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Mittelmeerraum von der Antike bis
in byzantinische Zeit.
Neue Entdeckungen und aktuelle
Forschungsansätze

*Harbors and Harbor Cities in the
Eastern Mediterranean from Antiquity
to the Byzantine Period:
Recent Discoveries and Current Approaches*

Band 2

OFFPRINT / AYRIBASIM

DEUTSCHES ARCHÄOLOGISCHES INSTITUT
ABTEILUNG ISTANBUL

BYZAS 19

Veröffentlichungen des Deutschen Archäologischen Instituts Istanbul

Österreichisches Archäologisches Institut Sonderschriften 52

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Hrsg. von
Sabine Ladstätter – Felix Pirson – Thomas Schmidts

Istanbul, 30.05.-01.06.2011



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Set ISBN 978-605-4701-60-5

Band 2 ISBN 978-605-4701-62-9

Publishers Zertifikat-Nr.: 14641

Umschlaggestaltung

Kelenderis Mosaic (K. L. Zoroğlu)

Redaktion

Barbara Beck-Brandt, Dominique Krüger, Angela Schwab

Druck

Oksijen Basım ve Matbaacılık San. Tic. Ltd. Şti.

100. Yıl Mah. Matbaacılar Sit. 2. Cad. No: 202/A Bağcılar - İstanbul

Tel: +90 (212) 325 71 25 Fax: +90 (212) 325 61 99

Zertifikat-Nr.: 29487

Produktion und Vertrieb

Zero Prod. Ltd.

Abdullah Sokak. No: 17 Taksim 34433 Istanbul-Turkey

Tel: +90 (212) 244 75 21 Fax: +90 (212) 244 32 09

info@zerobooksonline.com

www.zerobooksonline.com/eng/

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Ancient Shipsheds

David J. BLACKMAN

Abstract

The paper concentrates on evidence for ancient shipsheds from the coast of Turkey and the eastern Aegean. It describes definite and possible new evidence, and urges research into some important sites such as Knidos and Kyzikos. It stresses the importance of shipsheds as a diagnostic feature of ancient military harbours, providing evidence not only for the dimensions of ancient warships but also for the naval strategy of coastal cities, and in particular of cities on offshore islands such as Rhodes and Samos, with their mainland possessions (*peraiiai*). In conclusion, the paper emphasizes the anonymity of ancient dockyards in Turkey, compared with those of later periods.

Özet

Yazı, Anadolu ve Doğu Ege kıyılarındaki antik gemi barınaklarına dair bulgular üzerinde yoğunlaşmaktadır. Belirli ve olası bu yeni bu bulguları tanımlamakla birlikte, Knidos ve Kyzikos gibi önemli kentleri araştırmaya teşvik etmektedir. Askeri limanların saptanmasında gemi barınaklarının önemi, bu barınakların sadece savaş gemilerinin boyutları hakkında değil, aynı zamanda kıyı kentlerinin ve özellikle Rhodos, Samos gibi kıyıdan uzak adalar ve ait oldukları anakaranın (*Peraiiai*) deniz stratejisi hakkında bilgi verdiği vurgulanmaktadır. Son olarak, daha geç dönemlerle karşılaştırarak Türkiye'deki antik tersanelerin anonim olduğu belirtilmektedir.

This paper will concentrate on Turkey and the eastern Aegean. We are hearing expert presentations on a number of sites during this seminar; I shall mention some other sites where there is new information or there are questions to be asked, notably on the subject that has always been of particular interest to me: ›shipsheds‹ – covered slipways – a diagnostic feature of ancient military harbours or dockyards. A team of us are writing a book on ›Shipsheds of the Ancient Mediterranean‹, which we hope to finish this year. We have just heard a presentation by Bjørn Lovén, on his major investigation of the military harbours of Piraeus. Kalliopi Baika, another member of our team, has (as we have also heard) worked on a number of shipshed sites, mainly rock-cut but including also Corcyra. Maria

Costanza Lentini and I have co-operated on the excavation of all that survives of the dockyard of Naxos in Sicily. For the ›Shipsheds book‹ we have consulted closely with those who have worked on the shipsheds at Carthage, Marseille and Kition in Cyprus; also with Lazaros Kolonas, who has completed the excavation of the shipsheds at Oiniadai, and is now preparing final publication. This is very important because of the parallels between Oiniadai and Piraeus¹.



Fig. 1 Knidos: air photograph (D. J. Blackman)

Taking account of the geographical ambit of this conference, I have three questions to put to this audience, which I already put to the audience in Izmir last year (Blackman forthcoming):

- 1) Is it not possible to investigate the trireme harbour of Knidos (**Figs. 1. 2**)? Perhaps this is already planned? This would be a challenging project, but has fascinating potential, when we know that the west harbour was described by Strabo (14, 2, 15) as a ›closable‹ trireme harbour, and a ›naval station‹ (*naustathmos*) for 20 ships. As long ago as 1924 Armin von Gerkan pleaded for a study of this harbour: I show his plan² (here **Fig. 3**). Does a need for preservation of the overlying buildings really prevent access to the shipsheds? Local sources have reported that remains of shipsheds have been revealed on the isthmus³.
- 2) Strabo (12, 8, 11) wrote that Kyzikos had over 200 shipsheds. There is no archaeological evidence to support this. Where were they? How many were there? What is their date and historical context? Can the figure really be accurate? Karl Lehmann-Hartleben⁴ thought that the figure was a »Riesenzahl«, and I tend to agree. But the question needs investigation. The topography was discussed by F. W. Hasluck⁵ and R. de Rustafjaell⁶, but neither mentions Strabo's remark. I show de Rustafjaell's plan of 1902 (**Fig. 4**)⁷.

¹ See Blackman – Rankov et al. 2013; Baika, this volume. For Naxos, see now Lentini et al. 2008; Lentini – Blackman 2009; Lentini – Blackman 2010. For other sites mentioned, see Blackman 2008a; Blackman – Lentini 2010.

² von Gerkan 1924, 113 f. pl. 10.

³ B. Lovén has confirmed to me that he has heard the same reports.

⁴ Lehmann-Hartleben 1923, 101 n.1.

⁵ Hasluck 1902, 132–134; Hasluck 1904, 135–143; Hasluck 1910, 3–5.

⁶ de Rustafjaell 1902, 174–189.

⁷ My exploration of the site in October 1963 produced no new evidence on the shipsheds, but did indicate that the entrance to the east harbour was from the north rather than the south (as de Rustafjaell). I am grateful to Ian Cartwright for his work on this and other photos published in this article.



Fig. 2
Knidos: view
of west harbour
(D. J. Blackman)

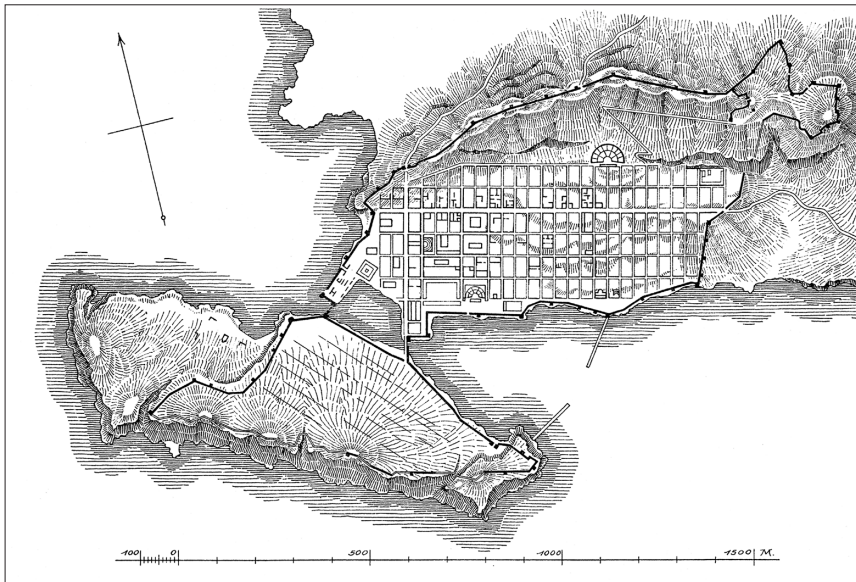


Fig. 3
Knidos: plan
(von Gerkan 1924,
pl. 10)

3) Where were the shipsheds in the ports of the eastern Aegean and western Asia Minor? I think of Ephesos: where were the *neoria* at Ephesos, which were attested by Strabo (14, 1, 24) for the mid-2nd century B.C.⁸? Clearly their lower ends, at least, would now be deep in ground water!

Have such remains all been overbuilt in the Hellenistic or Roman period? Some cities still had significant fleets in the Hellenistic period: I will refer to Kos and Rhodes later.

⁸ This question was raised during the discussion of the paper by M. Steskal.



Fig. 4
Kyzikos: plan
(de Rustaffjaell
1902, pl. XI)

Elaia is a site of great promise, about which we have heard from Felix Pirson. This is a site where I still hope he might find some evidence for the shipsheds housing the large *polyremes* of the Hellenistic period⁹.

I expect (and hope) that it is at sites in Italy such as Portus that we may find a solution to one of our big puzzles: the lack of clear archaeological remains of Roman *navalia*, for which we have literary and iconographic evidence¹⁰. We do have a little evidence now from Piraeus: some late walls above the classical shipsheds in Mounichia (and on the same alignment); excavated recently by the Piraeus Ephoreia, these may represent limited reconstruction after the destruction by Sulla (Petritaki 2001–2004).

Here are some other probable or possible shipshed sites in the region:

⁹ I was glad to hear that he will also study the site of Kane, at Bademli Limani to the west of Elaia, as part of the study of the wider maritime façade of Pergamon. The Roman fleet wintered there in 191/190 B.C.: Livy writes that they hauled their ships ashore (*naves subductae*) and built a rampart and ditch (Liv. 36, 45, 8). See Ragone 2000, 320–332; Stauber 1996, 273–277 (but the Romans would not have left their ships in the water). Earlier references: Schuchhardt 1912, 118; Cook 1988, 12, n. 18.

¹⁰ See Blackman 2008b; Rankov 2008; Hurst 2010. Simon Keay is currently excavating massive structures on the north side of the Trajanic harbour at Portus, which may prove to be *navalia* of the 2nd cent. A.D.

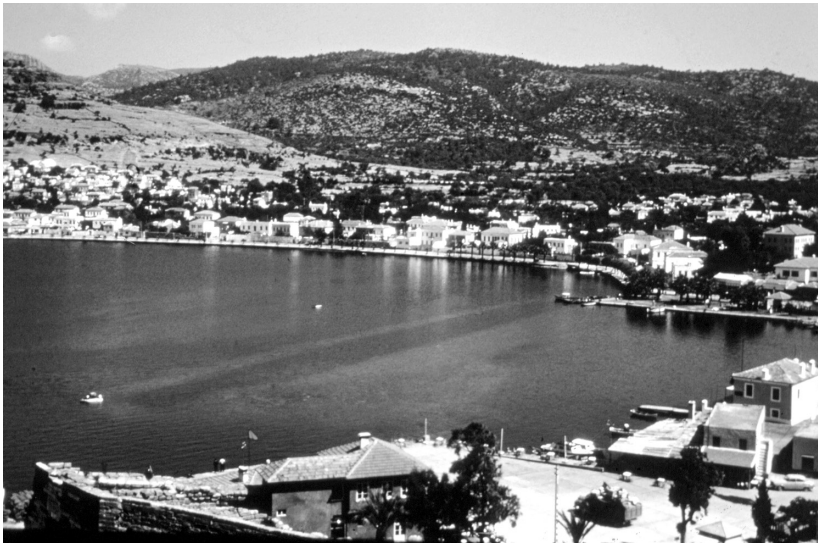


Fig. 5
Halicarnassus:
the harbour
(D. J. Blackman)

Halicarnassus/Bodrum

On the south side of the peninsula on which the Crusader Castle stands, lies a small bay with high rocks rising on both sides (east and west). On the west side of the bay a rock-cutting is visible, running out from under the castle wall for ca. 30 m towards the open sea, where it drops to 3–4 m below present sea level. It is not certain whether this cutting was for a wall foundation, or a walkway. About 7 m to the east is a short stretch of a parallel foundation, very badly preserved.

The current investigator Poul Pedersen argues that these are the remains of an ancient shipshed, and suggests that we may have here the explanation of Vitruvius' (2, 8, 13) description of the ›Secret Harbour‹ of the Palace. Time does not allow me a full discussion of this famous problem; the Secret Harbour has since Vitruvius been regarded as a ›large‹ installation. But the identification of a (probably single) rock-cut shipshed is plausible: possibly a private slipway for a monarch's personal ship, but clearly not the main dockyard of Halicarnassus – this probably lay within the mole now submerged, well visible in an archive photo of 1964 (**Fig. 5**)¹¹.

Kardia/Lysimacheia

Kardia, the first town of the Thracian Chersonese (the Gallipoli Peninsula), seems to have been on Cape Xeros (now Bakla Burnu), on the north-west side of the peninsula. In 1955 Daphne Hereward found 5th–4th century Attic pottery there, and ›an ancient rock-cutting for launching a ship‹¹². I have not been able to check this report, and should be interested to know of any recent research in the area of Bakla Limani¹³.

¹¹ Pedersen 2003, 475; Pedersen 2009, 326–328; and personal communication; Blackman – Rankov et al. 2013, 555–557. On the ›Secret Harbour‹ see for example Bean – Cook 1955, 87–89; Jeppesen 1986, 84–91.

¹² Hereward 1958.

¹³ R. Körpe in her paper referred to buildings on the shore. The question of naval bases in the Straits needs more study: Demosthenes mentions Sestos and Lampsakos in this context. For the port on the Asian side of the north

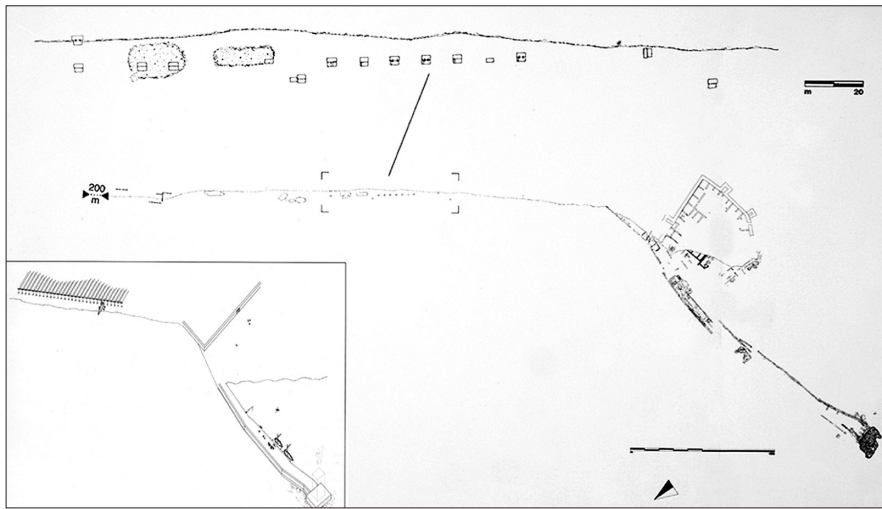


Fig. 6
Kyme: plan and
reconstructed
plan (P. A.
Gianfrotta 2002,
pls. II, III)

Kelenderis

Rough Cilicia is outside the area I have been discussing so far, but I have been in correspondence with Levent Zoroğlu for some time; and yesterday we had his report on his years of research. The late mosaic with ships and a possible depiction of a shipshed has attracted wide attention. I was waiting to hear about his more recent discoveries: he had written of structures in the water that could be the ramp of a slipway, or simply a quay. I am happy that he now speaks of a slipway¹⁴.

Kyme (in Aeolis)

A possible candidate for shipsheds comprises some enigmatic remains on the shore at Kyme. Originally excavated in 1925, they were interpreted as belonging to a long Doric stoa of the Hellenistic period, running along the shore and facing eastwards (landwards), probably on to the agora. This view seems to have been confirmed by recent investigations by the Italian team working on the land site: supplementary excavation revealed a second stoa to the south, running on a slightly different alignment almost as far as the main pier or breakwater¹⁵.

Independently, however, the Italian team studying the pier and other submerged remains has come to a different conclusion. They argue that the shore was too exposed for a shoreline stoa, and suggest that the remains belong to small shipsheds, 6–7 m long and just over 3 m wide¹⁶ (**Fig. 6**).

entrance to the Bosphorus, see Moreno 2008: this was the point where the grain ships gathered to be convoyed through the straits by Athenian triremes. There are likely to have been facilities here for the merchant ships and the warships. Later (by 220 B.C.) the port was controlled by Byzantium. For a strategic position at the south end of the Straits, Tenedos (until the foundation of Alexandria Troas), see Rutishauser 2001.

¹⁴ The mosaic: Friedman – Zoroğlu 2006; underwater discoveries: Zoroğlu 2007; Zoroğlu 2010; Zoroğlu, this volume; Blackman – Rankov et al. 2013, 571 f.

¹⁵ Parapetti 2006.

¹⁶ Gianfrotta 2002, pls. II, III, a reconstruction plan which only shows the northern stretch of stoa.

I remain unconvinced: the gaps seem too small, and the evidence available points to a long linear structure, parallel with the shore and not facing the sea, and now shown to be much longer than originally thought; we must hope for reconciliation of the evidence in the current work of Sebastiano Tusa.

Mytilene

There is no doubt that the shipsheds were in the south harbour, the closable harbour with space for 50 ships (Strab. 13, 2, 2). This fits the literary tradition (Hdt. 6, 8) where Lesbos provided 70 ships for the Ionian Revolt. Possible evidence for shipsheds has recently been found in rescue excavations: a 15 m stretch of wall parallel to and inside a stretch of breakwater, on the east shore of the harbour. The best argument for its identification as part of a shipshed is its location, but I am not convinced¹⁷.

Pyrrha (on Lesbos)

R. Koldewey reported remains of walls on the beach below the north side of the acropolis, sloping gently towards the sea, and forming a building 6.50 m wide and ca. 20 m long. He thought that their position and style of building indicated shipsheds, and that the sea may have penetrated this far in antiquity. His plan only marks one shipshed.

Neither Blackman nor Kalliopi Baika nor Hector Williams nor Theotokis Theodoulou's team from the Ephoreia of Maritime Antiquities have been able to find any visible trace of remains in the position indicated. The identification is possible, particularly with the gradient towards the sea, but cannot now be proved without full archaeological investigation¹⁸.

Dockyard sizes

I have discussed dockyard sizes before (Blackman 2003), but we can now add Kos to the discussion. The ancient harbour of Kos (now Mandraki) was a ›closed‹ (*kleistos*) harbour, and limited remains of the shipshed complex were found by Charis Kantzia on the southwest side (Fig. 7). A recently published inscription of the early 2nd century B.C. has now provided us with evidence for shipsheds towards the *eastern* end of the harbour¹⁹. A document concerning the sale of priesthoods also contains references to building work and maintenance, including a tantalizingly incomplete sentence »... of Aphrodite Pontia the [something] between ... Herakleion and the *neoria* which have been equipped with *kleithra*, leaving access from the shipbuilding yards (*naupagia*)«. The sanctuary of Aphrodite Pandamos and Pontia has plausibly been identified with the ›sanctuary of the port‹ excavated in the 1930's at the east end of the waterfront and clearly close to the ancient shore. Close

¹⁷ Koldewey 1890, 8; contra Lehmann-Hartleben 1923, 89; Blackman – Rankov et al. 2013, 576. Theotokis Theodoulou discussed this site in more detail, in his paper.

¹⁸ Koldewey 1890, 27; Blackman – Rankov et al. 2013, 577 f.; Theodoulou discussed this site also, in his paper.

¹⁹ Segre 1993, 121, ED 178 b(A) 2–5; Parker 2002, with general discussion of the cult of Aphrodite Pontia, and translation of the text (156–158); Bouras forthcoming. I am grateful to Catherine Bouras for valuable discussion of this inscription.

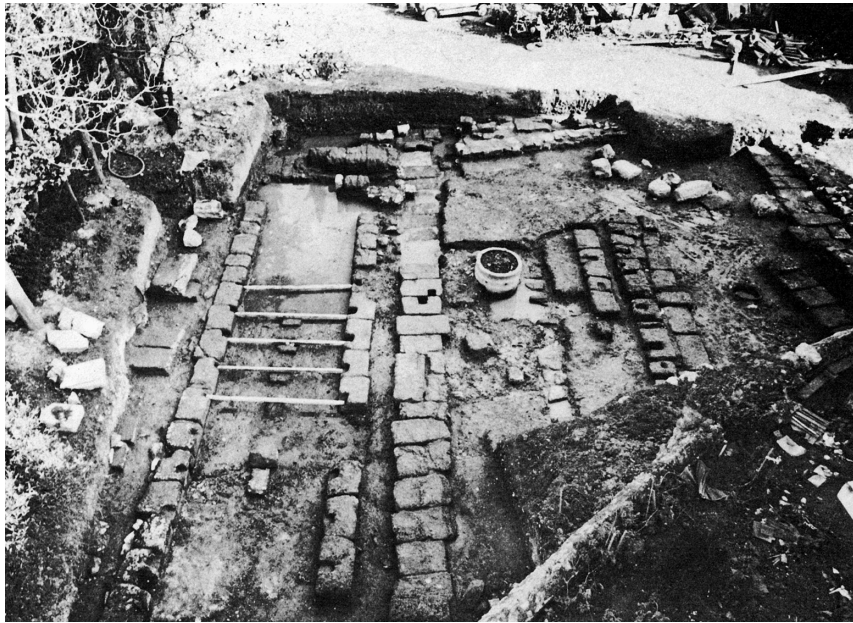
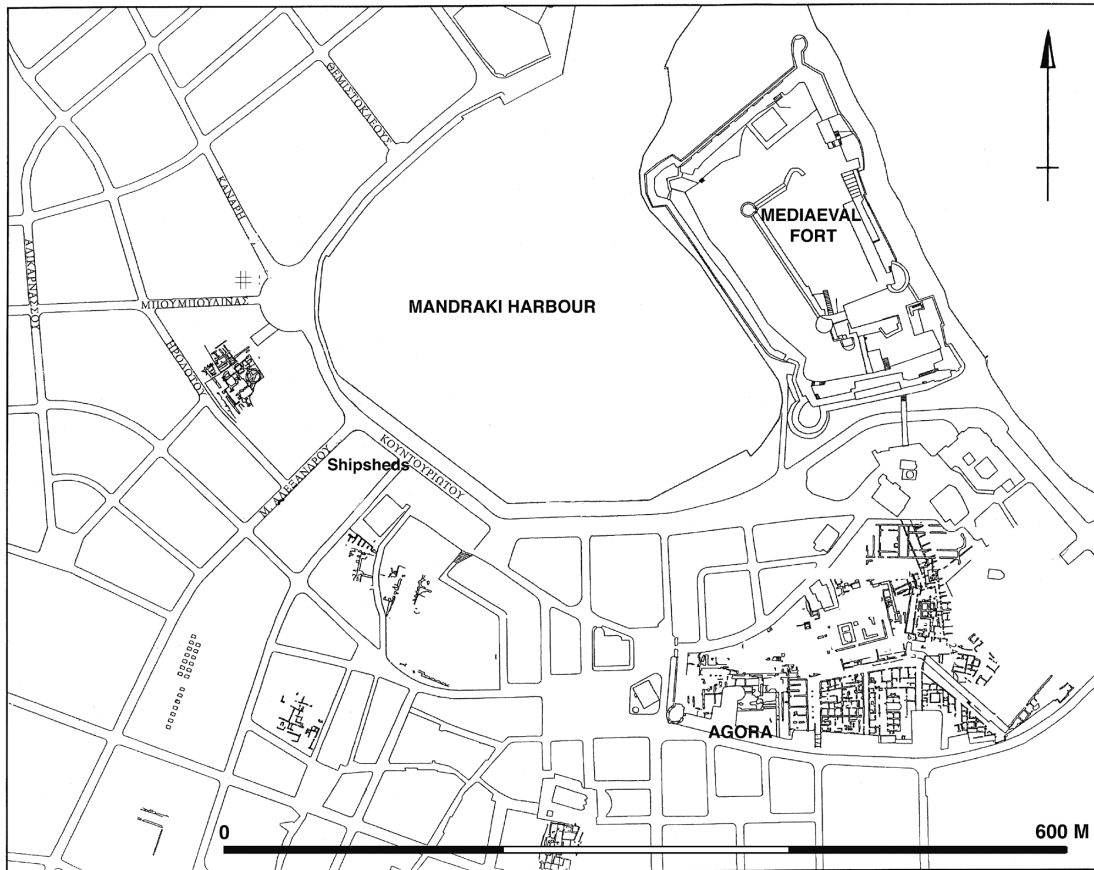


Fig. 7
Kos: the shipshed
(KB' Ephorate)

Fig. 8
Kos: plan of the
port (Blackman
– Rankov et al.
2013, 363
fig. B10.1)



by to the east, a smaller sanctuary has been identified as the shrine of Herakles. In the inscription [something] has to be done to [something] connected with the sanctuary of Aphrodite Pontia, between the *neoria* and the Herakleion. The *neoria* must lie to the west

of, and probably not far from the sanctuary of Aphrodite; and they must be at the eastern end of the line of shipsheds. This would indicate a line of shipsheds all along this shore – ca. 300 m, housing up to 45–50 warships (**Fig. 8**). This seems a lot for Kos, though we do not have the evidence for Koan fleet size that we have for the Rhodian. Perhaps the line of shipsheds was not continuous.

Clearly *kleithra* here must mean closable doors or gates. Thus we have here confirmation of our assumption that access to *neoria* was made difficult for security reasons; perhaps the shipsheds in a closed military area which were closest to a public area were known to have distinctive gates. We also have an interesting indication of the proximity of the ship-building yard; it is perhaps surprising to find an undoubtedly noisy installation close to a principal sanctuary of the city.

For Rhodes, as I said, we have more frequent references to fleet numbers. The Rhodian fleet became an important force in the early Hellenistic period. Dio Chrysostom (31, 103) refers back to a Golden Age, when Rhodes »... used to send out a fleet of 100 ships or more, and again of 70 and then of 30 ...«. This must refer back to the 4th/3rd centuries (and the figure of 100 is a maximum).

The tradition of the Rhodian thalassocracy is clear. The fleet size is usually estimated at 40 to 50 major units in the Hellenistic Period. After 227 B.C. we start to get precise figures. In 190 B.C. Rhodes put 75 ships to sea, but never more than 55 at a time: this was probably the maximum number of ships that Rhodes could man with citizen crews.

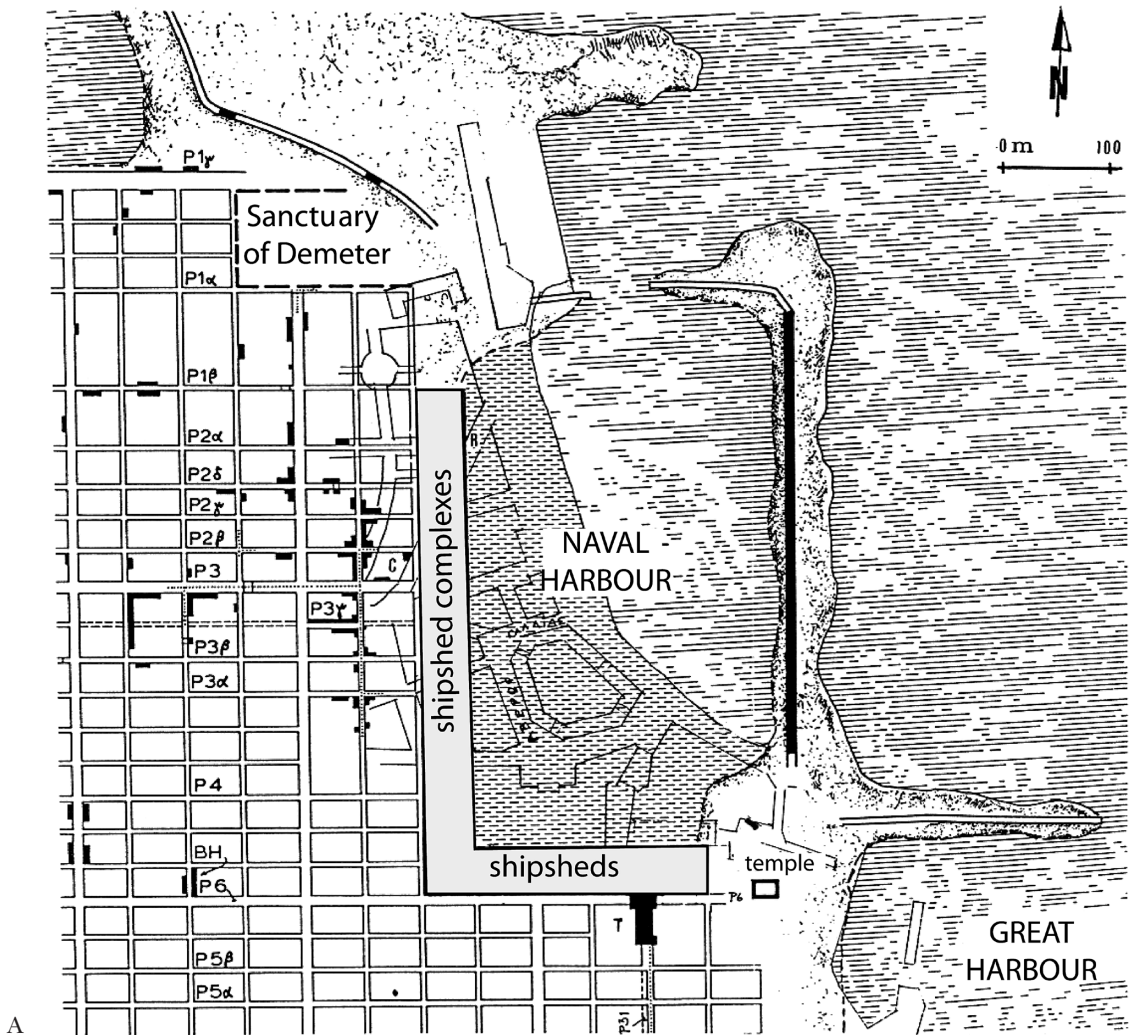
The military harbour was Mandraki, whose shoreline might just have managed to accommodate 100 ships, but it is not clear that such a large number of ships were ever based at Rhodes itself. Some ships may have been permanently based at out-stations.

The main surviving evidence comes from the south side of Mandraki harbour. Remains of shipsheds were excavated by an Italian team in 1940–1941, and published by Paul Knoblauch, Angeliki Yiannikouri and myself²⁰ (**Fig. 9**). We were able to identify the dividing wall between sets of shipsheds of different clear widths: 6–6.30 m housing the larger units – *kataphrakta*; 4.20–4.40 m housing the smaller units – the *aphrakta*. Here we have evidence for the standard ›battleships‹ (triremes to *pentereis*) and the guardships (including *trihemioliai*) – the ships used for policing the seas, notably against pirates²¹.

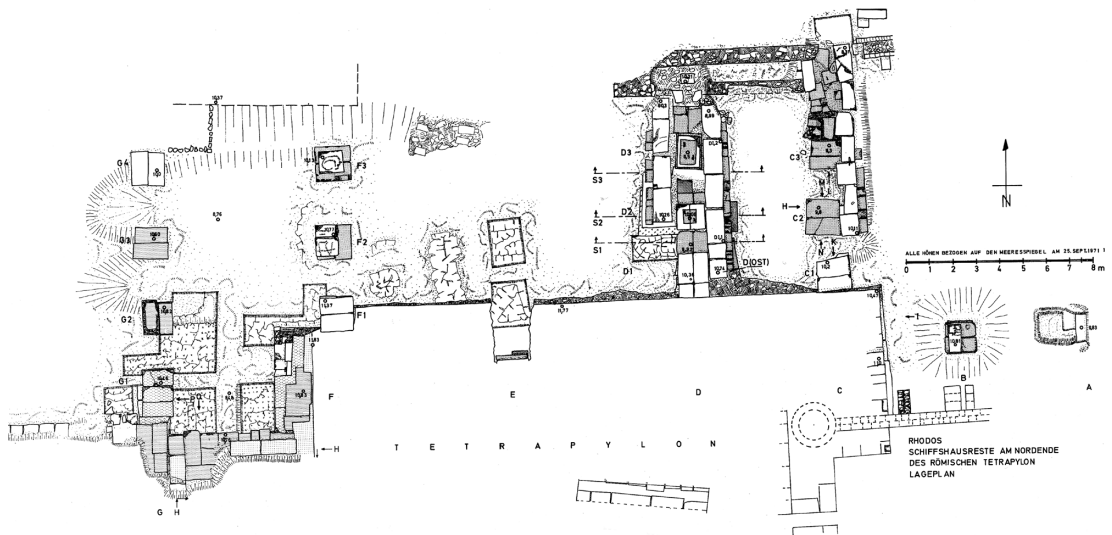
We only have a narrow strip (some 10 m) of the back part of 6 shipsheds, with a steep gradient which may well represent an upswing such as we see at Oiniadai and Naxos. Two phases are clearly defined: before and after the great earthquake of 227 B.C., with no change in dimensions.

²⁰ Blackman – Rankov et al. 1996, 509–517.

²¹ For a more cynical view of the relationship between pirates and *prostatai* see Gabrielsen 2001: he argues that the merchant, the pirate and the naval *prostatai* were »tangled into an intricate relationship of mutual dependence«; and that both pirates and naval *prostatai* were parts of a single historical structure, the »raid mentality«, which essentially represented a specific mode of economic activity.



A



B

Fig. 9 A) Rhodes: the military harbour (Blackman et al. 1996, fig. 1).
 B) Rhodes: the shipsheds (Blackman et al. 1996, fig. 6)

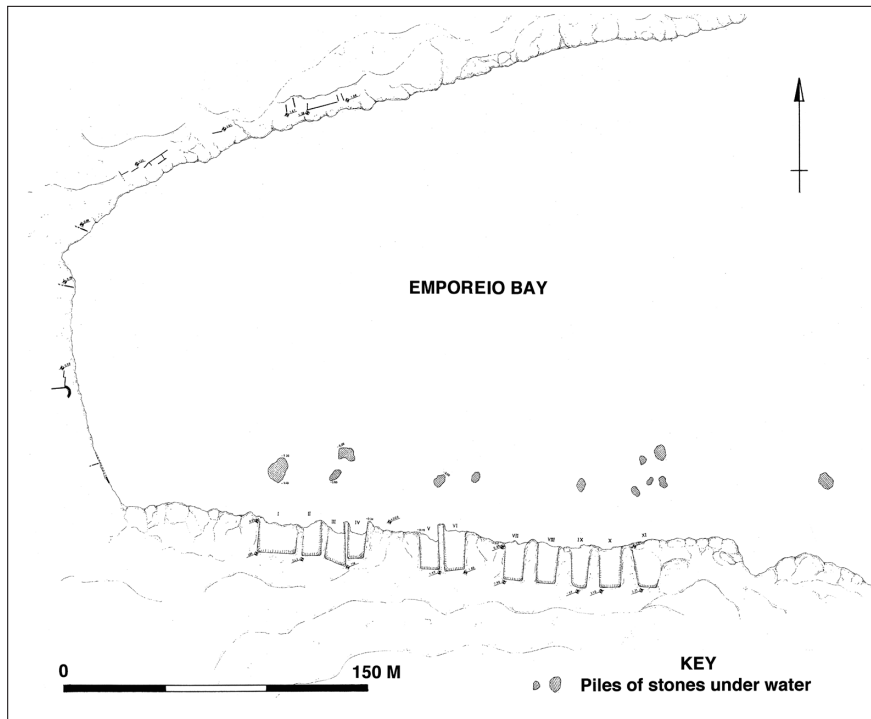


Fig. 10
Alimnia: plan
of Emporeio
Bay (Ephorate
of Maritime
Antiquities,
A. Tagonidou)

Rhodian naval out-stations

After this study I was invited by the Ephorate of the Dodecanese to look at remains on the island of Alimnia (ancient Eulimna) which lies just north of Chalke off the west coast of Rhodes. Alimnia has the best natural harbour in the area. Two groups of rock-cut slipways were found: 10 on the south-east side of the main harbour, and 11 on the south side of the Bay of Emporeio. I surveyed these in 1991–1992, and in 1997 collaborated with the Ephorate of Maritime Antiquities in underwater investigation of Emporeio Bay. The slipways seem very short (length 16 to 20 m), and rather wide: ca. 8–10 m or 9–11 m. They could each have housed two small guard ships (**Fig. 10**).

Above lies the Hellenistic (and later) fort of Kastro. Since it has a panoramic view of the west coast of Rhodes, it must have served as a lookout station, from which the ships below could be alerted, and also signals could be sent to towers on the mainland coast and up to the city of Rhodes (**Fig. 11**). I suggested then (Blackman 1999) the idea of an early warning network of naval bases for the Rhodian fleet, in addition to the fleet headquarters in Rhodes. Now we have more evidence²².

The first piece of new evidence, from the mainland of Karia, is an inscription found in 1992 in Yeşilyurt (formerly Pisiköy), north of the Keramic Gulf, at the site of ancient Pisyē²³. It dates from the second or third quarter of the 3rd century. The opening lines

²² My fuller treatment of this topic has appeared as Blackman 2010. I am grateful for information and photographs from Winfried Held, Hans Lohmann and Marco Anzidei, and for discussion with them.

²³ Debord – Varinlioğlu 2001, 95–105 no. 1.



Fig. 11
Alimnia: view of
Emporeio Bay,
from the west
(D. J. Blackman)

are damaged, but the main point is clear: this is the preamble of a public subscription for the construction of shipsheds (*neoria*), followed by the list of names of contributors: communities lying between Pisye and the coast. The missing part of one line clearly refers to *another* authority for which the *neoria* were to be built. I follow the editors in favouring a mention of the Rhodians, and deducing Rhodian control by the mid-3rd century of these sites in the Keramic Gulf, with a naval base whose location has been plausibly proposed by the editors.

The *neoria* must have been built on the bay of Akbük, below the fortified site of Sarnıç which had a Rhodian garrison; the suggested location for the *neoria* seems plausible, and it deserves investigation. The site is small, but the bay is large and the important point was a suitable gentle shoreline. We know nothing about the later history of the port in the period of Rhodian control: the *neoria* must have continued to serve as a base for the Rhodian fleet²⁴.

The second piece of new evidence from the mainland is not from the recesses of the Keramic Gulf, but from the nearest point to the island of Rhodes: the small city of Loryma at the southern tip of the Karian Chersonese, the heart of the Rhodian *peraia*. Its strategic importance for Rhodes is clear: it lies across the strait from Rhodes, and on a main shipping route. Winfried Held has described his discoveries there²⁵.

It is clear that we have a set of six shipsheds, for twelve warships; perhaps warships smaller than triremes: patrol vessels such as *trihemioliai*, or *hemioliai*. Without excavation we can only date from context, but a naval base here is likely to have been a Rhodian construction not later than of the early 3rd century B.C.: a key link in a naval early warning system for the island and cities of Rhodes itself.

²⁴ For the location, which I have not visited, see Brun in Debord – Varinlioğlu 2001, 53–57 and figs. 77, 78; Piri Reis in the 1520's mentioned a harbour at Ak Bük (1988, 503). For the nearby site of Kapıcıkada (a pirate refuge site [?]) see W. Held, this volume.

²⁵ Held 2003; Held 2009; Blackman – Rankov et al. 2013, 372–375.

It was not only Rhodes that saw the importance of its mainland possessions (its *peraiia*) as part of its naval defences: the Samians built shipsheds for guardships below a watch-tower on the mainland opposite the south-east coast of the island, on the north shore of Cape Mykale, commanding the channel between Samos and the mainland (much narrower than that between Rhodes and Loryma). Remains were noted by Theodor Wiegand in the 1890's, and slight traces of a shipshed have just been rediscovered by Hans Lohmann²⁶. Connected with a watch-tower on the island shore, this was part of the outer defences of the port of Samos.

To return to Rhodes: I have argued that there may have been further Rhodian naval out-stations on the coast of Karia and Lykia. Other possible sites are Megiste (Meis Adası), an early Rhodian possession off the Lykian coast, but none of the remains found along its shore can be related to such an installation – and slipways will have been the diagnostic feature. Another candidate is Daidala, a Rhodian enclave on the Gulf of Fethiye/Telmessos, where a dedication by a Rhodian governor was found – on an island in the bay called Tersana Island. This is an evocative name, and the island (which I have not visited) would seem to be a more suitable site for a naval station than Daedala; but no remains of slipways or other harbour installations have been found, and it is not certain that the island formed part of the Rhodian enclave.

Slipways have been found recently by Italian geologists (led by Marco Anzidei) researching sea level change, but at Tersane Bay, just outside the Gulf of Fethiye/Telmessos to the south-east, opposite Gemile Island (ancient Lebissos [?])²⁷. The two rock-cut slipways are now almost totally submerged. The almost flat upper ends, one 6 m wide and 6 m deep and the other 8 m wide and 8 m deep, lie just above present sea level (ca. 20 cm). Below a rock-cut step the ramps descend with a steep slope (ca. 20 %, perhaps representing the upswing at the top of the ramps) and can be followed to a depth of 4.5 m. Some rock-cut bollards are visible in the back wall, and some rock-cut post-holes along the side of the narrower slipway (**Fig. 12**). This interesting site certainly merits further investigation. It seems rather too far to be attributed to the Rhodian enclave (*tersane* toponyms are frequent along this coast, and may of course reflect later history)²⁸.

Clearly Rhodes was very concerned for its security from attack, not only from a distance but also from the nearby coast of Karia and Lykia. The naval harbours (with their shipsheds) and the naval strategy of the cities of the offshore islands (with their mainland *peraiiai*) form an important aspect of the ancient maritime history of western Asia Minor²⁹.

²⁶ Lohmann 2004; Lohmann et al. 2007, 98 f.; Blackman 2010, 389 figs. 11, 12; Blackman – Rankov et al. 2013, 562 f.

²⁷ Anzidei et al. 2011, 13–20; Blackman 2010, 391 n. 26; Blackman – Rankov et al. 2013, 563–565. For Gemile Island see Asano 2010; Foss 1994, esp. 6–9. The remains found by M. Anzidei are thought by W. Held and myself to be remains of slipways, by M. Zimmermann to be quarry workings.

²⁸ For the Seljuk tersane at Alanya, dated by clear epigraphic evidence to A.D. 1229–1231, see most recently Dağgölü 2009; Arenson 2010; Johns 2010. Dağgölü rightly stresses the importance of consulting Piri Reis (for whom I have found most helpful the trilingual edition by the Historical Research Foundation, 1988: for Alanya see Piri Reis 1988, 1603 f.: the five chambers of the tersane are clearly visible on his illustration of the site). Johns notes the similarity of the dimensions at Alanya to the shipbuilding order made by Charles I of Anjou, King of Sicily, in A.D. 1275.

²⁹ A conference in Bordeaux in 1999 on «Les Îles de l'Égée dans l'antiquité» produced a fine crop of relevant articles, published in REA 2001: see above all Debord; also Baker 2001, Gabrielsen 2001 and Rutishauser 2001;

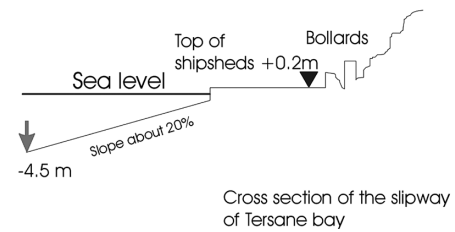
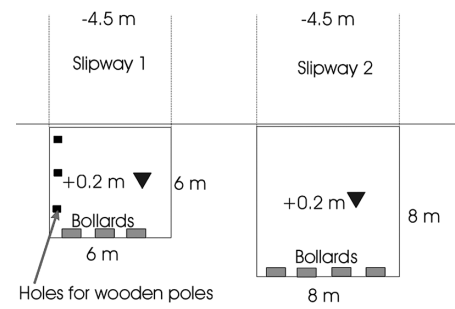
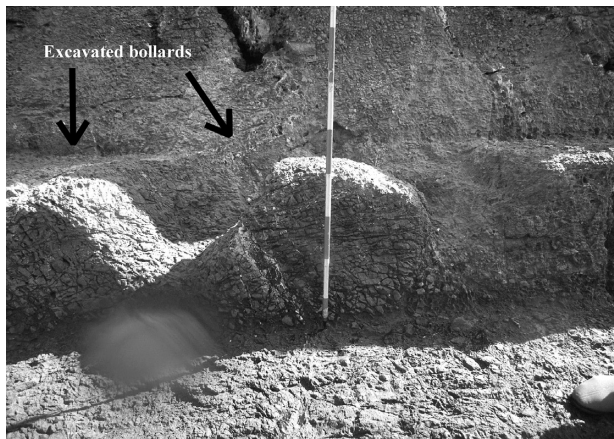
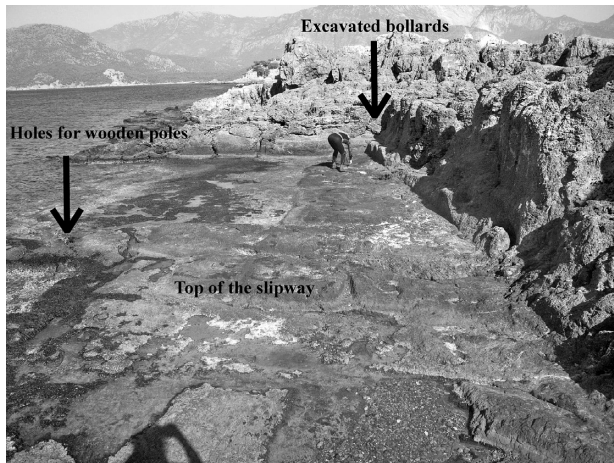


Fig. 12b
Tersane Bay: the slipways –
plan and section
(Courtesy M. Anzidei)

Fig. 12a
Tersane Bay:
the slipways – views
(Courtesy M. Anzidei)

An appendix: The anonymity of ancient dockyards

For Athens we can name some dockyard overseers (from their surviving accounts, on stone) and know from literature which statesmen gained a reputation for their construction of dockyards³⁰. We also have, from the ancient world, some depictions of shipsheds. But we have nothing to compare with a picture of Istanbul in the early 19th century. A book published in Paris in 1819, »Voyage pittoresque de Constantinople«, contained a series of views with explanatory text³¹. The artist was Antoine Ignace Melling, architect of Sultan Selim III and designer for his sister Hadice. One view (**Fig. 13**) is a general view eastward down the Golden Horn from the Heights of Eyub [now Eyüp], showing the slipways of the *tersane* on both banks; large vessels anchored farther seaward show the farthest point which they could reach in the Golden Horn. A second view shows the arsenal during an official visit (**Fig. 14**). The text explains that *Captain-Pasha* Hussein, recruited by

a fundamental article is Funke 1999. Offshore islands could be threatened if their *peraia* (or part of it) was seized by exiles: e. g. Anaia for Samos, and Antandros for Mytilene (see Thuk. 4, 52; 4, 75).

³⁰ Blackman – Rankov et al. 2013, 25 f.

³¹ De Lacretelle – Barbié du Bocage 1819.



Fig. 13 Constantinople/Istanbul: view down the Golden Horn
(De Lacroix – Barbier du Bocage 1819, n. no.)

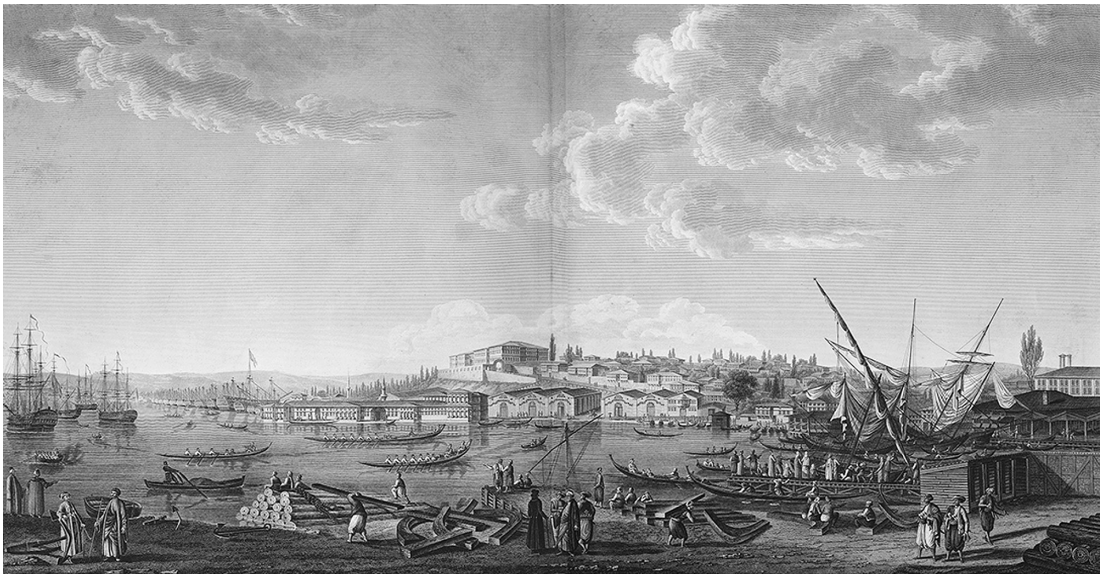


Fig. 14 Constantinople/Istanbul: view of the Arsenal/Tersane
(De Lacroix – Barbier du Bocage 1819, n. no.)

Selim to create a fleet, is shown in a rowing boat with seven pairs of oars; the *Tersané-Emini* (Dockyard Superintendent) is in a boat with six pairs of oars (**Fig. 15**). In the foreground the Captain of the Port (*Liman-Reisi*) is discussing work on the Arsenal with the French engineer, with naval officers as aides-de-camp (**Fig. 16**). Unfortunately for Selim, »... an early death deprived the Sultan of this enlightened and vigilant admiral ...«. Here we have the depictions of historical figures of the Turkish navy and officials of its Arsenal, at a precise moment in time. We have nothing comparable from antiquity.

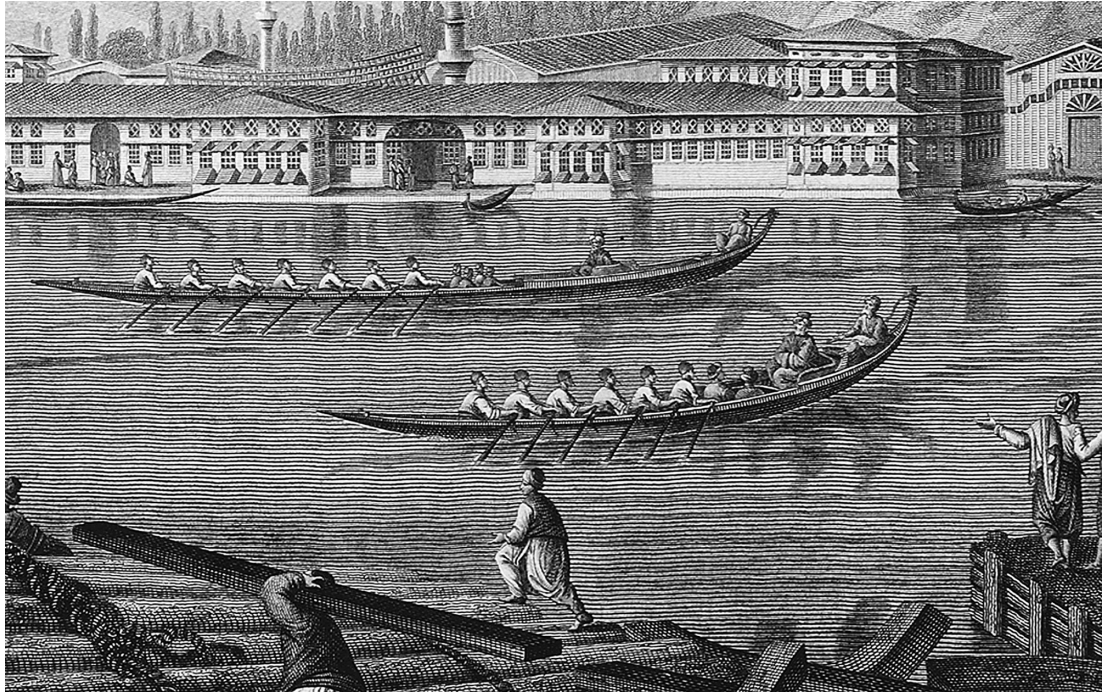


Fig. 15 Detail of Fig. 14: the rowing boats



Fig. 16 Detail of Fig. 14: the ›Liman-Reisi‹

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