancient Harbours in the Mediterranean. vol. 1." *IJNA* 11 (1982), pp. 79-104 and "Ancient Harbours in the Mediterranean. vol. 2." *IJNA* 11 (1982): 185-211 for a better understanding of harbors.

does today.⁴³⁷ Coastal sailing was avoided during the bad season *cheimon* and the sea was considered closed: *mare clausum*.⁴³⁸

As naval technology required, the convoy of ships that carried the grain from Alexandria could follow the shores of the Mediterranean passing by Palestine, Syria, Cilicia and Lycia and then from Rhodes turn to the Aegean coast to reach Constantinople.⁴³⁹ Another theory suggests that there was also another route by open-water access from Egypt to Rhodes and then to the Greek Islands, which was open to sailing year-round without any restrictions just like in the pre-Roman times.⁴⁴⁰

According to the same theory, the sailing time depended on water and food provisions.⁴⁴¹ Hence, since Antiquity, special sailing manuals called *periploi* guided the sailors through specific spots for docking, for supplying water and food or in case of emergency.⁴⁴² For instance, dating to the third century B.C. the *periplous* of Pseudo-Skylax provides detailed information about the naval stations on the Black Sea coast.⁴⁴³ Using *periploi*, sailors were informed about the currents, the surrounding geographic features and the ritual places along their way.

Until the sixteenth century's improvements in shipbuilding technology, the sailing season was restricted to the summer periods. It was not three full months

⁴³⁷ Pryor, *Geography, Technology, and War: Studies in the Maritime History of the Mediterranean, 649-1571*, p. 87.

⁴³⁸ Rougé, *Ships and Fleets*, pp. 15-16. Lionel Casson opposes the theory by arguing that the run between Rhodes and Alexandria was conducted continuously (Tammuz, "Sailing Seasons in the Early Antiquity", *MHR* 20:2 (2005), p. 145).

⁴³⁹ Pryor, *Geography, Technology, and War*, p. 90.

⁴⁴⁰ Tammuz, "Sailing Seasons in the Early Antiquity", pp. 145-156.

⁴⁴¹ *Ibid.*

⁴⁴² Blackman, "Ancient Harbors 1", p. 79.

⁴⁴³ See Shipley, Graham. *The Periplous of Pseudo-Scylax: An Interim Translation*. 2002. for more information about Pseudo-Scylax's Periplus.

but only fifty days from June 21 to August 10.⁴⁴⁴ For instance, the laws compiled under the reign of Theodosius II, the *Codex Theodosianus* allows convoys of ships carrying grain from Alexandria to Rome, later from Alexandria to the harbor in Yenikapı, between April 1 and October 15.⁴⁴⁵ With respect to law, the time limitation required a new solution for the effectiveness of the shipment for feeding the population.

Under the reign of Augustus, the population of Rome was approximately 1,250,000 and by the time of Nero, half a million tons of grain were unloaded each year on the quays at Portus in a limited time.⁴⁴⁶ According to Mango's estimation considering the needs of the population in Constantinople, the number of the cargo ships carrying grain that approached Yenikapı at once was about 500.⁴⁴⁷ Depending on the size, the largest ship could carry 340 tons, or 7,500 sacksloads.⁴⁴⁸ Depending on the cargoes, teams of oxen could also be used in the hauling process as Procopius narrates.⁴⁴⁹

The quantity of grain stored for *annona* in the capital depended on the yearly harvest. Under the reign of Justinian the First, a granary was built in Tenedos reserved mainly for the grain coming from Alexandria.⁴⁵⁰ The construction of other granaries had several benefits such as decentralization of the sources in case of emergencies such as fire, war or natural disasters and relieving the burdens of a busy capital that was surrounded by sailing vessels. Another

⁴⁴⁴ Hesiod, *Works and Days* II, 646-694; Pryor, *Geography, Technology and War*, p. 87.

⁴⁴⁵ *Codex Theodosianus*. 13.9.3.3.

⁴⁴⁶ Lionel Casson, *Sea and Seamanship in the Ancient World*, (Princeton: Princeton University, 1986), p. 369; Oates, "The Population of Rome", p. 109.

⁴⁴⁷ Mango, *Le développement urbain de Constantinople*, p. 38.

⁴⁴⁸ Lionel Casson, *Harbor and River Boats of Ancient Rome*, *JRS* 55:1/2 (1965), p. 31.

⁴⁴⁹ Procopius, *History of the Wars*, V.26.10-13; Casson, *Harbor and River Boats of Ancient Rome*, p. 39.

⁴⁵⁰ Timothy E. Gregory "Tenedos" *The Oxford Dictionary of Byzantium*. Ed. Alexander P. Kazhdan. © 1991, 2005 by Oxford University Press, Inc. The Oxford Dictionary of Byzantium: (e-reference edition). Oxford University Press. Koc University. 29 April 2010 <http://0-www.oxford-byzantium.com.libunix.ku.edu.tr:80/entry?entry=t174.e5338>

major fact was of course, that grain served not only the capital but also its hinterland.

An Ostian funerary relief depicts how vessels were towed into harbors (Fig. III.70). While approaching with furled sails to the harbor's entrance symbolized with by the lighthouse, a smaller boat or a tugboat with oars tugged the boat into the harbor next to the quays.⁴⁵¹

Ships were tied with ropes to piers through perforated blocks.⁴⁵² One of them was discovered along the western dock in Yenikapı (Fig. III.51). Another and more organized way was to place inscribed marble bollards on the docks. Dating back to the fifth and sixth centuries, a bollard inscribed as “Α ΚΑΤΑΠΛΑΟΥ” and discovered in the port of Phthiotian Thebes explains that the bollard marked the fourth berth for the approaching vessel (Fig. III.52).

An Ostian tomb painting known as the *Isis Giminiana* depicts the unloading of the vessel after it was tied to the berths on the quays (Fig. III.14). On a wooden plank leading up from the quay to the vessel, two men carry sacks on their shoulders to the *res*, a corn measurer.⁴⁵³ Holding a kind of abacus, the corn measurer stands in the vessel next to the *farnacis magister*, the ship's master who stands at the stern and the controller of the measurer.⁴⁵⁴ The depiction gives us an idea about how small-scale transportation was conducted in the harbor in Yenikapı. However we know that the demand for grain in Yenikapı was higher especially during late antiquity.

⁴⁵¹ Meiggs, *Roman Ostia*, Plate XXVI.

⁴⁵² Oleson, "The Technology of Roman Harbors", p. 147.

⁴⁵³ Meiggs, *Roman Ostia*, pp. 294-5.

⁴⁵⁴ Rickman, "The Grain Trade under the Roman Empire", p. 267.

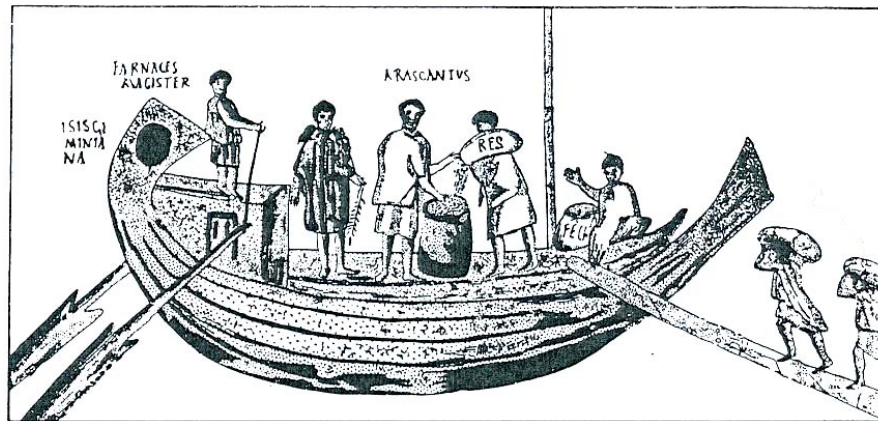


Fig. III.14. The Isis Giminiana, an Ostian tomb painting.

In order to fulfill the shipment needs, the harbor in Yenikapı was full of both stone and wooden docks that are still identifiable on the field (Fig. III.41, 42). The construction materials, the size and the length of these features varied since different sized vessels carrying different cargoes docked in different piers. According to the typology and to the analysis of the wood, these piers were used during several centuries by being constantly repaired.

3.3.2. Key Elements in Harbor Architecture

One of the discoveries in the Caesarea Maritima harbor's excavations is comparable to the pier discovered in Yenikapı in terms of its construction, which constitutes subsequent underwater units.

In Caesarea Maritima, an independent square block built underwater was discovered 6.60 meters north of the harbor's breakwater (Fig. III.50).⁴⁵⁵ Measuring about 15 m in length and 12 m in width, the separate unit differs from the pier in Yenikapı by its distance to the closest block and its magnitude.⁴⁵⁶ The

⁴⁵⁵ J.P. Oleson et al, "The Caesarea Ancient Harbor Excavation Project", *JFA* 11:3 (1984): p. 299.

⁴⁵⁶ Oleson, "The Technology of Roman Harbors", p. 153.

structure in Caesarea Maritima was interpreted as the substructure of the tower supporting the famous statue as narrated by Josephus.⁴⁵⁷

Statues were part of the major architectural components of the Roman harbors as coins and depictions illustrate (Fig. III. 60-62). The location of statues in harbors varied according to architectural design. For instance, one of the seven wonders of antiquity, the Colossus of Rhodes, stood at the entrance of the harbor stepping on the tips of the breakwaters just like the statue in Caesarea Maritima, which stood at the entrance of the harbor on a tower.

Another practice was to place statues along the shore on monumental columns just like the port of Puteoli. During the Roman period, statues represented the divinities or benefactors who financially contributed to the harbor. Central authority encouraged harbor building for the revival of trade income, possibly like in Yenikapı and Eleutherius.⁴⁵⁸

The harbors of Constantinople had two famous statues, a bronze ox in Neorion and the statue of Eleutherius the *asecretis* in the harbor in Yenikapı who was one of the only known benefactors of the fourth century harbor.⁴⁵⁹

The tips of breakwaters could be used for another architectural arrangement: to place lighthouses. Lying on the southern Mediterranean coast, and restored by the emperor Septimius Severus, the lighthouse of Leptis Magna stood at the mouth of the harbor (Fig.III.57). But these were not the only spots where lighthouses could be placed. For instance, Strabo describes an island in Alexandria named Pharos on which a lighthouse stood: "And likewise the extremity of the isle is a rock, which is washed all round by the sea and has upon

⁴⁵⁷ Oleson, "The Caesarea Ancient Harbor Excavation Project", p. 299.

⁴⁵⁸ Rickman, "Towards a Study of Roman Ports", *Harbour Archaeology. Proceedings of the First International Workshop on Ancient Mediterranean Harbours*, Caesarea Maritima 24.-28.6.83 (1985): p. 106.

⁴⁵⁹ *Patria*, II 63; Anonymous, *Parastaseis Syntomoi Chronikai*, 5a.

it a tower that is admirably constructed of white marble with many stories and bears the same name as the island. This was an offering made by Sostratus of Cnidus, a friend of the kings, for the safety of mariners...”⁴⁶⁰

The Alexandrian *Pharos*, the lighthouse which gives its name to the island lying across Alexandria was one of the Seven Wonders of the Ancient World. *Pharos*, which was designed by Sostratus of Cnidus, was constructed with huge blocks that were joined with lead.⁴⁶¹ The form of the Alexandrian lighthouse is known from various sources like coins, historical accounts and mosaics that illustrate other lighthouses. A mosaic from Venice depicts the *pharos* of Alexandria as a three-storied cylindrical structure (Fig. III.65). A similar relief appears on the entrance of the Pisan tower. A lighthouse is depicted as a three-storied structure between two ships (Fig. III.66). As a matter of fact, the lighthouses were not only cylindrical as illustrated by a terracotta model discovered in Vulci which depicts a square lighthouse that was built using worked stones (Fig. III.73).

The oldest working lighthouse known also as the “tower of Hercules” is in La Coruña, Spain (Fig. III.76).⁴⁶² Having been restored several times, the structure’s approximate size is 10 m square. Another example of a lighthouse is in Leptis Magna where the excavators have revealed the remains of a lighthouse that is approximately 13x18 m.⁴⁶³

⁴⁶⁰ Strabon, *Geography*, 17.I.6.

⁴⁶¹ White, *Greek and Roman Technology*, p. 105.

⁴⁶² Hague, D.B. "Lighthouses". *Marine Archaeology. Proceedings of the 23rd Symposium of the Colston Research Society held in the University of Bristol, April 4th to 8th, (1971):* p. 293.

⁴⁶³ *Ibid.*, p. 296.

One of the few remains of ancient lighthouses was recently discovered at Patara on the southwestern coast of Turkey (Fig. III.77).⁴⁶⁴ The podium of the lighthouse, 20 m square, is completely preserved.⁴⁶⁵ On top of the podium stood a circular structure with an entrance from the western side.⁴⁶⁶ The inscription of the structure provides us with the information about its benefactor; accordingly the lighthouse was constructed by the provincial governor Marcus Sextius Priscus in the first century C.E.⁴⁶⁷

This evidence provides good comparisons for the locations and the sizes of lighthouses. However, no evidence of a lighthouse has come from the archaeological excavations in Yenikapı. Obviously the structure, if it was preserved at all, has to be out of the limits of the excavated area, thus further south of the current excavation area.

3. 3. Conclusions

This chapter presented some of the selected architectural remains of the harbor in Yenikapı in order to support the historical context, which is offered in the previous section. In order to provide a better understanding of the remains, I presented several comparisons from the material evidence and the depictions of the other ancient harbors.

Selections for the comparative material had to be limited to Roman harbors for several reasons. Among the archaeological research all over the world, only a small number focused on the harbor studies. In addition, the general focus of harbor studies is particularly limited to the Roman harbors since they provide

⁴⁶⁴ Havva İşkan. "Patara 2005 Yılı Kazı ve Onarım Çalışmaları." *28. Kazı Sonuçları Toplantısı* 1.Cilt, Ankara: Döşim Basımevi, (2007), pp. 18-19.

⁴⁶⁵ Ibid.

⁴⁶⁶ Havva İşkan. "Patara 2004." *Anadolu Akdenizi Arkeoloji Haberleri* 2005-3, Istanbul, (2005), p. 64.

⁴⁶⁷ Ibid., 64.

both well-preserved remains as well as rich textual evidence. With respect to the Byzantine harbors, almost no ancient or modern literature exists.

This study should be seen as a starting point for the reinterpretation of the harbor's remains in a comparative manner, which requires drawing insight from the other harbors that were excavated so far. Yet given the rareness of the research field, the archaeological excavations in the harbor in Yenikapı become particularly important.

One of the conclusions to draw from this chapter is that there is no evidence in support of a lighthouse or a warehouse. I suggest that the only remains that can be identified as a breakwater is the fourth century remain that lies in 100ADA.

In my view, the remains on the northeastern part are not breakwaters but remains of piers that were constructed during a renovation program of the harbor in the eighth century. My argument originates from the fact that the positions; the structures lie parallel to each other, and the distance between them is too short to be an entrance to the harbor.

Another conclusion to draw from this chapter is that the remains of the Middle Byzantine church discovered in the excavations date back to a period earlier than the thirteenth century since it was already abandoned in this period, as Maximos Planoudes wrote.

The distribution of the archaeological remains –the earlier remains are discovered on the western end of the harbor-gives ground for arguments about the phases of the harbor.⁴⁶⁸ In other words, the harbor decreased in size or silted up from west to east, considering that the earliest remains of the harbor are on the

⁴⁶⁸ Rahmi Asal, "İstanbul'un Ticareti ve Theodosius Limanı." *Gün Işığında İstanbul'un 8000 Yılı: Marmaray, Metro, Sultanahmet Kazıları*. Ed. Arzu Karamani Pekin. İstanbul: Vehbi Koç Vakfı, (2007), pp. 180-9.

western part and the oldest remains are in the eastern part. Accordingly, the remains in 100ADA dated to the fourth century such as the fourth century wall fragment and the pier can be the only remains of the harbor that Theodosius I constructed.

CONCLUSIONS

In the present study, I developed a comprehensive historical survey about the only excavated harbor of the Byzantine capital, the harbor in Yenikapı. In doing so, I paid particular attention to two overlooked aspects of the harbor, its history and its architectural remains. In order to construct an accurate history of the harbor in Yenikapı, I focused on the primary sources that refer to the harbor throughout history and proposed a comprehensive reassessment of them. The research undertaken in this study differs from existing studies by reinterpreting the primary sources in close connection with the newly discovered remains.

The main sources I analyzed include chronologically *The Notitia Urbis Constantinopolitanae*, the *Codex Theodosianus*, the *Patria of Constantinople*, the *Chronicon Paschale*, the *Parastaseis Syntomoi Chronikai*, the *Chronicles of Theophanes the Confessor*, *The Anonymous Miracles of St. Artemius* and the *Letters of Maximos Planoudes*.⁴⁶⁹ The reason behind these choices is that these were the only known sources referring to the harbor in Yenikapı, but had never been studied as such in a detailed way, especially after the archaeological excavations.

Only in this way was it possible to write the first comparative historical study of the first excavated harbor of Constantinople, the harbor in Yenikapı, after the archaeological excavations. By bringing together the available evidence, I discovered some interesting links that were not referred to in existing publications

⁴⁶⁹ See Fig. 23 for the table of references. A close analysis of these sources required several translations, the *Patria* and *Maximos Planoudes* which were not translated into any modern language so far, had been translated from Greek to English by Adrian Saunders and presented in this thesis.

so far. These include mainly construction projects that possibly took place in the eighth century and the thirteenth century ruined monastery in Vlanga. Archaeological excavations revealed that the harbor continued to function after the seventh century up to the eleventh century. At this point, the harbor of Caesarius that was referred by the Chronicles of Theophanes and the Miracles of St.Artemius is precisely linked to the harbor in Yenikapı.

Another case that brings together the primary sources and the archaeological evidence is the discovery of amphorae datable to the period between the fifth century B.C. and the fourth century C.E. This proves that there was already mercantile activity in this bay and furthermore that the early construction program by Eleutherius that was referred to in the Patria was partially approved.

Apart from historical evidence, I presented a selection from the architectural remains of the other well-known harbor excavations like Cosa, Alexandria, Leptis Magna and Caesarea Maritima by placing them in context with the ancient depictions of the harbors such as Alexandria, Puteoli and Ostia. By doing this, I tried to regenerate a hypothetical picture of the harbor in Yenikapı, when it was still an active harbor during the Byzantine reign.

As the study shows, the bay at Yenikapı at the mouth of the Lycus River, which lay on the Sea of Marmara shore, was relatively protected from the adverse weather conditions and the dangerous waves of the Propontis. The pottery shards convey that this convenience allowed the use of the bay long before the Byzantine period, possibly from the fifth century B.C., and the shore emerged as a natural coastal facility where ships could be just pulled up on the Marmara shore.⁴⁷⁰

⁴⁷⁰ Kızıltan, "Marmaray Metro Projeleri Kapsamında Yapılan Yenikapı, Sirkeci, Üsküdar Kazıları", p. 9.

The next phase of the harbor starts with the interventions of Eleutherius, an aristocrat from the imperial court of Constantine the Great in the fourth century C.E. As the secretary of the imperial court, Eleutherius financially contributed to the newly founded city of the emperor Constantine and enabled the rehabilitation of the coastal facility on the southern coast of the city, in today's Yenikapı.⁴⁷¹ In return, the emperor probably granted him lands and subsequently, the precinct as well as the harbor were named Eleutherius after him.⁴⁷²

The evidence from the archaeological excavations does not include any material remains from this second phase of the harbor. But a sample taken from the wooden beams of a wall fragment opened the ground to discussions. Dated back to the first half of the fourth century C.E. the wall fragment is argued by the excavation team to be the part of the Constantine's wall.⁴⁷³ Another argument that can be related to the fourth century remain is that it may be also part of the construction program of Theodosius I. Considering the partiality of the excavated area, mainly 100 ADA, it is difficult to draw a final conclusion about the remains.

According to the primary sources, Eleutherius placed his statue somewhere in the harbor. The evidence suggests that the statue carried a woven basket on his back and a plow in his hand.⁴⁷⁴ Eleutherius' attributes were not chosen haphazardly since the major reasons that lay behind was the issue of transportation of the grain supply to feed the constantly increasing population of the capital.

Through the years, the population of Constantinople increased unexpectedly and the urban infrastructure was no longer sufficient. According to

⁴⁷¹ *Patria*, II 63

⁴⁷² Theophanes The Confessor, *The Chronicle*, p. 37.

⁴⁷³ For the discussions on the architectural remains see Gökçay' s article "Yenikapı Kazılarında Ortaya Çıkarılan Mimari Buluntular".

⁴⁷⁴ *Patria*, III 91.

the Codex Theodosianus, at the end of the fourth century, Theodosius I issued a law promoting contributions for the restoration projects of “the aqueducts and the harbor” that was subsequently named the harbor of Theodosius after the name of the emperor.⁴⁷⁵ The key elements in the harbor’s renovation were the extension of the port and two warehouses, Horrea Alexandriana and Horrea Theodosiana that stood on the northeastern part of the harbor. The archaeological evidence suggests that there is no reliable evidence for the harbor’s remains that Theodosius I constructed, thus it had to be further north and not within the limits of the archaeological excavation area.

Under the reign of Theodosius II, during the first half of the fifth century, the harbor in Yenikapı was itemized in an imperial account, namely, the *Notitia Urbis Constantinopolitanae* still as ‘Portus Theodosiacus’.⁴⁷⁶ At the mid fifth century, the harbor was still active being one of the four harbors of the capital. The harbor was possibly surrounded by sea walls under the reign of Theodosius II who also commissioned one of the largest construction projects of the capital.⁴⁷⁷

During the fifth and the sixth centuries, the harbor had to be one of the most active harbors since at the end of the sixth century under the reign of Justin II, another harbor on the Marmara shore, the harbor of Julian, fell in disuse and required renovations that resulted by the intervention of Justin II who named the harbor as the harbor of Sophia.⁴⁷⁸

Until the late seventh century, there is no mention of the harbor of Theodosius. Then two different accounts, the *Miracles of St. Artemius* and *Theophanes the Confessor* state a new name, Caesarius, given to the eastern part

⁴⁷⁵ *Codex Theodosianus* XV.1.23.

⁴⁷⁶ Anonymous, *Notitia Urbis Constantinopolitanae*, p. 239

⁴⁷⁷ Janin, *Constantinople Byzantine*, p. 281.

⁴⁷⁸ *Ibid.*, p. 223.

of the harbor. The former provides information about a granary known as “Lamia” that was identified as Horrea Alexandriana and the latter informs us about a big fire under the reign of Justinian I in the quarter of Caesarius.⁴⁷⁹

Under the reign of Constantine IV, in 671 and 672, Constantinople was threatened by the Arab fleet and Theophanes the Confessor writes that the Byzantine fleet was stationed in the Proclianesian harbor of Caesarius.⁴⁸⁰ Archaeological evidence conveys that the harbor in Yenikapı was still in use in the seventh century. If there is not another harbor on the eastern part of the harbor, which seems to be unlikely due to the space limitation for housing a fleet, the harbor of Caesarius has to be the same as the harbor of Theodosius.

A widespread argument is that with the early seventh century Persian invasion of Egypt, the harbor in Yenikapı decreased in size since the empire lost its main grain supply forever. Nevertheless by looking at the archaeological evidence and the historical evidence about the harbor of Caesarius, the harbor in Yenikapı survived into the middle ages.

The historical evidence both about the middle ages of Constantinople and the harbor in Yenikapı from the seventh century is notoriously inadequate. For a long time, there was no reliable evidence about the harbor in Yenikapı.

In a recent talk at the Istanbul Archaeological Museums, Prof. Peter Ian Kuniholm stated that samples for dendrochronological analysis that were taken from the formworks of the northeastern pier in the harbor at Yenikapı and were dated to the late eighth century.⁴⁸¹ Accordingly, a new argument could be

⁴⁷⁹ Anonymous, *Miracles of St. Artemius*, (16) p. 107; Theophanes the Confessor, *The Chronicle*, pp. 347-348.

⁴⁸⁰ Ibid. 493.

⁴⁸¹ Talk given at the Istanbul Archaeological Museums on June, 28 2010.

proposed in relation to the iconoclastic emperors or the construction works in *ta Eleutheriou* by the empress Eirene.

Constantine V repaired the aqueducts and also focused his building activities on the southern coast of the city, about which the information reached us fragmentarily because of the manipulation of the information and the literature of his time by his opponents who only emphasized his iconoclastic tendencies.⁴⁸²

Several decades later, at the end of the eight century, the empress Eirene constructed a palace for herself in *ta Eleutheriou* on the northeastern limit of the harbor in Yenikapı.⁴⁸³ The imperial residence must contain certainly a scala for the imperial visitors. I suggest that the construction of the eight century in the harbor must be related one of these construction projects on the northeastern coast of the harbor in Yenikapı.

The current argument will clearly become more reliable when and if the dendrochronological results are published.⁴⁸⁴ But if the remains are dated to the eighth century, we will have a significant discovery presenting new information about the reign of Constantine V or most likely about the empress Eirene as well as the underwater construction technique of the eighth century.

Another important conclusion to draw, while investigating the history of the harbor, is the link between the archaeological and the architectural remains of the three-apsed structure, which was discovered in the excavations and the historical evidence depicting that the Jewish tanners took over the lands of a

⁴⁸² Magdalino, "Constantine V and the Middle Age of Constantinople", pp. 3-4; Gregory. *A History of Byzantium*, pp. 194-195.

⁴⁸³ Magdalino, "Maritime Neighborhoods of Constantinople", p. 216; Janin, *Constantinople Byzantine*, pp. 130-131.

⁴⁸⁴ The only dendrochronology reports are published in the website of the Cornell University (<http://dendro.cornell.edu/reports/>) and do not provide information about the remains that are discussed in this study.

monastery in the Vlanga neighborhood in the thirteenth century.⁴⁸⁵ According to the strata, the archaeologists dated the multi-phased structure to the thirteenth century.

Maximos Planoudes writes that there was a ruined church in Vlanga in the thirteenth century that the church of St. John the Forerunner asks for using it as cemetery.⁴⁸⁶ The discovery of a three-apsed church in the Yenikapı excavations with a number of burials in and around the church suggests that the ruined church could have been granted to the church of St. John the Forerunner in Vlanga and subsequently was used as cemetery.

Considering the historical evidence, the church discovered in Yenikapı may be reasonably dated back to an earlier period as it was already ruined in the thirteenth century. The clarification of the cult in the monastery would complete the understanding of the religious complex, which could also explain the numerous small fire places discovered at the same level.

Planoudes also states that there was no more space for the Christians to be buried in Vlanga because of the Jews who involved in tanning in the partly silted harbor area.⁴⁸⁷ This information suggests that in the thirteenth century, the silted harbor area was used both by the Jews as tannery and by the Christians as cemetery.

One possible direction for future research on the harbor in Yenikapı is the detailed investigation of the underwater construction techniques of the Byzantine period. The harbor in Yenikapı provides a suitable context for this purpose by at the same time opening discussions about the middle Byzantine period of Constantinople. For instance, a detailed analysis of the material remains, which

⁴⁸⁵ Bouras, "Aspects of the Byzantine City", p. 519.

⁴⁸⁶ Maximos Planoudes, *Epistulae*, pp. 50-52.

⁴⁸⁷ Ibid.

takes into account the provenance of the construction materials, would enable us to determine from where the capital provided the wood, the stone and other materials during different periods.

The limitations of this present study are obvious. The fact that the thesis has been accomplished before the completion of the archaeological excavations or the fact that the 100ADA has been covered for prevention of damage are two of these main limitations. The access to the materials and to the results of the analysis were limited since they have not yet been fully published. Considering the above-given factors, the study dealt with the partiality of the presented information and explored the harbor's history and archaeology in these limited conditions.

Eventually, there is need for further research as emphasized above about the harbors of Constantinople in general and the harbor in Yenikapı in particular. Yet still, this study should be considered as a first step in opening up discussion of the different aspects of the harbor in Yenikapı.

FIGURES

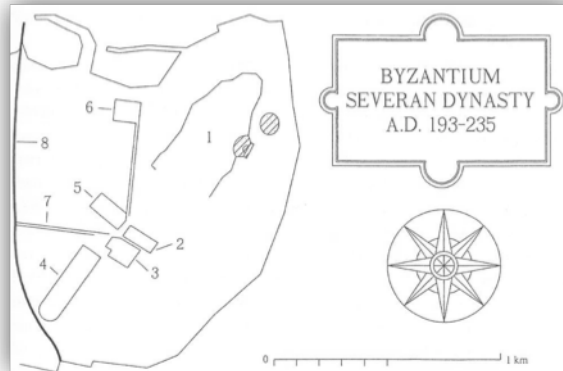


Fig. I. 12. Byzantium under the Severan Dynasty by S. Bassett.



Fig. I.13. The iron chain, which closed the *Portus Prosphorianus*, was fixed to the gate of St. Eugenius (Yalıköşk Kapısı).



Fig.I.14. The seawalls along the Marmara shore, photo. by Trémaux.



Fig. II.7. Constantinople by Buondelmonti, manuscript in Venice.

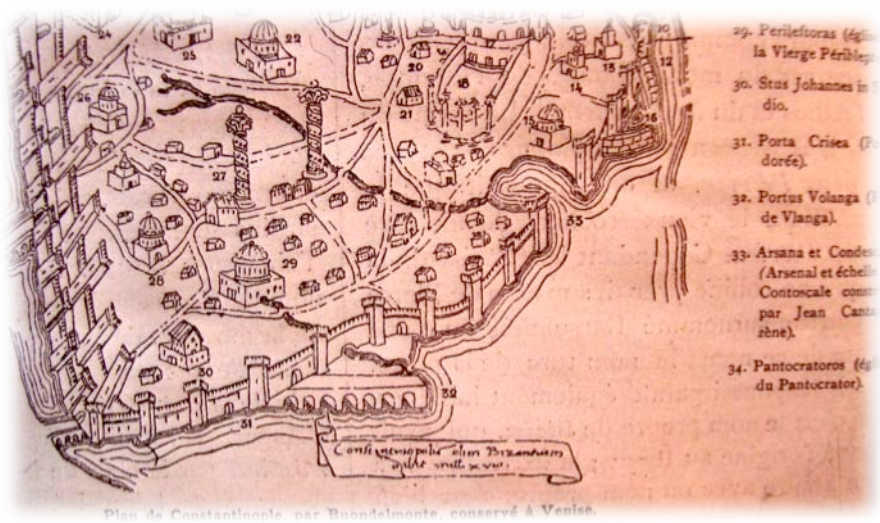


Fig. II.8. Yenikapı in Buondelmonti, 1422, detail from the manuscript in Venice.

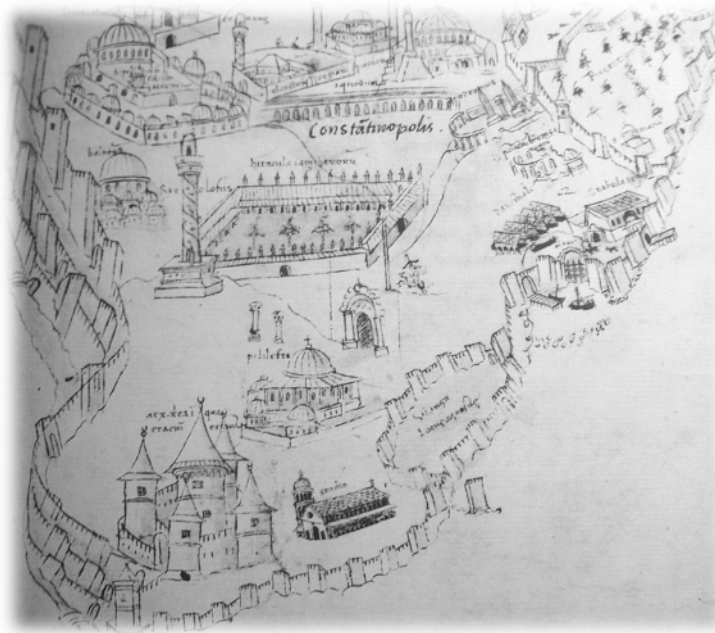


Fig. II.9. Yenikapı in Buondelmonti, the variant in Düsseldorf.

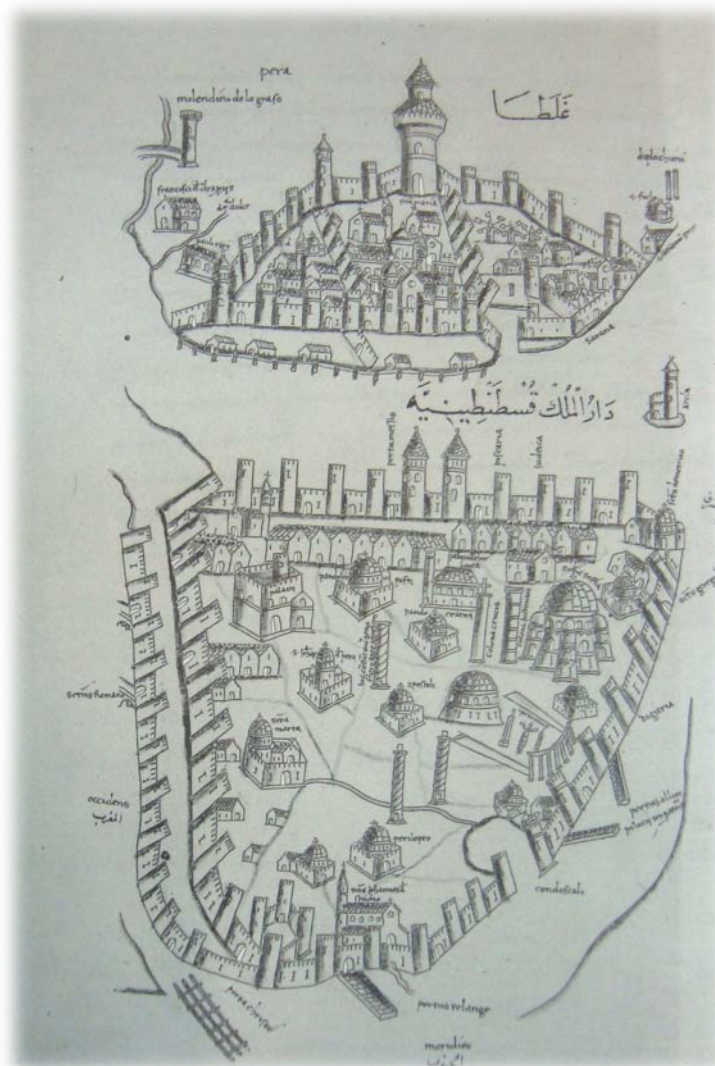


Fig. II.10. Paris variant of Buondelmonti, 1457-58.

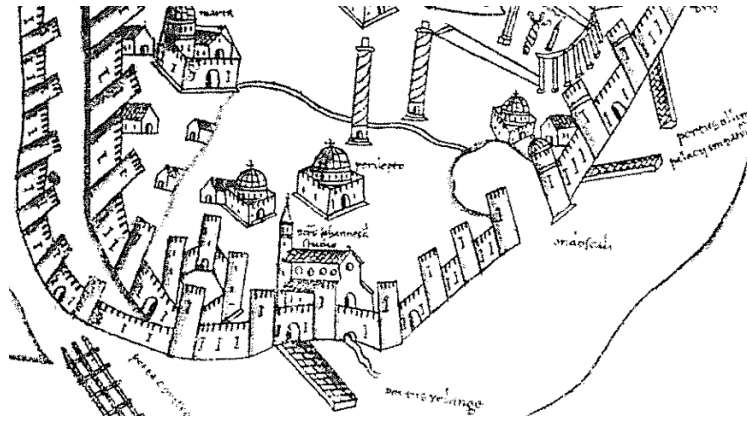


Fig. II.11. Detail of Yenikapi in Paris variant of Buondelmonti, 1422.



Fig. II.12. Detail showing the towers and the walls surrounding the harbor according to Buondelmonti's Düsseldorf variant.

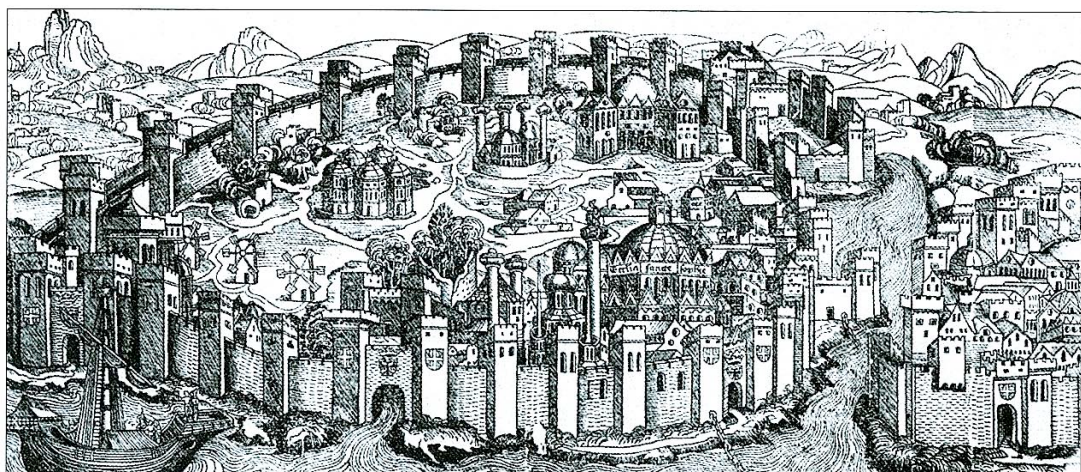


Fig. II.13. The fifteenth century Constantinople and Yenikapi in Hartmann Schedel's Liber Chronicarum, Nuremberg 1493.



Fig. II.14. Constantinople by Guillaume Joseph Grelot, 1680-1681, version of J.Peeters, 1723.



Fig. II.15. View of Constantinople, a copy of Notitia Dignitatum illustrated by Peronet Lamy, 1436, Oxford, Bodleian Library.



Fig. II.16 Yenikapı by Vavassore.



Fig. II.17. View of Yenikapı, Guilono Balloni's miniature, Venice, 1569.



Fig. II.18. Yenikapı in Marco Sadler, 2nd half of 15th century.



Fig. II.19. View of Yenikapı in Sebastian Münster's Cosmographia, Basel 1550.



Fig. II.20 Yenikapi by Guilino Ballino, Venice 1569.

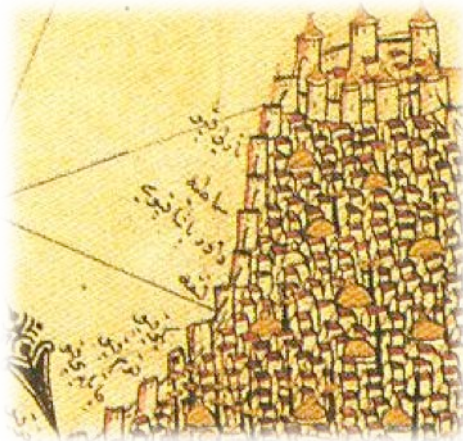


Fig. II.21. Yenikapi in Piri Reis' Kitab-ı Bahriye, 1525, copy from Paris.



Fig. II.22. Yenikapi by Piri Reis, Kitab-ı Bahriye, the seventeenth century copy of the original in 1521, Berlin.

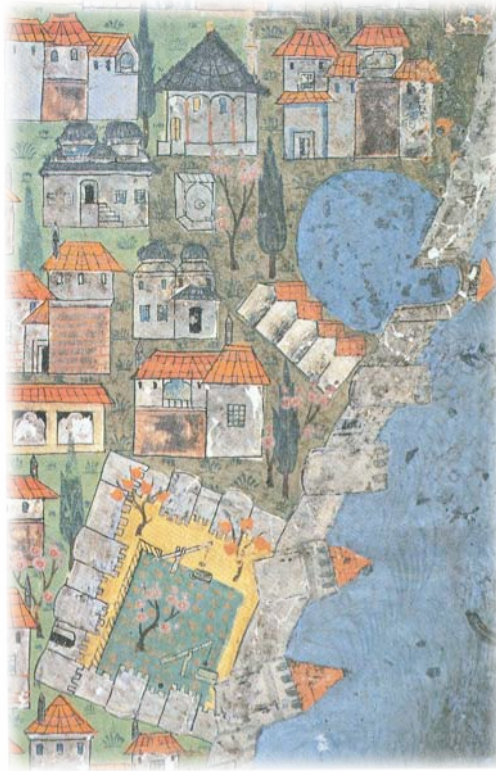


Fig. II.23. Yenikapı by Matrakçı Nasuh.



Fig. II.24. Yenikapı in Veli Can's Hünername, 1584.



Fig. II.25 Hünername of Sayyid Lokman from 1584-5.

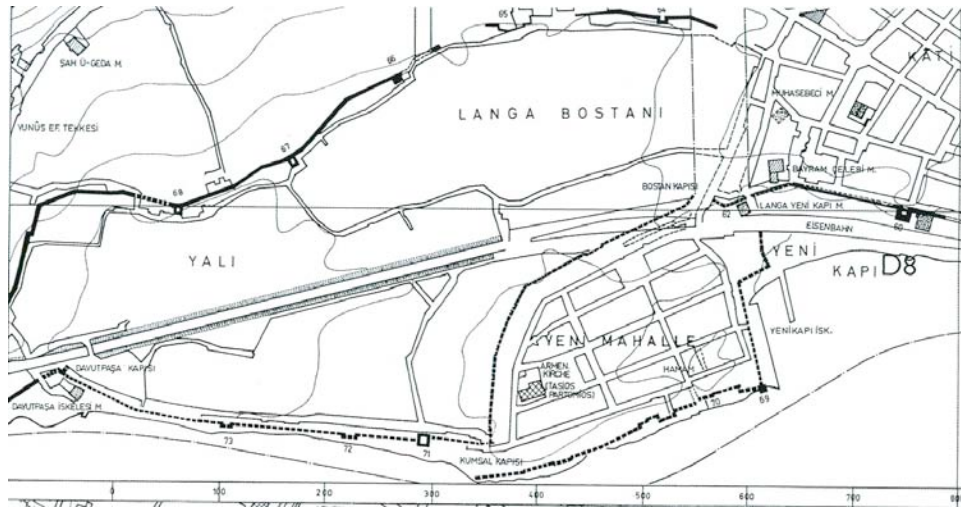


Fig. III.15. Yenikapı by Müller-Wiener.

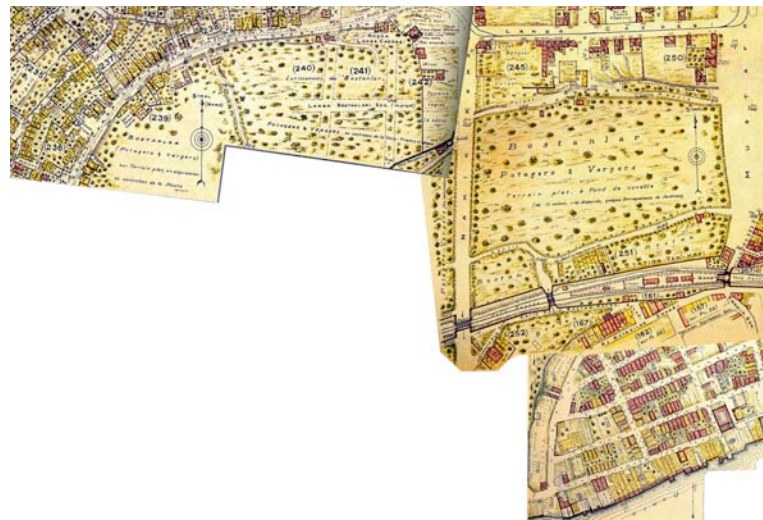


Fig. III.16. Yenikapı in Pervititch



Fig. III.17. Yenikapı in Alman Mavisi (German Blue).



Fig. III.18. Yenikapı in 1946.



Fig. III.19. Yenikapı in 1982.



Fig. III.20. Aerial view of today's Yenikapı with the yellow sector demonstrating the borders of the 58.000 m² archaeological excavations.

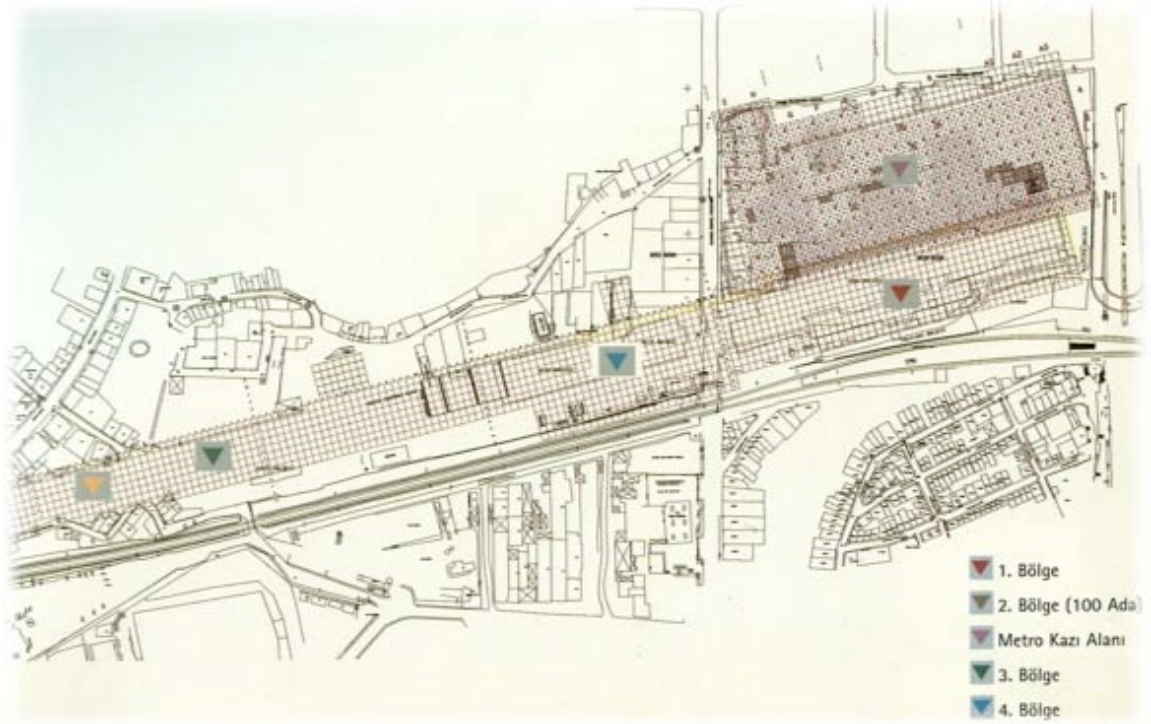


Fig. III.21. Plan of the archaeological excavations in the harbor in Yenikapı with the legends showing the sectors.

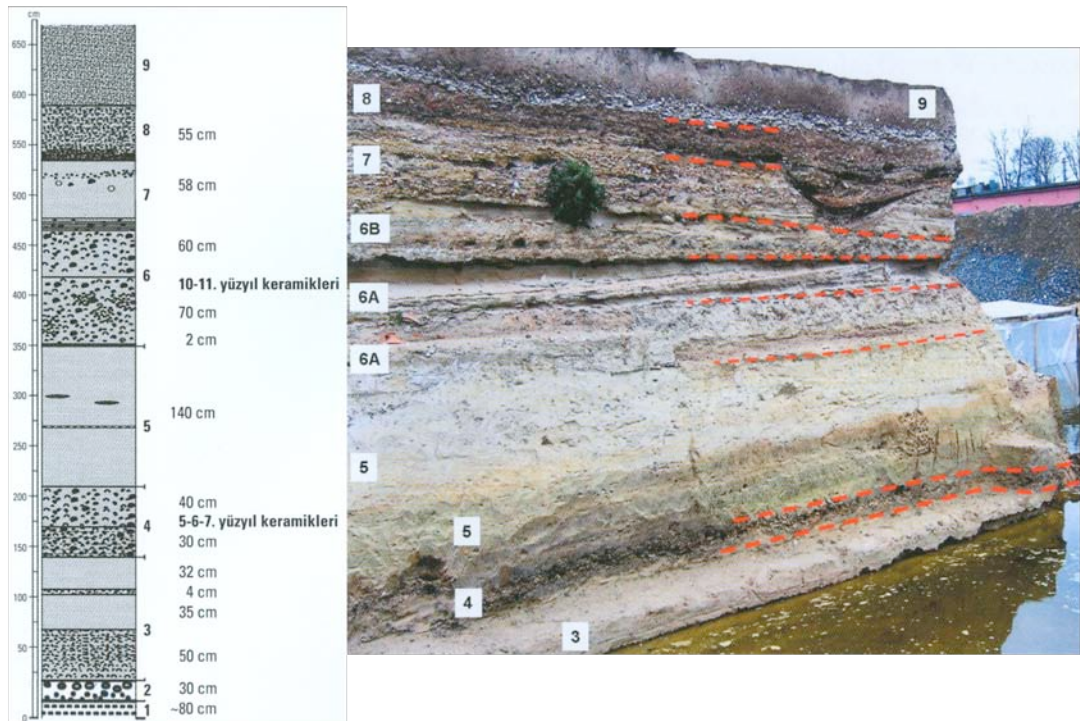


Fig. III.22. The geological and archaeological stratification of the harbor, from Perinçek.

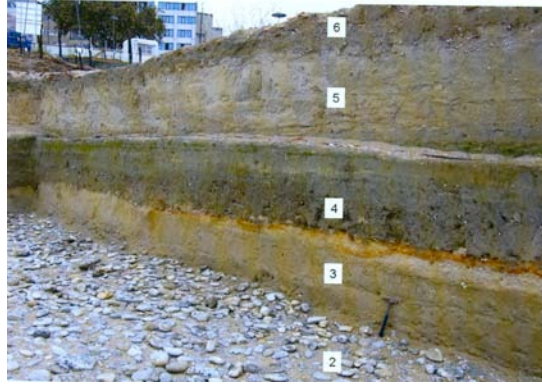


Fig. III.23 View of the layers by Perinçek.



Fig. III.24. View of the layers 6a and 6b that were defined by the storm by Perinçek.



Fig. III.25. View of layers by Perinçek.



Fig. III.26. The inner walls of the harbor in 1859.



Fig. III.27. The western tower on the outer walls of the harbor.



Fig. III.28. View of the gate next to the tower 65.



Fig. III.29. The present day view of a tower surrounding the harbor in Yenikapı. (the tower no 66 according to Dirimtekin's numbering system)



Fig. III.30. View of the harbor's remaining walls lying on the western part of the tower, Ercan 2009.



Fig. III.31. The fragment of the harbor's inner wall surrounded by modern constructions, Ercan 2009.



Fig. III.32. The masonry of the fifth century wall at the northwest of the harbor, Ercan 2009.



Fig. III.33. Detail from the brickstamps from Structure No.5, Köşker 2005.



Fig. III.34. Structure No. 5, view of the insitu stamped bricks, Köşker 2005.



Fig. III.35. Structure No.5, detail from the brickstamps, Köşker 2005.



Fig. III.36. View of a stamped brick on site, Ercan 2009.



Fig. III.37. View of the stamped bricks' assemblage, the wooden pier and the layers below the Middle Byzantine church, Ercan 2009.



Fig. III.38. View of the so-called tsunami layer.



Fig. III.39. Remains of the possible tannery workshops in 100ADA area, Köşker 2005.



Fig. III.40. Structure No.2, the so-called 'wall of Constantine', view of the wooden beams' holes in the wall from east, Köşker 2005.



Fig. III.41. View of a wooden scala and the ongoing excavations in order to reach the seabed below the bricks' assemblage, Ercan 2009.



Fig. III.42. View of a wooden dock, Ercan 2010.



Fig. III.43. View of the western dock, looking to the northwest, Ercan 2008.



Fig. III.44. The upper part of the dock, looking south, Ercan 2008.



Fig. III.45. Detail of the holes for metal pins from the dock, looking to the northeast, Ercan 2008.



Fig. III.46. View of the dock and the spolia frieze block from southeast, Ercan 2008.



Fig. III.47. Detail of a spolia frieze block, Ercan 2008.



Fig. III.48. The south eastern end of the eastern dock, Ercan 2008.



Fig. III.49. Detail of the bricks on top of the dock looking to south, Ercan 2008.

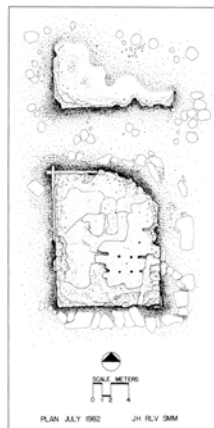


Fig. III.50. Plan of the two constructions belonging to a breakwater and a tower in Caesarea Maritima.



Fig. III.51. A perforated stone block on the quay in Yenikapı, Köşker 2005.



Fig. III.52. Marble bollard, 5th-6th century.



Fig. III.53. View of the inscribed block in 100ADA, Köşker 2005.



Fig. III.54. View of the so-called quay from northwest, Köşker 2005.

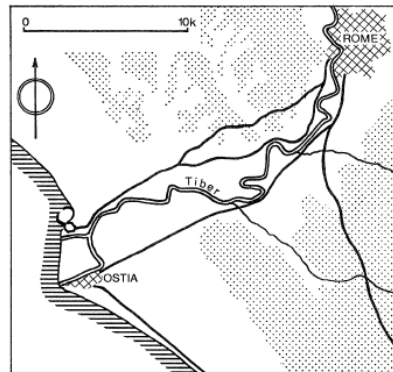


Fig. III.55. Location of Ostia and Rome.

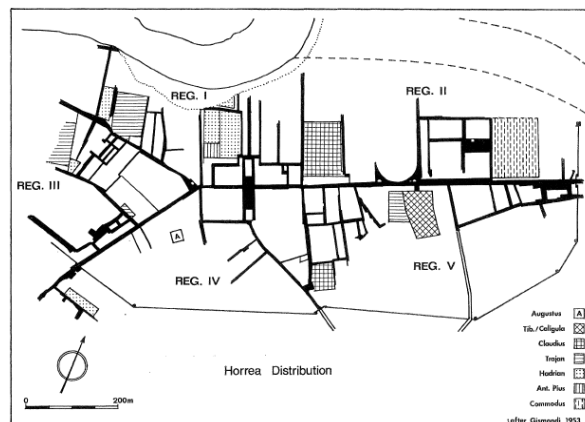


Fig. III.56. Location of Ostia and the distribution of horrea along Tiber.

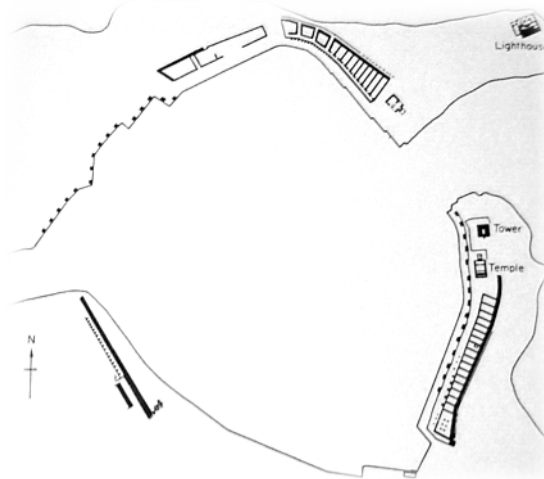


Fig. III.57. Plan of the harbor in Leptis Magna and the river flowing in the harbor.

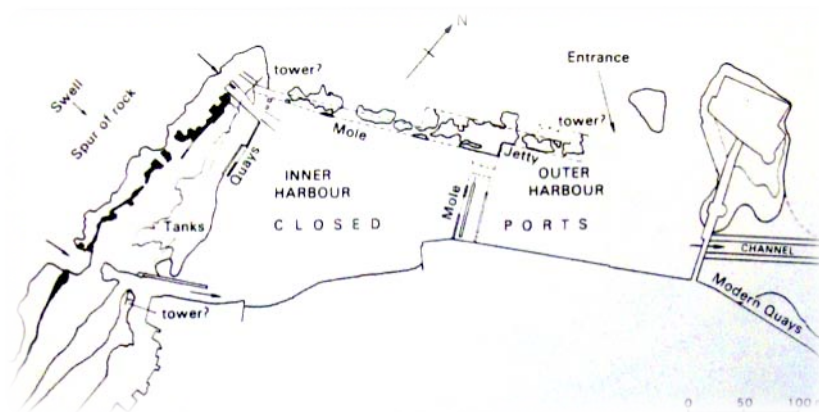


Fig. III.58. Plan of the Sidon harbor divided into two sections.

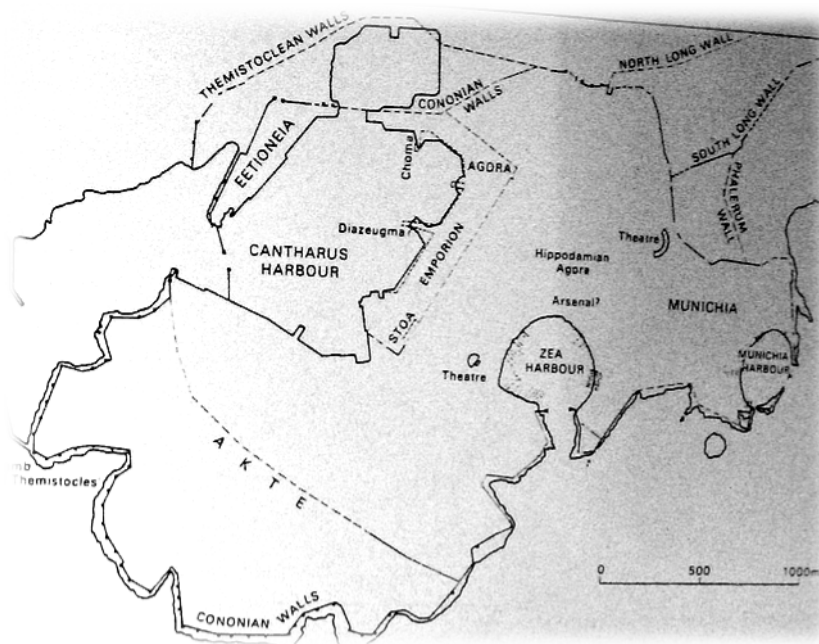


Fig. III.59. The harbor of Piraeus with several sections.



Fig. III.60. Wall painting from Stabiae, depicting the harbor of Puteoli with the arched breakwater, warehouses and the statues placed along the shore.



Fig. III.61. Sestertius of Nero dating about the second century C.E., depiction of the harbor of Ostia.



Fig. III.62. Bronze coin found in Soloi Pompeiopolis.

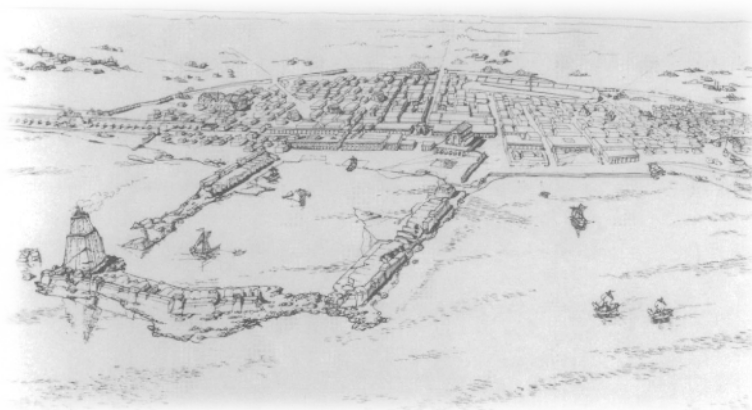


Fig. III.63. Imaginary view of Caesarea Maritima, drawing by Stephen Gianetti.

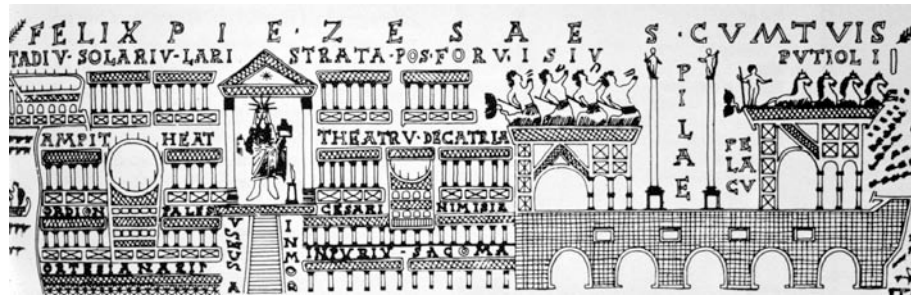


Fig. III.64. Depiction of the Puteoli harbor, The National Museum, Prague.



Fig. III.65. The pharos of Alexandria, mosaic in St. Mark's, Venice.



Fig. III.66. Pharos depiction at the entrance the Pisa tower, Ercan 2009.



Fig. III.67. Plan of the harbor complex at Caesarea Maritima.



Fig. III.72. Sesterius of Antoninus Pius, Boyce Plate 14.



Fig. III.73. Terracotta model of a lighthouse from Vulci, Rome Villa Giulia Museum.



Fig. III.74. A harbor with a lighthouse, mosaic found in a house in Quirinale, Rome.



Fig. III.75. A sixth century mosaic from Theodorias depicting a lighthouse.



Fig. III.76. The Lighthouse in La Coruña, Spain.



Fig. III.77. Patara Lighthouse.

BIBLIOGRAPHY

PRIMARY SOURCES

- Anna Comnena. *The Alexiad*. Trans. E.R.A. Sewter. Baltimore: Penguin Books, 1969.
- Anonymous. *Le Livre du Préfet, ou L'édit de L'Empereur Léon Le Sage Sur Les Corporations de Constantinople*. Genève: Georg & Co., 1894.
- Anonymous. *Scriptores Originum Constantinopolitanarum*. Ed. Theodore Preger. New York: Arno Press, 1975. Vol. 1. and 2.
- Anonymous. *Chronicon Paschale 284-628 A.D.* Trans. Mary Whitby and Michael Whitby. Liverpool: Liverpool University Press, 2007.
- Anonymous. *The Miracles of St. Artemius: A Collection of Miracle Stories by an Anonymous Author of Seventh-Century Byzantium*. Leiden: The Medieval Mediterrenean, 1997.
- Anonymous. *Codex Theodosianus: The Theodosian Code and Novels, and the Sirmondian Constitutions*. Trans. Clyde Pharr, Theresa Sherrer Davidson and Mary Brown Pharr. Princeton, N.J.: Princeton University Press, 1952.
- Anonymous. *Notitia Urbis Constantinopolitanae*. Ed. and trans. Otto Seeck. Berlin, 1876.
- Anonymous. *Constantinople in the Early Eighth Century: The Parastaseis Syntomoi Chronikai*. Ed. and trans. Averil Cameron and Judith Herrin. Leiden, 1984.
- Benjamin of Tudela. *Itinerary of Benjamin of Tudela*. Trans M.N. Adler. Oxford: University Press, 1907.
- Bertrandon de la Broquière. *Bertrandon de la Broquière'in Denizaşırı Seyahati*. Trans. İlhan Arda. İstanbul: Eren, 2000.
- Constantin VII Porphyrogénète. *Le Livre des Cérémonies*. Paris: Société d'édition "Les Belles lettres", 1935
- Dio Cassius. *Roman History I*. Cambridge, Mass.: Harvard University Press, 2006.
- Dionysius of Byzantium. *Anaplys Bospori*, Ed. Rudolf Güngerich. Berolini : Apud Weidmannos, 1958.
- Evagrius Scholasticus. *The Ecclesiastical History of Evagrius Scholasticus*. Trans. Michael Whitby. Liverpool: Liverpool University Press, 2000.

- George Akropolites. *The History*. Trans. Ruth Macrides. New York: Oxford University Press 2007.
- Herod. *The Histories*. Trans. Robin Waterfield. Oxford: Oxford University Press, 1998.
- Hesiod. *Works and Days*. Cambridge, Mass.: Harvard University Press, 2006.
- Josephus. *The Jewish War I*. Cambridge: Harvard University Press, 2004.
- Leo the Deacon. *The History of Leo the Deacon: Byzantine Military Expansion in the Tenth Century*. Trans. Alice-Mary Talbot and Denis F. Sullivan. Washington, D.C. : Dumbarton Oaks Research Library and Collection, 2005.
- Maximos Planoudes. *Epistulae*, Ed. Maximilianus Treu. Amstelodamum : Apud A.M. Hakkert, 1960.
- Michael Doukas. *Decline and Fall of Byzantium to the Ottoman Turks*. Trans. Harry J. Magoulias. Detroit: Wayne State University Press, 1975.
- Mikhael Doukas. *Tarih: Anadolu ve Rumeli (1326-1462)*. İstanbul: Arkeoloji ve Sanat Yayınları, 2008.
- Michael Psellus. *Fourteen Byzantine Rulers*. Trans. E.R.A. Sewter. New York: Penguin Books, 1966.
- Nikephoros Patriarch of Constantinople. *Short History*. Trans. Cyril Mango. Washington D.C.: Dumbarton Oaks, 1990.
- Niketas Choniates. *O City of Byzantium, Annals of Niketas Choniates*. Trans. Harry J. Magoulias. Detroit: Wayne State University Pres, 1984.
- Petrus Gyllius. *The Antiquities of Constantinople*. Ithalica Press, New York, 1988.
- Petrus Gyllius. *İstanbul Boğazı*. İstanbul: Eren Yayıncılık, 2000.
- Pliny. *Letters*, I, Books 1-7. Trans. Betty Radice. Loeb Classical Library: Harvard University Press, 1989.
- Procopius. *On Buildings*. Trans. H. B. Dewing and Glanville Downey. The Loeb Classical Library: Harvard Universtiy Press, 2006.
- . *History of the Wars V*. Cambridge, Mass.: Harvard University Press, 2006.
- Seneca. *Epistles 1-65*. Cambridge, Mass.: Harvard University Press, 2006.

- Stephen of Novgorod. *Russian Travelers to Constantinople in The Fourteenth and Fifteenth Centuries*. Ed. and Trans. George Majeska. Washington, D.C.: Dumbarton Oaks Research Library and Collection, 1984.
- Stephanus of Byzantium. *Ethnica*. Ed. Margarethe Billerbeck, adiuvantibus Jan Felix Gaertner, Beatrice Wyss, Christian Zubler. Vol.1. Berolini: W. de Gruyter, 2006.
- Strabo. *Geography*. Cambridge, Mass.: Harvard University Press, 2005.
- Suetonius. *The Lives of the Caesars*, Claudius V. Cambridge, Mass.: Harvard University Press, 2001.
- Theophanes the Confessor. *The Chronicle of Theophanes the Confessor: Byzantine and Near Eastern History, AD 284-813*. Trans. Cyril Mango and Roger Scott. Oxford: Oxford University Press, 1997.
- Vitruvius. *On Architecture*. Cambridge, Mass.: Harvard University Press, 2002.
- Zonaras. *The History of Zonaras: from Alexander Severus to the Death of Theodosius the Great*. London: Routledge, 2009.
- Zosimus. *New History*. Trans. Rod Ridley. Canberra: Australian Association for Byzantine Studies, 1982.

SECONDARY SOURCES

- Adam, Jean-Pierre. *Roman Building: Materials and Techniques*. Trans. Anthony Mathews. London: Routledge, 2001.
- Ahrweiler, Hélène. "Les Ports Byzantins (VIIe-IXe Siècles)." *La Navigazione Mediterranea Nell'alto Medioevo*. Vol. 1. Spoleto, (1978): 259-283.
- Akyalçın, Dilek. *The Jewish Communities in the Making of Istanbul Intra Muros: 1453-1520*. MA Thesis. İstanbul: Sabancı University, 2002/2003.
- Algan, Oya; Yalçın, N.M.; Yılmaz, Y.; Perinçek, D.; Özdoğan, M.; Yılmaz, İ.; Meriç, E.; Sarı, E.; Elmas, E.K.; Ongan, D.; Yeşiladalı, Ö. B.; Danışman, G.; Özbal, H. "Antik Theodosius Yenikapı Limanı'nın Jeoarkeolojik Önemi: Geç-Holosen Ortam Değişimleri Ve İstanbul'un Son Onbin Yıllık Kültürel Tarihi." *Gün Işığında İstanbul'un 8000 Yılı: Marmaray, Metro, Sultanahmet Kazıları*, Ed. Arzu Karamani Pekin. İstanbul: Vehbi Koç Vakfı, (2007): 242-45.
- Asal, Rahmi. "İstanbul'un Ticareti ve Theodosius Limanı." *Gün Işığında İstanbul'un 8000 Yılı: Marmaray, Metro, Sultanahmet Kazıları*, Ed. Arzu Karamani Pekin. İstanbul: Vehbi Koç Vakfı, (2007): 180-190.
- Asgari, Nurşin. "The Proconnesian Production of Architectural Elements in Late Antiquity, Based on Evidence from the Marble Quarries." *Constantinople*

and its Hinterland: Papers from the twenty-seventh Spring Symposium of Byzantine Studies, April 1993, Ed. Cyril Mango and Gilbert Dagron, Oxford: Aldershot [u.a.]: Variorum, (1995): 263-289.

Asutay-Effenberger, Neslihan. *Die Landmauer von Konstantinopel-İstanbul: Historisch- topographische und baugeschichtliche Untersuchungen*. Berlin: Walter de Gruyter, 2007.

Avramea, Anna. "Land and Sea Communications, Fourth-Fifteenth Centuries." *The Economic History of Byzantium: From the Seventh Through the Fifteenth Century*, DOS 59 (2002): 57-90.

Balta, Evangelia. "La tannerie pré-industrielle en Grèce." Ed. Kornilia Zarkia, Athens: Piraeus Bank Group Cultural Foundation, (1997): 39-41.

Barber, Charles. "Reading the Garden in Byzantium: Nature and Sexuality." *BMGS* 16 (1992): 1- 19.

Bardill, Jonathan. *Brickstamps of Constantinople*. 2 vols. Oxford; New York: Oxford University Press, 2004.

Bassett, Sarah. *The Urban Image of Late Antique Constantinople*. Cambridge: Cambridge University Press, 2004.

Başaran, Sait. "Iron Ways and an Ancient Harbor on the Marmara Coast." *The 'Old Ships' of The 'New Gate': Yenikapı'nın Eski Gemileri*. Ed. Ufuk Kocabaş. Istanbul: Ege Yayınları, (2008): 1-23.

———. "İstanbul Üniversitesi, Yenikapı Bizans Batıkları Projesi 2006-2008 Yılı Çalışmaları: Genel Değerlendirme." *1.Marmaray–Metro Kurtarma Kazıları Sempozyumu Bildiriler Kitabı 5-6 Mayıs 2008*, Istanbul, (2010): 17-23.

Berger, Albrecht, "Der Langa Bostanı in Istanbul." *IstMitt* 43 (1993): 467-477.

———. "Regionen und Strassen in Konstantinopel." *IstMitt* 47 (1997): 349-414.

———. "Streets and Public Spaces in Constantinople." *DOP* 54 (2000), 161-172.

———. "Theodosius Limanı." *DBIA* (1994): 263.

Berger, Albrecht.; Jonathan Bardill. "The Representation of Constantinople in Hartmann Schedel's World Chronicle, and Related Pictures." *BMGS* 22 (1998): 2-37.

Blackman, D.J. "Ancient Harbors in the Mediterranean. vol. 1." *IJNA* 11 (1982): 79-104.

———. "Ancient Harbors in the Mediterranean. vol. 2." *IJNA* 11 (1982): 185-211.

- Bouras, Charles. "Aspects of the Byzantine City, Eighth-Fifteenth Centuries." *The Economic History of Byzantium*, DOS 59 (2002): 497-528.
- Boyce, Aline Abaecherli. "The Harbor of Pompeiopolis." *AJA* 62.1 (1958): 67-78.
- Bratianu, Georges. "La Question de l'Approvisionnement de Constantinople à l'époque Byzantine et Ottomane." *Byzantion* 5 (1930): 83-107.
- Brown, H. "The Venetians and the Venetian Quarter in Constantinople to The Close of the Twelfth Century." *JHS* 40 (1920): 68-88.
- Bauer, Franz Alto. Ed. *Visualisierungen von Herrschaft: frühmittelalterliche Residenzen: Gestalt und Zeremoniell: internationales Kolloquium 3.-4. Juni 2004 in Istanbul*. Byzas 5. Istanbul: Ege Yayınları, 2006.
- Cameron, Averil. "Notes on the Sophiae, the Sophianae and the Harbor of Sophia." *Byzantion* 37 (1967): 11-20.
- . *The Byzantines*. Malden, MA: Blackwell Publishing, 2006.
- . *The Mediterranean World in Late Antiquity AD 395-600*. London; New York: Routledge, 1993.
- Casson, Lionel. "The Role of the State in Rome's Grain Trade." *MAAR* 36 (1980): 21-29.
- . *Ships and Seamanship in the Ancient World*. Princeton: Princeton University, 1986.
- . "Harbor and River Boats of Ancient Rome." *JRS* 55:1/2 (1965): 31-39.
- Croke, Brian. "Justinian's Constantinople." *The Cambridge Companion to the Age of Justinian*. Ed. Michael Maas. Cambridge; New York: Cambridge University Press, (2005): 60-87.
- Crow, James. "The infrastructure of a Great City: Earth, Walls and Water in Late Antique Constantinople." *Technology in Transition A.D. 300-650* Ed. Luke Lavan; Zanini, E.; Sarantis, A., *Late Antique Archaeology* 4, Leiden, (2006): 251-285.
- Çelik, Gülbahar Baran. "Yenikapı'da Günlük Yaşam." *Gün Işığında İstanbul'un 8000 Yılı: Marmaray, Metro, Sultanahmet Kazıları*, edited by Arzu Karamani Pekin. Istanbul: Vehbi Koç Vakfı, (2007): 216-227.
- Dagron, Gilbert. *Naissance D'une Capitale, Constantinople et Ses Institutions de 330 à 451*. Paris: Presses Universitaire de France, 1974.
- . *Constantinople Imaginaire*. Etudes Sur Le Recueil Des Patria. Paris, 1984.

- . "The Urban Economy, Seventh-Twelfth Centuries." Ed. Angeliki E. Laiou. *The Economic History of Byzantium From Seventh Through The Fifteenth Century*, Washington, D.C.: DOS (2002): 393-461.
- Dark, Ken. "Houses, Streets and Shops in Byzantine Constantinople From the Fifth to the Twelfth Centuries." *JMS* 30 (2004): 83-107.
- . "The New Post Office Site in Istanbul and the North-Eastern Harbor of Byzantine Constantinople." *IJNA* 33 (2004): 315-319.
- Dirimtekin, Feridun. *Fetihten Önce Haliç Surları*. Istanbul: Istanbul Enstitüsü, 1956.
- . *Fetihten Önce Marmara Surları*. Istanbul: Istanbul Fetih Derneği Yayınları, 1953.
- Downey, Glanville. "Imperial Building Records in Malalas." *BZ* 38 (1938): 1-15, 299-311.
- . "Earthquakes at Constantinople and Vicinity A.D. 342-1454." *Speculum* (1955): 598-600.
- Durliat, Jean. "L'Approvisionnement de Constantinople." *Constantinople and Its Hinterland: papers from the Twenty-seventh Spring Symposium of Byzantine Studies*, Oxford, April 1993. Ed. Cyril Mango and Gilbert Dagron. Aldershot: Variorum, (1995): 19-35.
- Ebersolt, J. *Etude Sur La Topographie et Les Monuments De Constantinople*. 1909.
- Eyice, Semavi. *Son Devir Bizans Mimarisi*. Istanbul, 1980.
- . "Eleutherios Limanı." *DBIA*. Istanbul, (1994): 253.
- Eyigün, Yalçın. "İstanbul Metrosu Yenikapı-Unkapanı Arası Metro İnşaatı Projesi: Yenikapı İstasyonu." *1.Marmaray-Metro Kurtarma Kazıları Sempozyumu Bildiriler Kitabı 5-6 Mayıs 2008, İstanbul*, (2010): 53-65.
- Foss, Clive., Winfield, D. *Byzantine Fortifications*. Pretoria: University of South Africa, 1986.
- Gökçay, Metin. "Yenikapı Kazılarında Ortaya Çıkarılan Mimari Buluntular." *Gün Işığında İstanbul'un 8000 Yılı: Marmaray, Metro, Sultanahmet Kazıları*, edited by Arzu Karamani Pekin. Istanbul: Vehbi Koç Vakfı, (2007): 166-180.
- Gregory, Timothy E. *A History of Byzantium*. Malden: Blackwell Publishing: 2005.

- Grimal, Pierre. *Mitoloji Sözlüğü*. Istanbul: Sosyal Yayınları, 1997.
- Guidoboni, Emanuela. *Catalogue of Ancient Earthquakes in the Mediterranean Area up to the 10th Century*. Trans. Brian Phillips. Rome: Istituto Nazionale di Geofisica, 1994.
- Guilland, Rodolphe. *Etudes de Topographie de Constantinople Byzantine*. 2 vols. Berlin: Akademie Verlag, 1969.
- . "Les ports de Byzance sur la Propontide." *Byzantion* 23 (1954): 181-238.
- Hague, D.B. "Lighthouses." *Marine Archaeology*. Proceedings of the 23rd Symposium of the Colston Research Society held in the University of Bristol, April 4th to 8th, (1971): 293-314.
- Haldon, John. *Byzantium in the Seventh Century: The Transformation of a Culture*. Cambridge: Cambridge University Press, 1993.
- Halkin, François. "Euphémie de Chalcedoine. " *Subsidia Hagiographica* 41 (1965): 81-106.
- Herrin, J. *Byzantium: The Surprising Life of a Medieval Empire*. Princeton: Princeton University Press, 2009.
- Hohlfelder, Robert L. "Building Harbors in the Early Byzantine Era: The Persistence of Roman Technology." *BF* 24 (1997): 367-380.
- . "Procopius, De Aedificiis 1.11.18-20 Caesarea Maritima and the Buildings of Harbors in Late Antiquity." *MHR: Mediterranean Cities: Historical Perspectives*, Ed. Irad Malkin and Robert R.L.Hohlfelder (1988): 54-62.
- . "Anastasius I, Mud and the Foraminifera: Conflicting Views of Caesarea Maritima's Harbor in Late Antiquity." *Bulletin of the American Schools of Oriental Research* 317 (2000): 41-62.
- Houston, George. "Ports in Perspective, Some Comparative Materials on Roman Merchant Ships and Ports." *AJA* 92.4 (1988): 553-564.
- Howard-Johnston, J.D. "The Siege of Constantinople in 626." *Constantinople and its Hinterland: Papers from the twenty-seventh Spring Symposium of Byzantine Studies, April 1993*, Ed. Cyril Mango and Gilbert Dagron, Oxford: Aldershot [u.a.]: Variorum, (1995): 131-143.
- İşkan, Havva. "Patara 2005 Yılı Kazı ve Onarım Çalışmaları." 28. *Kazı Sonuçları Toplantısı* 1.Cilt, Ankara: Döşim Basımevi, (2007): 15-29.
- . "Patara 2004." *Anadolu Akdenizi Arkeoloji Haberleri* 2005-3, Istanbul, (2005): 57-67.

- Jacoby, David. "The Jews of Constantinople and Their Demographic Hinterland." *Constantinople and its Hinterland: Papers from the twenty-seventh Spring Symposium of Byzantine Studies*, April 1993, Ed. Cyril Mango and Gilbert Dagron, Oxford: Aldershot [u.a.]: Variorum, (1995): 221-232.
- . "La population de Constantinople à l'époque Byzantine: Un problème de démographie urbaine." *Société et Démographie à Byzance et en Romanie Latine*, London, (1975): 81-109.
- . "Les quartiers Juifs de Constantinople à l'époque Byzantine." *Société et Démographie à Byzance et en Romanie Latine*, London, (1975): 167-227.
- . "Italian Privileges and Trade in Byzantium before the Fourth Crusade: A Reconsideration." *Anuario de estudios medievales* 24 (1994): 349-68.
- Janin, Raymond. *Constantinople Byzantine, Développement Urbain et Répertoire Topographique*. Paris: Institut Français d'Études Byzantines, 1964.
- . "Les ports de Constantinople sur la Propontide." *Byzantion* XX (1950): 73-79.
- Johnston, Norman J. "The Urban World of the Matraki Manuscript." *JNES* 30/3 (1971): 159-176.
- Kızıltan, Zeynep. "Marmaray Metro Projeleri Kapsamında Yapılan Yenikapı, Sirkeci, Uskudar Kazıları." *1.Marmaray–Metro Kurtarma Kazıları Sempozyumu Bildiriler Kitabı 5-6 Mayıs 2008*, İstanbul, (2010): 1-17.
- Kocabaş, Ufuk. "İstanbul Üniversitesi, Yenikapı Bizans Batıkları Projesi Kapsamındaki Gemilerin Yapım Teknikleri ve Özellikleri." *Gün Işığında İstanbul'un 8000 Yılı: Marmaray, Metro, Sultanahmet Kazıları*, Ed. Arzu Karamani Pekin. İstanbul: Vehbi Koç Vakfı, (2007): 194-200.
- . "İstanbul Üniversitesi, Yenikapı Batıkları Projesi: Gemiler." *1.Marmaray–Metro Kurtarma Kazıları Sempozyumu Bildiriler Kitabı 5-6 Mayıs 2008*, İstanbul, (2010): 23-35.
- Kocabaş, Ufuk; Işıl Özsait Kocabaş. "Life at the Theodosian Harbor, Wrecks and Rapid Silting." *The 'Old Ships' of The 'New Gate': Yenikapı'nın Eski Gemileri*. Ed. Ufuk Kocabaş. İstanbul: Ege Yayınları, (2008): 23-37.
- . "Le port de Théodose: Trésors de l'Archéologie Marine." *De Byzance à Istanbul: Un Port pour Deux Continents*. Paris: Réunion des Musées Nationaux, (2009): 143-151.
- Kömürcüyan, Eremya Çelebi. *İstanbul Tarihi, XVII. Asırda İstanbul*. İstanbul: Eren Yayıncılık, 1988.
- Kuban, Doğan. *İstanbul Bir Kent Tarihi: Bizantion, Konstantinopolis*, İstanbul. İstanbul: Türkiye Ekonomik ve Toplumsal Tarih Vakfı, 1996.

- Kubilay, Ayşe Y. *Maps of Istanbul-Istanbul Haritaları*. Istanbul: Denizler Kitabevi, 2010.
- Leonard, John R. "Harbor Terminology in Roman Periploi. " *Res Maritimae. Cyprus and the Eastern Mediterranean from Prehistory to Late Antiquity. Proceedings of the Second International Symposium "Cities on the Sea", Nicosia, October 18 - 22, 1994*: 163-200.
- Lewis, Arthur.R. *Naval Power and Trade in the Mediterranean A.D. 500-1100*. Princeton: 1951.
- . "Mediterranean Maritime Commerce: A.D. 300-1100 Shipping and Trade." *La Navigazione Mediterranea Nell'alto Medioevo*. Vol.1. Spoleto (1978): 481-501.
- Lopez, Robert. "The Role of Trade in the Economic Readjustment of Byzantium in the Seventh Century." *DOP* 13 (1959): 67-85.
- Magdalino, Paul. "The Maritime Neighborhoods of Constantinople: Commercial and Residential Functions, Sixth to Twelfth Centuries." *DOP* 54 (2000): 209-26.
- . "Aristocratic Oikoi in the Tenth and Eleventh Regions of Constantinople." *Byzantine Constantinople: Monuments, Topography and Everyday Life*. Ed. N. Necipoğlu. Vol. 33. Brill: The Medieval Mediterranean (2001): 53-72.
- . *Constantinople Médiévale. Études sur l'évolution des structures urbaines*. Paris: De Boccard, 1996.
- . "Constantine V and the Middle Age of Constantinople." *Studies on the History and Topography of Byzantine Constantinople*. Burlington, VT: Ashgate Pub. Co., (2007): 1-24.
- . "The Grain Supply of Constantinople, Ninth-Twelfth Centuries." *Constantinople and Its Hinterland: papers from the Twenty-seventh Spring Symposium of Byzantine Studies*, Oxford, April 1993. Ed. Cyril Mango and Gilbert Dagron. Aldershot: Variorum, (1995): 35-49.
- Maguire, Henry. "Gardens and Parks in Constantinople." *DOP* 54 (2000): 251-264.
- Mango, Cyril. *Le développement urbain de Constantinople (IVe-VIIe Siècles)*. Paris: De Boccard, 2004.
- . "Constantinopolitana." *Studies on Constantinople*. Aldersho: Variorum, 2005. 305-36.

- . "The Development of Constantinople as an Urban Centre." *Studies on Constantinople*. Variorum, 2005. 117-36.
- . "Septime Severe et Byzance." *Académie des Inscriptions et Belles-Lettres* 147 (2003): 593-621.
- . "The Palace of the Boukoleon." *CahArch* 45 (1997): 41-50.
- . "The Shoreline of Constantinople in the Fourth Century." *Byzantine Constantinople: Monuments, Topography and Everyday Life*. Ed. N. Necipoğlu. Vol. 33. Brill: The Medieval Mediterranean (2001): 17-28.
- . "The Triumphal Way of Constantinople and the Golden Gate." *DOP* 54 (2000): 173-188.
- . *Byzantine Architecture*. London: Electra, 1978.
- . "Byzantine Brick Stamps." *AJA* 54.1 (1950): 19-27.
- . "Constantinople." *The Oxford History of Byzantium*. Ed. Cyril Mango. Oxford; New York: Oxford University Press, (2002): 65-70.
- Mango, Marlia Mundell. "The Commercial Map of Constantinople." *DOP* 54 (2000): 189-207.
- . "Byzantine Trade: Local, Regional, Interregional and International." *Byzantine Trade, Fourth to Twelfth Centuries The Archaeology of Local, Regional and International Exchange. Papers of the Thirty-Eight Spring Symposium of Byzantine Studies*, St. John College, University of Oxford, March 2004. Ed M.M. Mango, Burlington: Ashgate (2009): 3-15.
- . "The Porticoed Street at Constantinople." *Byzantine Constantinople: Monuments, Topography and Everyday Life*. Ed. N. Necipoğlu. Vol. 33. Brill: The Medieval Mediterranean (2001): 28-51.
- Manners, Ian R. "Constructing the Image of a City: The Representation of Constantinople in Cristopher Buondelmonti's *Liber Insularum Archipelagi*." *Annals of the Association of American Geographers* 87:1 (1997): 72-102.
- Martindale, John R. *The Prosopography of the Later Roman Empire*. Cambridge: Cambridge University Press, 2006.
- McCann, Anna Marguerite. "The Roman Port and Fishery of Cosa: A Center of Trade in the Late Roman Republic." *Harbor Archaeology. Proceedings of the First International Workshop on Ancient Mediterranean Harbors*, Caesarea Maritima 24.-28.6.83 (1985): 115-157.
- Meiggs, Russell. *Roman Ostia*. Oxford: Oxford University Press, 1977. 2nd ed.

- Mitchell, Stephen. *A History of the Later Roman Empire*. Malden, MA; Oxford: Blackwell Pub., 2007.
- Mordtmann, August J. *Esquisse topographique de Constantinople*. Lille: Desclée, De Brouwer et Cie, 1892.
- Müller-Wiener, Wolfgang. *Bizans'dan Osmanlı'ya İstanbul Limanı*. İstanbul: Tarih Vakfı Yurt Yayınları, 1998.
- . *İstanbul'un Tarihsel Topografyası: 17. Yüzyıl Başlarına Kadar Byzantion - Konstantinopolis – İstanbul*. İstanbul: Yapı Kredi Yayınları, 2007.
- Necipoglu, Nevra. *Byzantium Between the Ottomans and the Latins: Politics and Society in the Late Empire*. Cambridge: Cambridge University Press, 2009.
- Oates, Whitney. "The Population of Rome." *CPh* 29:2 (1934): 101-116.
- Oleson, J.P. "The Technology of Roman Harbors." *The International Journal of Nautical Archaeology and Underwater Exploration* 17:2 (1988): 147-157.
- Oleson, J.P.; R.L. Hohlfelder; Raban, A.; Vann, R.L. "The Caesarea Ancient Harbor Excavation Project (C.A.H.E.P.): Preliminary Report on the 1980-1983 Seasons." *JFA* 11:3 (1984): 281-305.
- . "Sebastos: Herod's Harbor at Caesarea Maritima." *The Biblical Archaeologists* 46:3 (1983): 133-143.
- Ousterhout, Robert. "Building Medieval Constantinople." *Proceeding of the PMR Conference* Vol.19-20 (1994-96): 35-67.
- . *Masters Builders of Byzantium*. Princeton, N.J.: Princeton University Press, 1999.
- Perinçek, Doğan. "Yenikapı Kazı Alanı' nın Son 8000 Yıllık Jeoarkeolojisi ve Doğal Afetlerin Jeolojik Kesitleri." *1.Marmaray –Metro Kurtarma Kazıları Sempozyumu Bildiriler Kitabı 5-6 Mayıs 2008, İstanbul* (2010): 191-219.
- Pryor, John. H. *Geography, Technology, and War: Studies in the Maritime History of the Mediterranean, 649-1571*. Cambridge: New York: Cambridge University Press, 1992.
- . "Greek Fire." *The Age of the Dromon: the Byzantine Navy ca. 500-1204*. Ed. John H. Pryor and Elizabeth M. Jeffreys. Leiden; Boston: Brill, 2006.
- Pulak, Cemal. "Yenikapı Bizans Batıkları." *Gün Işığında İstanbul'un 8000 Yılı: Marmaray, Metro, Sultanahmet Kazıları*, edited by Arzu Karamani Pekin. İstanbul: Vehbi Koç Vakfı, 2007: 200-216.

- Rathbone, Dominic. "The Grain Trade and Grain Storages in the Hellenistic East." *Trade and Famine in Classical Antiquity*. Ed. Peter Garnsey and C.R. Whittaker. Cambridge (1993): 45-55.
- Ricci, Alessandra. "The Road from Baghdad to Byzantium and the Case of the Bryas Palace in Istanbul." *Byzantium in the Ninth Century: Dead or Alive?* Ed. Leslie Brubaker, (1998): 131-149.
- Rickman, Geoffrey. "Towards a Study of Roman Ports." *Harbor Archaeology. Proceedings of the First International Workshop on Ancient Mediterranean Harbors, Caesarea Maritima 24.-28.6.83* (1985): 105-14.
- . *Roman Granaries and Store Buildings*, Cambridge: Cambridge University Press 1971.
- . "The Grain Trade under the Roman Empire." *MAAR 36: The Seaborne Commerce of Ancient Rome: Studies in Archaeology and History* (1980): 261-275.
- . "The Creation of Mare Nostrum: 300 BC-500 AD." *The Mediterranean in History*. Ed. David Abulafia. Los Angeles, California: J. Paul Getty Museum, (2003): 127-155.
- Rougé, J. "Ports et Escales dans l'Empire Tardif." *La Navigazione Mediterranea Nell'alto Medioevo*. Spoleto (1978): 67-124.
- . *Ships and Fleets of the Ancient Mediterranean*. Middletown, CT: Wesleyan University Press, 1981.
- Shipley, Graham. *The Periplus of Psedo-Scylax: An Interim Translation*, 2002.
- Scafuri, Michael. P. *Byzantine Naval Power and Trade: The Collapse of the Western Frontier*. MA Thesis. Texas A&M University, 2002.
- Scranton, R.L. and E.S. Ramage. "Investigations at Corinthian Kenchreai." *Hesperia* 36.2 (1967): 124-186.
- Ševčenko, N.P. "Wild Animals in the Byzantine Park." *Byzantine Garden Culture*, Ed. by Littlewood, A. and H. Maguire, DOP, 2002: 69-87.
- Sodini, Jean Pierre. "Marble and Stoneworking in Byzantium Seventh to Fifteenth Centuries." *The Economic History of Byzantium*. *Dumbarton Oaks Studies* 59 (2002): 129-146.
- Stathakopoulos, Dionysios Ch. *Famine and Pestilence in the Late and Early Byzantine Empire*. Burlington: Ashgate, 2004.
- Talbert, Richard, J.A. ed. *Barrington Atlas of the Greek and Roman World*. Princeton, N.J.: Princeton University Press, 2000.

- Tammuz, O. "Sailing Seasons in the Mediterranean in the Early Antiquity." *MHR* 20:2 (2005): 145-162.
- Tanney, Dominique. *Istanbul vu par Matrakçı et les Miniaturistes du XVIe siècle*. Istanbul, 1993.
- Teall, John. L. "The Age of Constantine Change and Continuity in Administration and Economy." *DOP* 21 (1967): 11-36.
- . "The Grain Supply of the Byzantine Empire, 330-1025." *DOP* 13 (1959): 87-140.
- Thomov, Thomas. and Anna Ilieva. "The Shape of The Market: Mapping the Book of the Eparch." *BMGS* 22 (1998): 105-116.
- Toksoy, Arzu. "Yenikapı'da İnanç." *Gün Işığında İstanbul'un 8000 Yılı: Marmaray, Metro, Sultanahmet Kazıları*, Ed. Arzu Karamani Pekin. Istanbul: Vehbi Koç Vakfı, (2007): 230-236.
- Tsangadas, B. *The Fortifications and Defence of Constantinople*. New York, 1980.
- Van Millingen, Alexander. *Byzantine Constantinople. The Walls of the City and Adjoining Historical Sites*. Elibron Classics Series. London: Adamant Media Corporation, 2005.
- Vitelli, Giovanna. "Grain Storage and Urban Growth in Imperial Ostia: A Quantitative Study." *World Archaeology* 12: 1 (1980): 54-68.
- White, Ken. D. *Greek and Roman Technology*. New York: Cornell University Press 1984.
- Whittow, Mark. *The Making of Byzantium 600-1025*. Berkeley: University of California Press, 1996.

EXHIBITION CATALOGUES

- Everyday life in Byzantium*. Ed. by Demetra Papanikola-Bakirtzi; Trans. David Hardy ... [et al.]. Athens: Hellenic Ministry of Culture, Directorate of Byzantine and Post-Byzantine Monuments; Museum of Byzantine Culture, 2002.
- Sur, Kemer, Kubbe Osmanlı Fotoğrafçılarının Gözüyle Bizans İstanbulu: Wall, Arch, Dome Byzantine Istanbul in the Eyes of Ottoman Photographers*. Ed. G.F.Tanman, Ögel, Z., İstanbul: Suna ve İnan Kıraç Vakfı, 2007.

WEB SITES/ E_REFERENCES

For the results of the dendochronological analysis:
<http://dendro.cornell.edu/reports/>

"Annona" Andrew J. Cappel *The Oxford Dictionary of Byzantium*. Ed. Alexander P. Kazhdan. © 1991, 2005 by Oxford University Press, Inc.. The Oxford Dictionary of Byzantium: (e-reference edition). Oxford University Press. Koc University. 3 May 2010 <http://0-www.oxford-byzantium.com.libunix.ku.edu.tr:80/entry?entry=t174.e0298>

"Belisarios" Walter Emil Kaegi, Anthony Cutler. *The Oxford Dictionary of Byzantium*. Ed. Alexander P. Kazhdan. © 1991, 2005 by Oxford University Press, Inc.. The Oxford Dictionary of Byzantium: (e-reference edition). Oxford University Press. Koc University. 26 January 2010 <http://0-www.oxford-byzantium.com.libunix.ku.edu.tr:80/entry?entry=t174.e0707>

"Constantinople, Monuments of" Cyril Mango, Katherine M. Kiefer, William Loerke *The Oxford Dictionary of Byzantium*. Ed. Alexander P. Kazhdan. © 1991, 2005 by Oxford University Press, Inc.. The Oxford Dictionary of Byzantium: (e-reference edition). Oxford University Press. Koc University. 31 May 2010 <http://0-www.oxford-byzantium.com.libunix.ku.edu.tr/entry?entry=t174.e1228.s0003>

"Kyros" Timothy E. Gregory. *The Oxford Dictionary of Byzantium*. Ed. Alexander P. Kazhdan. © 1991, 2005 by Oxford University Press, Inc.. The Oxford Dictionary of Byzantium: (e-reference edition). Oxford University Press. Koc University. 2 September 2010 <http://0-www.oxford-byzantium.com.libunix.ku.edu.tr/entry?entry=t174.e2975>

"Notitia Urbis Constantinopolitanae" Alexander Kazhdan. *The Oxford Dictionary of Byzantium*. Ed. Alexander P. Kazhdan. © 1991, 2005 by Oxford University Press, Inc.. The Oxford Dictionary of Byzantium: (e-reference edition). Oxford University Press. Koc University. 17 October 2008 <http://0-www.oxford-byzantium.com.libunix.ku.edu.tr:80/entry?entry=t174.e3862>

"Tenedos" Timothy E. Gregory. *The Oxford Dictionary of Byzantium*. Ed. Alexander P. Kazhdan. © 1991, 2005 by Oxford University Press, Inc.. The Oxford Dictionary of Byzantium: (e-reference edition). Oxford University Press. Koc University. 29 April 2010 <http://0-www.oxford-byzantium.com.libunix.ku.edu.tr:80/entry?entry=t174.e5338>

The official website of the Metropolitan Municipality of Istanbul:
<http://www.ibb.gov.tr/tr-TR/SubSites/raylisistemler/Pages/taksim-yenikapi.aspx>

The official website of the Ministry of Transportation:
<http://www.marmaray.com.tr/>

The official website of the Ministry of Culture and Tourism:
<http://www.kultur.gov.tr>

VITA

After graduating from the Galatasaray High School in 2002, Ayşe Ercan undertook her undergraduate studies at the Istanbul University in Classical Archaeology and received her Bachelor Degree in 2007. During and after her studies, she has worked for the Cultural Awareness Foundation both as a coordinator and a volunteer in conjunction with various educational programs in the area of cultural heritage in Istanbul and Turkey.

In 2007, she began to pursue her graduate studies in the program of ‘Anatolian Civilizations and Cultural Heritage Management’ at the Koç University, specializing particularly in the field of Byzantine Studies and Heritage. Beside her studies, she has been involved in several archaeological excavations in southwestern Turkey, in ancient sites such as Perge, Sagalassos and Aphrodisias, conducted by Turkish and international universities. She also worked for the excavations of the Middle Byzantine Church in Istanbul, Küçükyaalı. During her involvement at various sites ranging from Prehistoric to Byzantine periods, she worked on site, in the development of restoration projects as well as in the organisation of public archaeology projects with local community. Based on her archaeological fieldworks, she presented two papers; one focusing on the archaeological excavations in Perge presented at the Department of Architecture of the University of Sydney in 2007, and the other on the public archaeology project in Sagalassos, presented at the Research Center for Anatolian Civilisations in 2009, in Istanbul. In 2009, she attended a summer school in Italy entitled ‘Pisa and The Mediterranean’ and organised by the Kunsthistorisches Institut in Florence. She presented a paper there about the Livorno harbor in Italy.

In her master’s thesis entitled ‘Yenikapı, A Late Antique and Byzantine Harbor in Constantinople: A Historical, Archaeological and Architectural Study of the Newly Discovered Remains’ she examines the newly discovered remains of the harbor in Yenikapı in the light of the existing Byzantine historical accounts.