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Name	Prosperity period (centuries)	Region
<a href="#">Aigeira</a>	2nd A.D. - 4th A.D.	Corinthian Gulf
<a href="#">Andos - Palaeopoli</a>		Aegean sea
<a href="#">Anthedon</a>		Euboean Gulf
<a href="#">Attica - Sounion</a>	5th B.C. - 1st A.D.	Saronic Gulf
<a href="#">Corinth - Kechreae</a>	1st A.D. - 6th A.D.	Saronic Gulf
<a href="#">Corinth - Lechaeon</a>	6th B.C. - 6th A.D.	Corinthian Gulf
<a href="#">Crete - Phalasarna</a>	4th B.C. - 1st B.C.	Crete
<a href="#">Cyprus - Amathus</a>	4th B.C. - 3rd B.C.	Cyprus
<a href="#">Cyprus - Marion</a>	4th B.C. - 3rd B.C.	Cyprus
<a href="#">Kea - Otzias bay</a>		Aegean sea
<a href="#">Kythnos - Madraki bay</a>		Aegean sea
<a href="#">Lemnos - Ag. Sotiras</a>		Aegean sea
<a href="#">Lemnos - Hefaistia</a>		Aegean sea
<a href="#">Lemnos - Neftina</a>		Aegean sea
<a href="#">Lemnos - Thanos bay Stvi)</a>		Aegean sea
<a href="#">Lesvos - Antissa</a>	4th B.C. - 2nd B.C.	Aegean sea
<a href="#">Lesvos - Eressos</a>	4th B.C. - 7th A.D.	Aegean sea
<a href="#">Lesvos - Kalo Limani</a>		Aegean sea
<a href="#">Lesvos - Mytilini (N. harbour)</a>	4th B.C. - 7th A.D.	Aegean sea
<a href="#">Lesvos - Mytilini (South harbour)</a>	4th B.C. - 7th A.D.	Aegean sea
<a href="#">Lesvos - Pyrra</a>	4th B.C. - 2nd B.C.	Aegean sea
<a href="#">Piraeus - Kantharos</a>	5th B.C. - 4th B.C.	Saronic Gulf
<a href="#">Piraeus - Mounichia</a>	5th B.C. - 4th B.C.	Saronic Gulf
<a href="#">Piraeus - Zea</a>	5th B.C. - 4th B.C.	Saronic Gulf
<a href="#">Portocheli - Alieis</a>	5th B.C. - 4th B.C.	Peloponese
<a href="#">Salamis - Ambelaki</a>	5th B.C. - 3rd B.C.	Saronic Gulf
<a href="#">Samos - Pythagoreion</a>	6th B.C. - 5th B.C.	Aegean sea
<a href="#">Thassos - Commercial Harbour</a>	6th B.C. - 2nd B.C.	Aegean sea
<a href="#">Thassos - Military Harbour</a>	6th B.C. - 2nd B.C.	Aegean sea

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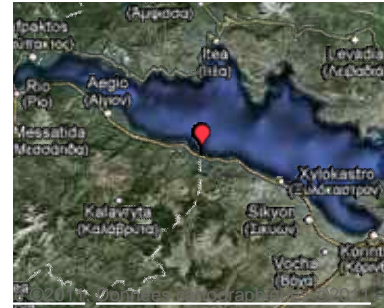
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## Aigeira

The ancient city of Aigeira was located in the Palaiokastro hill, in the northern tip of the Corinthian gulf, west of its modern location. The excavations conducted by the Austrian archaeological Institute provided some indication that the area was inhabited since the later Neolithic era. The city was known to Homer by the name Hyperesia. The Mycenaean establishment of the 12th century B.C. developed to a city that reached its peak during the Hellenistic and Roman period, according to the archaeological remains. As a result of a severe earthquake the city was devastated during the 4th century A.C.

The remains of Aigeira's harbour are located in the coastline near Mavra Litharia village, (Evrostini), in a bay, under the hill where the ancient city was located. All harbour structures are inland, due to the rising of the northern Peloponnesian coast for about 4 meters since antiquity. They can be attributed to the Roman period based on their structural details, but the existence of earlier constructions in underlying layers cannot be excluded.



Figures 

### Main features

Region	Corinthian Gulf
Use	Commercial
Prosperity period (centuries)	2nd A.D. - 4th A.D.
Existence of contemporary port	No
Findings on site	Yes

### General description

It is evidenced that rocky courses advanced once into the sea, creating favorable conditions for establishing a harbour in the area where the remnants of the Roman harbour of Aigeira are located, although the coast's morphology has been drastically altered as aforementioned. The conglomerate blocks found in the area are most probably part of elongated breakwaters, which were built along what it is nowadays the coastline. A sandy bay disrupting the continuity of the breakwaters can be regarded as the harbour's entrance. However, a different layout with a single breakwater cannot be excluded. The harbour structures, founded in a sandy seabed, were built by using hydraulic cement, pebbles and fragments of rocks, which were placed in wooden moulds (caissons).

### Technical features

Construction period (centuries)	2nd A.D. - 3rd A.D.
Port configuration	Artificial Harbour
Port basin size	m <sup>2</sup>
Main wind direction	N
Port land area	km <sup>2</sup>

Port entrance	
Change of sea surface elevation	4 m
Sedimentation	
Outer port structures	Moles, Breakwaters
Inner port structures	
Land facilities	
Construction method	
Neotectonic history	Lift
Shore line displacement	Weathering

### Function and operations

The city's location in the middle of the northern side of Peloponnese and the southern side of the Corinthian gulf, enlists it in a possible port network serving the trade line between Corinth, north Peloponnese and western Mediterranean colonies. Therefore construction or reconstruction of the Hegeira's harbour during the Roman period is strongly related to the importance attributed by the Romans to Corinth and the Lechaion harbour that was built during the same period.

It would be reasonable as well to assume that Aigeira was a terminal port in another sea route, connecting to the Itea gulf, which serviced the Delphi oracle and the Phokis mainland. Following this assumption, searching for harbour installations prior to the Roman period, connecting to Mainland Greece compartment (Sterea), seems logical.

### Sources

References in ancient literature	<ul style="list-style-type: none"> <li>• Pausanias, <i>Description of Greece</i>, VII, 26</li> <li>• Polybius, <i>The Histories</i>, IV, 57</li> </ul>
Related researches	Archeological, Geological, Seismicals
Findings in museums	No
Other references	<ul style="list-style-type: none"> <li>• Alzinger W. &amp; Mitsopoulos-Leon V., 1973, "Aigeira 1972", <i>AAA</i> 6, 193-200 (in Greek)</li> <li>• Alzinger W., 1974, "Aigeira's Excavations", <i>AAA</i> 7, 157-162 (in Greek)</li> <li>• Alzinger W., 1976, "Aigeira", <i>AAA</i> 9, 162-165 (in Greek)</li> <li>• Kershawa S., Guob L., Bragac J., 2005, "A Holocene coral-algal reef at Mavra Litharia, Gulf of Corinth, Greece: structure, history, and applications in relative sea-level change", <i>Marine Geology</i> 215, 171-192 [<a href="http://hera.ugr.es/doi/15772135.pdf">http://hera.ugr.es/doi/15772135.pdf</a>]</li> <li>• Ladstatter G., "Aigeira" in Austrian Archaeological Institute [<a href="http://www.oelai.at/eng/ausland/aigeira.html">http://www.oelai.at/eng/ausland/aigeira.html</a>] Feb. 2004</li> <li>• Leake W.M., 1836, <i>Travels in Morea</i> 3, London</li> <li>• Papageorgiou S., Arnold M., Laborel J., Stiros S., 1993, "Seismic uplift of the harbour of ancient Aigeira, Central Greece", <i>IJNA</i> 22.3, 275-281</li> <li>• Stiros, S.C., 1998. "Archaeological Evidence for Unusually Rapid Holocene Uplift Rates in an Active Normal Faulting Terrain: Roman Harbor of Aigeira, Gulf of Corinth, Greece" <i>Geoarchaeology</i> 13.7, 731-741</li> <li>• Verdelis N., 1958, "Chronique des fouilles en 1957", <i>BCH</i>, 726</li> <li>• Walter O., 1919, "Eine archaologische Voruntersuchung in Aigeira", <i>Jahreshefte des Osterreichischen Instituts in Wien, Beiblatt</i>, 6-42</li> <li>• Micha P., 2002, "The harbour of ancient Aigeira", <i>NAVIS II</i>: <a href="http://www.rgzm.de/Navis2/Home/FramesE.cfm">http://www.rgzm.de/Navis2/Home/FramesE.cfm</a></li> <li>• Papahatzis N., 1974, <i>Pausanias. Description of Greece. Attica</i>, Ekdotike Athinon, Athens (in Greek)</li> <li>• Stiros S., 2001, "The ancient harbour at Mavra Litharia Korinthias. Construction, history and conclusions for the reasons of ancient</li> </ul>

Aigeira's decline" in Mitsopoulos V. (ed.), *Forschungen in der Peloponnes*, Ost. Arch. Institute, Athen

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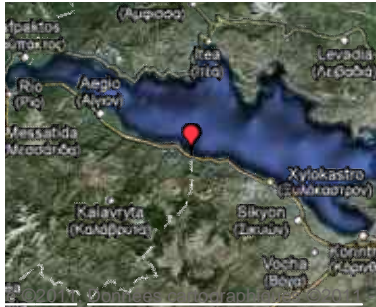
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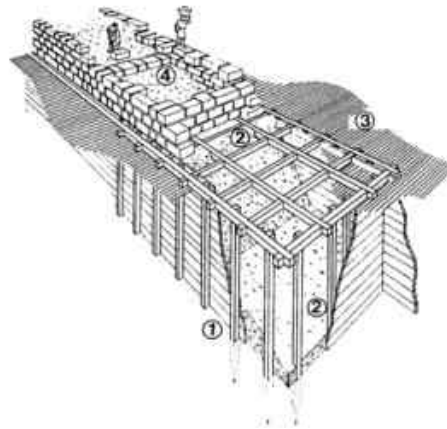
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### Aigeira



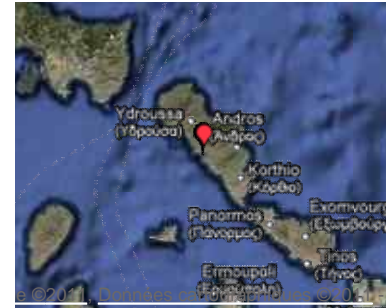
Features



## Andos - Palaeopoli

Ancient Andros city is located in the middle of the western coast of the island, where today is the village of Palaeopolis. The city was built upon the steep slopes that circulate a small plain in the neighboring bay, where remains of ancient harbour works are still visible.

The area has been inhabited since the Prehistoric times and the city/island of Andros was able to establish four colonies in Halkidiki, during the 7th century B.C. (Stageira, Akanthos, Argilos, Sani). In the classical period, the city was a member of the Athenian League, however during the Peloponnesian war it allied with Sparta only to return under Athenian influence short after. In the Hellenistic period it was under Pergamos rule.



Figures 

The city flourished during the Roman and early Byzantine periods and finally abandoned as many other settlements in the Aegean islands, around the 7th century A.D., due the Arabian Raids. The harbour remains is under investigation the last two summers (2006-2008), as part of a geological study in the framework of collaboration between Athens University and the Ephorate of Underwater Antiquities (Ministry of Culture - Greece).

However, Pseudoskylax reference to the harbour (58) certifies its existence since the Classical period (4th century B.C.). This conclusion is also supported by the harbour's shape that resembles a "limen kleistos" (enclosed harbour) in combination with the city's walls, which seem to extent until the breakwaters. Nevertheless, further investigation is required to certify whether the remains can be dated from the Classical period or that they belong to a subsequent phase.

### Main features

Region	Aegean sea
Use	Not defined
Prosperity period (centuries)	
Existence of contemporary port	No
Findings on site	Yes, the two moles.

### General description

As depicted in the satellite image of the area (Fig. 1), the port is bordered by two breakwaters. The windward breakwater with N-S axis is about 170m long and afterwards bends in right angle to the SE for another 40m. Along the beach facing the tip of the breakwater, a second construction can be seen, with an approximate length of 70m that seems to be a lee breakwater.

At the origin of the windward breakwater the archaeological research has revealed remains of ancient Roman baths. Equivalently, the excavations have brought to light in small distance remains of important buildings of the agora complex that belong to the end of the Hellenistic-beginning of the Roman period. The remains of an early Christian Basilica are also being excavated. The chronology of the buildings is indicative to the peak period of the port.

The size of the port's basin is relatively small, leading to a possible conclusion that part

of it has been filled with rubble, especially if we take in account the existence of a nearby stream that now discharges in the basin and the steep ground upon which the city has been build.

#### Technical features

Construction period (centuries)	, Undefined. Possibly in Classical period with reconstructions and repairs until 7th c. A.D.
Port configuration	Artificial Harbour, Outer Harbour
Port basin size	m <sup>2</sup>
Main wind direction	S
Port land area	km <sup>2</sup>
Port entrance	from South, possibly protected from a spur further south of the main mole.
Change of sea surface elevation	m
Sedimentation	
Outer port structures	Moles
Inner port structures	
Land facilities	
Construction method	
Neotectonic history	
Shore line displacement	Silting

#### Function and operations

The function and operation of the port cannot be determined without further investigation; it is logical however to assume that it hosted the fleet and served as a trading post for the city of Andros (importation of grain, exportation of minerals). Based upon ancient sources (Xenophon 1.4.21, Diod. Siculus VIII.69), which refer to the hosting of warships in the bay of Gavrio and the fact that a guard party was posted there, it has been supported that this bay was the main harbour of Andros island. Although such a hypothesis cannot be excluded, the remains of a "kleistos limen" in Palaeopoli cannot be irrelevant from the security of the city and the war fleet accordingly.

#### Sources

References in ancient literature	<ul style="list-style-type: none"> <li>• Herodotus, <i>Historiae</i> VIII.66,121</li> <li>• Diodorus Siculus, <i>Historical Library</i> VIII.69, XX.37</li> <li>• Xenophon, <i>Hellenica</i> I.4.21</li> <li>• Skylax <i>Periplus</i>58</li> </ul>
Related researches	Geological
Findings in museums	
Other references	<ul style="list-style-type: none"> <li>• Κοντολέων Ν., 1964, <i>Αρχαιολογική Εφημερίς</i>, Χρονικά, σσ. 1-5</li> <li>• Παλαιοκρασσά-Κόπιτσα Λ., 1994, "Το αρχαιολογικό έργο στην Παλαιόπολη Ανδρου", <i>Περιοδικό του Συλλόγου Διδακτικού Προσωπικού της Φιλοσοφικής Σχολής Ι'</i> (Πανεπιστήμιο Αθηνών), σσ. 559-563</li> <li>• Παλαιοκρασσά-Κόπιτσα Λ., 1996, <i>Παλαιόπολις Ανδρου. Τα οικοδομικά από την προανασκαφική έρευνα</i>, Αθήνα</li> <li>• Παλαιοκρασσά-Κόπιτσα Λ., 1998, "Η αρχαία πόλη της Ανδρου", <i>Ανδρος και Χαλκιδική, Πρακτικά Συμποσίου, Ανδρος 23 Αυγ. 1997, Ανδριακά Χρονικά</i> 29, σσ. 60-65</li> <li>• Παλαιοκρασσά-Κόπιτσα Λ., 2001, "Ανασκαφή Παλαιόπολης", <i>Αγκυρα</i> 1, σσ. 227-232</li> <li>• Τελεβάντου Χ., 2002, <i>Αρχαιολογικό Μουσείο Παλαιόπολης. Η Αρχαία Πόλις της Ανδρου</i>, Υπουργείο Πολιτισμού-ΚΑ' ΕΠΚΑ, Αθήνα</li> <li>• Πασχάλης Δ.Π., 1925, <i>Η Ιστορία της Νήσου Ανδρου</i>, τ. Α',</li> </ul>

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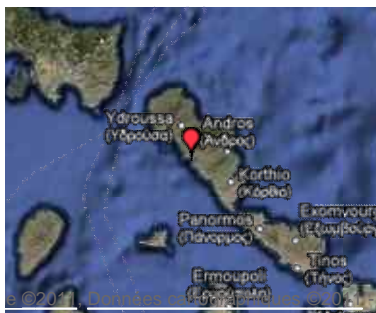
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### Andos - Palaeopoli



Features



Satellite view of the remains of the harbour at Palaeopoli (Google Earth)

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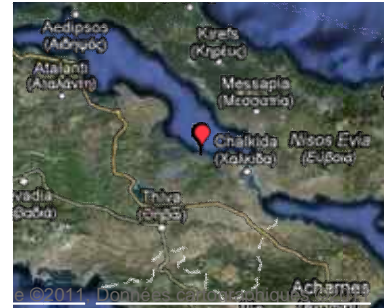
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## Anthedon

Anthedon was a small ancient city with an agora, stoa and temples, that its citizens were devoted on fishing and shipbuilding (Herakides, *Greece Description*, I.23). Nowadays it can be located near Loukisia village in NE Viotia (Euboean gulf). The area was inhabited from the Mycenaean period (16th -12th century B.C.) until the Early Byzantine period (6th century A.C.) and maybe later.

Parts of the citywalls encircling a small hill are still preserved, extended to the harbour's brakewaters at the beach. Remains of the harbour structures are visible on the sea surface and underwater.

Figures 

### Main features

Region	Euboean Gulf
Use	Commercial - Military
Prosperity period (centuries)	
Existence of contemporary port	No
Findings on site	Yes, the two brakewaters and the quay around northern, western and southern side.

### General description

Systematic study of Anthidon's harbour was conducted in 1966 by D.J. Blackman, J. Schafer and H. Schlager. The harbour had an almost circular basin (c.120-130m.), protected from north and east by two brakewaters constructed of blocks. Quays, with a total length of 370m., were surrounding the basin from north, south and west. Southern of the south quay an early Christian Basilica has been excavated (Rolfe 1890,96-107), which was possibly founded upon a preexisting ritual building.

### Technical features

Construction period (centuries)	4th A.D. - 7th A.D., 7th c. BC. but the harbour could very possibly had been in use from the Hellenic antiquity.
Port configuration	Artificial Harbour, Outer Harbour
Port basin size	15000 m <sup>2</sup>
Main wind direction	NE
Port land area	km <sup>2</sup>
Port entrance	From east, not in full protected
Change of sea surface elevation	m
Sedimentation	Yes
Outer port structures	Moles
Inner port structures	Wharves
Land facilities	Temples

Construction method	Hydraulic concrete had been used
Neotectonic history	
Shore line displacement	Silting

### Function and operations

Anthedon is located at the end of a Mycenaean road originating from Lake Kopaida area that is testified archaeologically at the south coast of Paralimni (Schlager et al. 1968, 23). Strabo (*Geogr.* IX.2.2) mentions the existence of a harbour at Anthedon, providing information from the historian Ephoros who considered that Viotia was superior to the surrounding nations because it had three seas and many good harbours, one of which was Anthedon. Diodorus Siculus (*Hist.* IE.78) also notes that at 364-363 B.C. Thebans voted for the construction of 100 triremes and the building of an equal number of shipsheds. Anthedon could not be uninvolved in such a project, either for building or mooring the triremes. Finally, the research of D.J. Blackman, J. Schafer and H. Schlager concluded that the visible remains of the harbour structures belong exclusively to one building phase, which can be dated from the Ioustinian period or/and later until the end of 7th century A.D. Combining the above information with the archaeological and philological evidence for the inhabitation of the area from the Mycenaean period to 7th century A.D., leads to the conclusion that this location was active as a harbour with or without installations already from the Mycenaean period. The remains of the Byzantine period are probably covering previous port structures on an underlying layer. Hence, the harbour of Anthedon must have been operating as a trading station for the rich mainland, while at the same time being a naval base of the Viotean and a squadron of the Byzantine fleet.

### Sources

References in ancient literature	<ul style="list-style-type: none"> <li>• Homer, <i>Iliad</i> B' 508</li> <li>• Pseudoskylax, <i>Periplus</i> 1.47</li> <li>• Herakleides, <i>Greece Description</i>, I.23</li> <li>• Plutarch, <i>Lives: Sulla</i> 26.4-9</li> <li>• Strabo, <i>Geography</i> IX.2.2, 13, 22, 26</li> <li>• Diodorus Siculus, <i>Library of History</i> IE.78</li> <li>• Pausanias, <i>Description of Greece</i> IX.22.5-6</li> <li>• Στέφανος Βυζάντιος, <i>Εθνικά: Ανθηδών</i></li> </ul>
Related researches	Archeological
Findings in museums	No
Other references	<ul style="list-style-type: none"> <li>• <b>Leake, W.M., 1835.</b> <i>Travels in Northern Greece</i>, [<a href="http://esf.niwi.knaw.nl/esf1996/leake96/html/geenfram.htm">http://esf.niwi.knaw.nl/esf1996/leake96/html/geenfram.htm</a>], Univ. Leiden Netherlands</li> <li>• Buck C.D., 1889, "Discoveries at Anthedon in 1889", <i>AJA</i> 5, pp. 443-460</li> <li>• Rolfe J.C., 1890, "Discoveries at Anthedon in 1889", <i>AJA</i> 6, 1890, pp. 96-107</li> <li>• Blackman D.J., Schafer J. &amp; H. Schlager, 1967, "Un port de la basse époque romaine en Grèce centrale", <i>Archeologie</i> 17, pp. 13-17</li> <li>• Schlager H., Blackman D.J., Schafer J., 1968, "Der Hafen von Anthedon mit Beiträgen zur Topographie und Geschichte der Stadt", <i>Archäologischer Anzeiger</i> 1, 21-98</li> <li>• Sakellariou M., 1972, "Decline of ruling cities. Mainland Greece and Aegean from 404 to 355 B.C.", <i>Historia tou Ellinikou Ethnous</i> Γ1, Ekdotike Athinon, 433-434 (in Greek)</li> <li>• Papachatzis N., 1974. <i>Description of Greece, Attica</i>, Ekdotike Athinon, 142, 435, 445 (in Greek)</li> <li>• Richard S. et al., 1976, <i>The Princeton Encyclopedia of Classical Sites</i>, Princeton University Press, Princeton, p. 59 (s.v. Anthedon)</li> <li>• Archaeological Atlas of the Aegean, [<a href="http://www.ypai.gr/atlas">www.ypai.gr/atlas</a>], Ministry of the Aegean - University of Athens</li> </ul>
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### Anthedon



Features 



Fig. 2. Plan of the harbour structures after the investigation of 1967 (Schlager et al. 1968, plan 2)

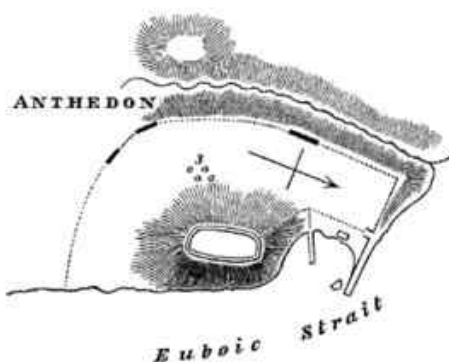


Fig. 2. The harbour plan after Leake. Beginning of 19th c. AD (<http://esf.niwi.knaw.nl/esf1996/leake96/images/p272.gif>)

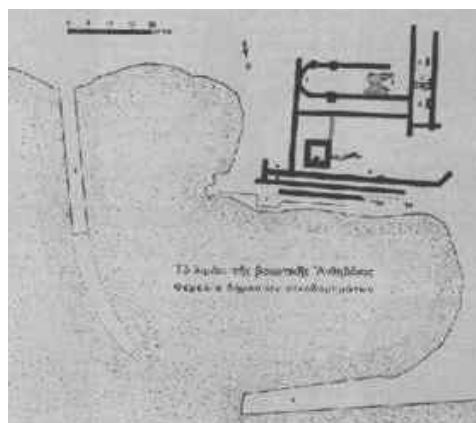


Fig. 3. Plan of the harbour of Anthedon (Rolfe 1890, 98, Fig. 16)



Fig. 4. View of the harbour of Anthedon from east (2005)

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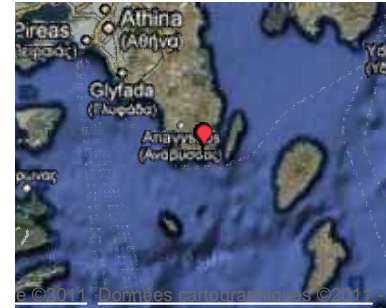
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**Attica -  
Sounion**

The archaeological research depicts the existence of organized worship of Poseidon and Athena during the 7th century B.C., while certain evidence exists for installations in the area of Cape Sounion from the Prehistoric period. At the begging of the 5th century the construction of a temple dedicated to Poseidon began, which had been later destroyed by the Persians. After the victory of the Greeks the marble temple of Poseidon was built and an equivalent of Athena. During the Peloponnesian war the cape was fortified in order to operate as an Attica fortress. Both sanctuaries at Sounion declined and were eventually abandoned by the 1st c. A.D.

Figures **Main features**

Region	Saronic Gulf
Use	Naval Base
Prosperity period (centuries)	5th B.C. - 1st A.D.
Existence of contemporary port	No
Findings on site	Yes

**General description**

From the harbour's installations only carvings and the ramps from a double ship-shed are preserved, as well as a part of a marble wall, at the south-east of Sounion gulf. The ship-shed had probably a symmetrical two-slope roof, possibly in two levels (Kenney 1947, 199). Remains of constructions, now underwater, are reported in the ship-shed area and the nearby bay (Baika 2005), however research has not yet completed for the evaluation of their use.

**Technical features**

Construction period (centuries)	5th B.C.
Port configuration	Natural Harbour
Port basin size	m <sup>2</sup>
Main wind direction	SW
Port land area	km <sup>2</sup>
Port entrance	
Change of sea surface elevation	m
Sedimentation	
Outer port structures	
Inner port structures	
Land facilities	Shipheds
Construction method	
Neotectonic history	
Shore line displacement	

**Function and operations**

The port of Sounion operated as a nautical base and an observation post watching

over the entrance of Saronic and Euboean gulf. Coincidentally it was a point for safeguarding the nearby Lavrion mines and the wheat trade routes to Athens during the Peloponnesian war as Thucydides mentions (Hist. 8.4). Thus the construction of the ship-shed is explained.

The port mentioned by Pausanias (Attica I.1), must be identified as the small bay west of the cape. Trade ships could have been dragged on the sandy beach and served by improvised port constructions that left no traces, although some submerged remains in the bay could belong to regular port installations (fig. 3; see Papahatzis 1974, 89 and Baika 2005)

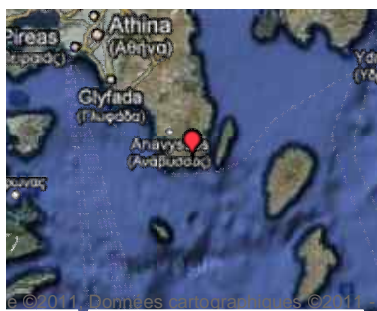
#### Sources

References in ancient literature	<ul style="list-style-type: none"> <li>• Cicero, <i>Epistulae ad Atticum</i> 7.3.10</li> <li>• Dittenberger W. (ed.), 1913, <i>Inscriptiones Graecae</i>, (2nd ed.), Berlin, 1170, 1180</li> <li>• Livy, <i>Ab Urbe Condita</i> 28.8.11, 32.17</li> <li>• Herodotous, <i>Histories</i> 6.87-90, 8.121</li> <li>• Thucydites, <i>History of the Peloponnesian War</i> 8.4</li> <li>• Xenophon, <i>Hellenica</i> 5.1.23</li> <li>• Homer, <i>Odyssey</i> 3.278-283</li> <li>• Pausanias, <i>Description of Greece. Attica</i> I.1</li> <li>• Strabo, <i>Geography</i> 390, 398</li> </ul>
Related researches	Archeological
Findings in museums	Yes
Other references	<ul style="list-style-type: none"> <li>• Baika K., 2005, "Sounion shipsheds reconsidered" in Tzalas H. <i>Tropis IX</i>, Athens (in press)</li> <li>• Blackman D.J., 1968, "The ship-sheds" in Morrison J. - Williams R., <i>Greek oared ships 900-322 BC.</i>, Cambridge, 184-192</li> <li>• Dismoor W.B., 1971, <i>Sounion</i>, Athens</li> <li>• Kenny A.E.J., 1947, "The ancient docks on the promontory of Sounion", <i>BSA42</i>, London, 194-200</li> <li>• Mussche H.F., 1964, "Note sur les fortification de Sounion", <i>BCH</i> 88, Paris, pp. 423-432,</li> <li>• Davaras K., 1974, <i>Sounion. Archaeological guide</i>, Ministry of Culture - TAP, Athens, 20-21 (in Greek)</li> <li>• Oiconomides A., 1955, <i>Sounion</i>, Athens (in Greek)</li> <li>• Papahatzis N., 1974, <i>Pausanias. Description of Greece. Attica</i>, Ekdotike Athinon, Athens, 78-90 (in Greek)</li> <li>• Staes V., 1900, "Sounion excavations", <i>AE</i>, Athens, 113-150</li> <li>• Staes V., 1917, "Excavations at Sounion", <i>AE</i>, Athens, 168-213</li> </ul>
Protection regime	
Author	Theotokis Theodoulou
Editor	Theotokis Theodoulou





**Attica - Sounion**



Features 



Fig. 1. Map of Cape Sounion with the ancient remains (Papahatzis, 1974, )



Fig. 2. Representation of the structures of the walled site of Sounion. Among them the ship-shed (Papahatzis 1974, 90)



Fig. 3. Representation of harbour structures at the beach of



Sounion bay  
(Papahatzis 1974, 89)

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Fig. 4. View of cape Sounion with the temple of Poseidon,  
from west  
(<http://lilt.ilstu.edu/DRJCLASSICS/sites/sounion/0088.htm>)

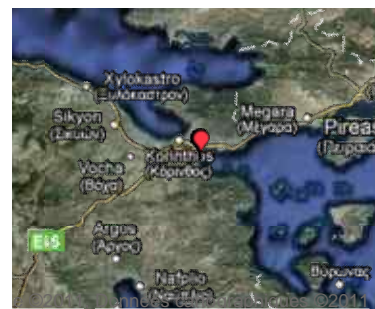


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**WOWCREATIVEPROJECTS**

## Corinth - Kechreae



Figures 

### Main features

Region	Saronic Gulf
Use	Commercial
Prosperity period (centuries)	1st A.D. - 6th A.D.
Existence of contemporary port	Yes
Findings on site	Yes

### General description

### Technical features

Construction period (centuries)	1st A.D. - 6th A.D.
Port configuration	Outer Harbour, Artificial Harbour
Port basin size	30000 m <sup>2</sup>
Main wind direction	NW
Port land area	km <sup>2</sup>
Port entrance	
Change of sea surface elevation	2 m
Sedimentation	Yes
Outer port structures	Moles
Inner port structures	Quays, Wharves
Land facilities	Lighthouses, Store Buildings, Shops, Temples, Stoes
Construction method	
Neotectonic history	Sink
Shore line displacement	Silting

### Function and operations

### Sources

References in ancient literature	
Related researches	Archeological
Findings in museums	Yes
Other references	
Protection regime	

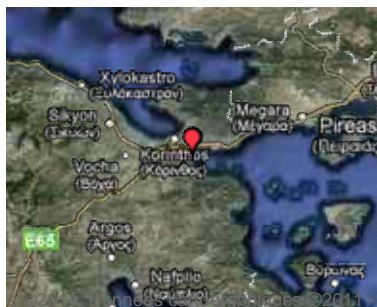
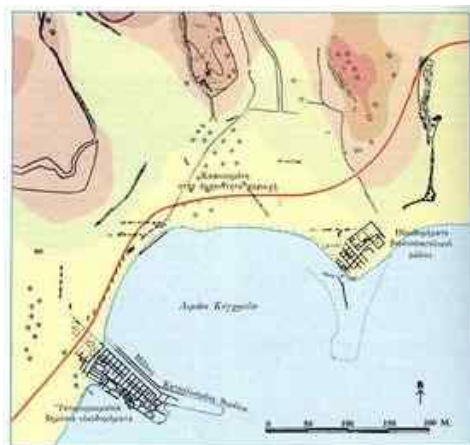

**Corinth - Kechreae**Features 

Fig. 1. Plan of the area of the harbour with the located harbour installations



Fig. 2. Plan of the south mole with the remains of the stores, the fish tanks and the sanctuaries (Παναχατζής 1974, 46, εικ. 28)



Fig. 3. View of the Early Cristian basilida at the south mole (Παναχατζής 1974, 49, εικ. 33)





Fig. 4. View of the buildings of the Aphrodite sanctuary and the tower at the area of the north mole (Παναχατζής 1974, 49, εικ. 34)

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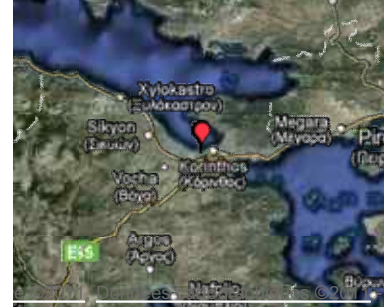
## Corinth - Lechaeon

Lechaeon was the western harbour of Corinth while Kenchreea was the eastern one. The two harbours were serving the navigation of the fertile Corinthian plateau and the wider area of Peloponnesus to the western Mediterranean and central Greece, as well as the Aegean Sea respectively. During the Classical times, the area of the Lechaeon harbour and the city of Corinth were connected with long walls, which are recorded in written sources and they have been partly excavated.

The first harbour works are attributed to the tyrant of Corinth Periandros. Furthermore, the relics of the harbour, the written testimony and the pottery scattered around the area testify formations dating possibly from the Hellenistic period and definitely from the Roman times.

The inner, dug out basins of Lechaeon consist the earliest example of the "cothon" type harbour in the Aegean and the one of the only two such examples in the same area, along with the one of Phalassarna.

The harbour was in use from the early 6th c. B.C. to at least the 6th c. A.D. During the middle of the 6th c. A.D. the basilica of Martyr Leonidis, which had been built near the western basin, was destroyed by an earthquake. After that, the "suburb" of the harbour was quite likely decline; although that does not necessary confirm the complete final abandonment of the harbour infrastructure.



Figures 

### Main features

Region	Corinthian Gulf
Use	Not defined
Prosperity period (centuries)	6th B.C. - 6th A.D.
Existence of contemporary port	No
Findings on site	Yes, moles, wharves, basins, canals, possibly piers

### General description

Two moles are located at the beach, north of the inner basins. Their northern ends are still visible at the surface of the sea. They are constructed with headers bind together with clamps, as it is evident from the relevant cuttings. The formation also of the western mole's end suggests the existence of a tower or a lighthouse on it. The area between the two moles, which was perhaps communicating with the inner west basin with a second channel, is considered as a "pro-limen" by some researchers (Georgiades 1907, Paris 1915). An aerial view of 1960 (Theodoulou 2002) proves the existence of the so called "pro-limen" but not the channel. East of the two moles, a row of un-worked medium size stones is visible underwater. It could have been constructed there in order to prevent the main entrance channel or the "pro-limen" from silting or even as a border of a second "pro-limen" basin (Georgiades 1907, Paris 1915). At the broader area of the harbour relics of walls can be identified as remains of the city walls, ship-sheds, temples, villas etc that are referred in the written sources, or even as other buildings necessary for the harbour's operation. Eastern of the entrance channel some conglomerated formations are considered as remains of Roman caissons. The main remnants of the Lechaeon

harbour consist of three or four inner dugout basins, which were formed where a marsh once was situated. The sand and pebbles of the prime and the following dredging of the harbour formed two hills, which hid the harbour from north. Among the two hills a channel at the northeastern of the basins was leading to the sea. Both its sides were constructed by ashlar. Another channel was also connecting the western with the eastern basins. In several areas of the banks, remains of rows of headers of a not defined construction are noticed (quays?). At the northern side of the eastern basin, on a certain area of the structure, projecting perpendicular pillars can be found, probably used for mooring or berthing. Such a construction, situated at the southern side of the same basin, could be not its limit to the south, but a pier between this and another basin further south. In the western basin, there is a rectangular construction of ashlar, possibly a base for a statue or a lighthouse (?).

#### Technical features

Construction period (centuries)	6th B.C. - 4th A.D., The first harbour configurations are dated probably to 6th c. BC. Based on pottery and located remains it seems that more harbour works took place around 45 AD. Finally some more repairs can be dated to the period around 335 AD after epigraphic witnesses.
Port configuration	Artificial Harbour, Inner Harbour, Outer Harbour
Port basin size	1500 m <sup>2</sup>
Main wind direction	NE
Port land area	km <sup>2</sup>
Port entrance	A channel at the northeast leading to the eastern inner basin. Possibly a second channel leading from the pro-limen to the inner western basin
Change of sea surface elevation	0.7 m
Sedimentation	Yes
Outer port structures	Moles, Breakwaters
Inner port structures	Quays, Piers, Canals, Basins
Land facilities	Temples, Defence Structures, Lighthouses, Other
Construction method	Ashlars and possibly caissons
Neotectonic history	Lift
Shore line displacement	Silting

#### Function and operations

The harbour of Lechaeon transacted the expansion of the Corinthian colonies to the west during the Archaic period and was used as the most important port for the navigation towards Central Greece, the Ionian Sea and Italy during its operation period, from the Archaic to Byzantine times. Furthermore, the existence of ship sheds at the harbour is witnessed in the ancient sources (Xenophon). Thus, it is also certain that at least a part of the continent of the Corinthian fleet dealing with the west was housed in one of the harbour's protected basins.

#### Sources

References in ancient literature	<ul style="list-style-type: none"> <li>• Thucydides, <i>History of the Pelonesian War</i> I.XIII.2</li> <li>• Diodorus Siculus, <i>Historical Library</i> XIV, 86, 2-4</li> <li>• Xenophon, <i>Hellenica</i> IV.4.7-13,</li> <li>• Plutarch, <i>Moralia</i> 2</li> <li>• Strabo, <i>Geography</i> VIII.20</li> <li>• Pausanias, <i>Description of Greece</i> II.2.3</li> <li>• Polybius, <i>The Histories</i> V.18.9, 24.12, 25.5, 26.16, 28.4</li> </ul>
Related researches	
Findings in	No

## museums

- Babbit F.C., 1928, *Plutarch's Moralia. The Dinner of the seven Seven Wise Men*, LOEB Classical Library, London, William Heinemann Ltd, New York, G.P. Putnam's Sons
- Blegen, C.W., 1921, *Korakou, a prehistoric settlement near Corinth*, Boston-New York, ASCS
- Bon A., 1932, "The Medieval Fortifications of Acrocorinth and Vicinity", *Corinth*, Cambridge, Mass, v. III, pt. II
- Brownson C.L., 1947, *Xenophon Hellenica*, LOEB Classical Library, Cambridge-Massachusetts, Harvard University Press
- Bursian C., 1862-72, *Geography von Griechenland*, Leipzig, B.G. Teubner, v. II
- Flemming N.C. - Czartoryska N.M.G. - Hunter P.M., 1973, "Eustatic and Tectonic Components of Relative Sea Level Change", pp. 4-5 in Blackman D.(ed.), 1973, *Marine Archaeology: Proceedings of the Twenty Third Symposium of the Colston Research Society*, held in the University of Bristol, April 4th to 8th, 1971 (Colston Papers 23), Londres, 4-5
- Fowler H.N., 1932, "Corinth and the Corinthia" *Corinth, Introduction - Topography - Architecture*, Cambridge, Mass, v. I, pp. 95-96
- Geer M.R., 1954, *Diodorus of Sicily*, LOEB Classical Library, Cambridge-Massachusetts, Harvard University Press
- Georgiades A. S., 1907, *Les Ports de la Grece dans l' Antiquite qui Subsistent Encore Aujoyrd' Hui*, Athenes
- Jones H.L., 1961, *The Geography of Strabo*, LOEB Classical Library, Cambridge-Massachusetts, Harvard University Press,
- Kent J.H., 1966, *Corinth. The Inscriptions 1926-1950*, v. VIII pt. II, Princeton, ASCS, 164, pl. 42
- Leake W.M., 1830, *Travels in the Morea*, London, John Murray
- Lehman-Hardleben K., 1923, "Die Antiken Hafenanlagen des Mittelmeeres", *Klio*, Beiheft XIV, Leipzig, Dieterich'sche Verlagsbuchandlung, 148-152
- Marchant E.C., 1946, *Xenophon Agesilaus*, LOEB Classical Library, Cambridge-Massachusetts, Harvard University Press
- Mazarakis-Ainian P., 1992, *Les Structures Portuaires en Grece Antique*, Memoire presente en vue de l'obtention du titre de Licencie, Universite Libre de Bruxelles, Faculte de Philosophie et Lettres, Histoire de l'Art et Archeologie, v. II, 50-54
- Paris J., 1915, "Contributions a l' Edute des Ports Antiques du Monde Grec", *Bullentin de Correspondance Hellenic* 39 (1915), 5-16
- Parsons A.W., 1932, "The Long Walls to the Culf", *Corinth* v. III, pt. II, Cambridge, Mass, 84-125
- Rothaus R., 1995, "Lechaeon, western port of Corinth", *Oxford Journal of Arcaeology* 14 (1995), Blackwell Publishers, Oxford, pp. 293-306
- Shaw J.W., 1969, "A Foundation in the Inner Harbor at Lechaem" in *American Journal of Archaeology* 73, Boston, Archaeological Institute of America, 370-372
- Smith C.F., 1956, *Thucydides, History of the Peloponnesian War*, LOEB Classical Library, London-Cambridge-Massachusetts, Harvard University Press
- Spon J.- Wheler G., 1678, *Voyage d' Italie de Dalmatie, de Grece et de Levant; fait aux annees 1675 et 1676 par Jacob Spon et George Wheler*, Lyon, A. Cellier
- Stiros, S. et.al., 1998. " On the date of construction of Lechaion, western harbor of ancient Corinth, Greece", *Geoarchaeology* 11.3 , 251 - 263
- Tavernier J.B., 1680-82, *Les six voyages de Jean-Babtiste Tavernier qu' il a fait en Turqie, en Perse, et aux Indes, pentant l' espace de quarante ans*, Paris, G. Clouzier
- Theodoulou T. 2002, "Lechaeon; the west port of Corinth", [<http://www.rgzm.de/navis2/home/FramesGR.cfm>]
- Williams C.K., 1993, "Roman Corinth as a commercial center", *The Corinthia in the Roman Period*, (Gregory T.E, (ed) JRA Supplement 8), pp.31-36
- Θεοδούλου Θ. 2002, "Λέχαιο, το δυτικό τεχνητό λιμάνι της αρχαίας Κορίνθου", *Ενάλια* VI, Αθήνα, ΙΕΝΑΕ, σσ. 83-99+
- Πάλλας Ι. Δ. 1961, "Ανασκαφή βασιλικής εν Λεχαιώ", *Πρακτικά Αρχαιολογικής Εταιρείας* 1956, Αθήναι, 164-178

## Other references

- Πάλλας Ι. Δ. 1962, "Ανασκαφή της Βασιλικής του Λεχαιού", *Πρακτικά Αρχαιολογικής Εταιρείας* 1957, Αθήναι, 95-104
- Πάλλας Ι. Δ. 1965 (α), "Ανασκαφή της Παλιοχριστιανικής Βασιλικής του Λεχαιού", *Πρακτικά Αρχαιολογικής Εταιρείας* 1958, Αθήναι, 119-134
- Πάλλας Ι. Δ., 1963, "Ανασκαφαί Λεχαιού", *Αρχαιολογικόν Δελτίον* 17 (1961/2): Χρονικά, Αθήναι, 69-78
- Πάλλας Ι. Δ., 1965 (β), "Ανασκαφή Βασιλικής Λεχαιού", *Πρακτικά Αρχαιολογικής Εταιρείας* 1959, Αθήναι, 126-140
- Πάλλας Ι. Δ., 1967
- Πάλλας Ι. Δ., 1969, "Αγρός Α. Τίντηρη - Π. Γεωργίου εν αρχαίω Λεχαιώ", *Αρχαιολογικόν Δελτίον* 23 (1968): Χρονικά, τ. Β1, Αθήναι, 200-202
- Παπαχατζής Ν., 1976, *Παυσανίου Ελλάδος Περιήγησις - Κορινθιακά-Λακωνικά*, Αθήνα, Εκδοτική Αθηνών, σσ. 42-22
- Σκιάς Α.Ν., 1895, "Ανασκαφαί εν Κορίνθω", *Πρακτικά Αρχαιολογικής Εταιρείας* 1892, Αθήναι, 111-136
- Σκιάς Α.Ν., 1907, "Ανασκαφή εν Κορίνθω", *Πρακτικά Αρχαιολογικής Εταιρείας* 1906, Αθήναι, 145-166
- Στίκας Ε., 1962, "Ανασκαφικαί έρευναι εν Λεχαιώ", *Πρακτικά Αρχαιολογικής Εταιρείας* 1957, Αθήναι, 89-94
- Φιλαδελφεύς Α., 1921, "Αρχαία έπαυλις μετά Νυμφαίου εν Λεχαιώ της Κορινθίας", *Αρχαιολογικόν Δελτίον* 4 (1918), Αθήναι, 125-135
- "Ανασκαφικαί έρευναι εν Λεχαιώ", *Πρακτικά Αρχαιολογικής Εταιρείας* 1965, Αθήναι, 136-166

Protection  
regime

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Editor Theotokis Theodoulou





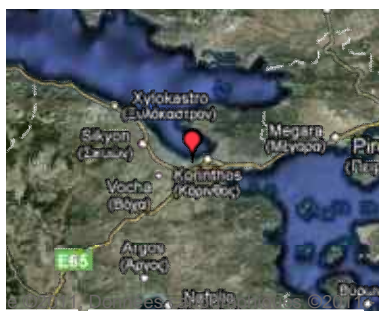
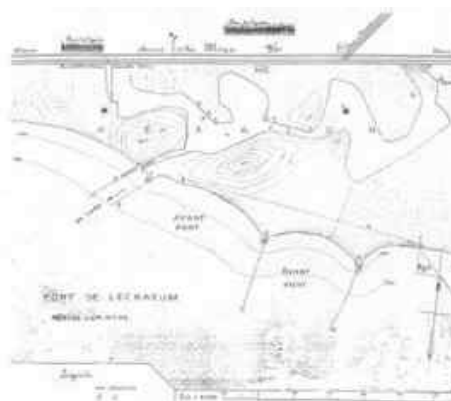
**Corinth - Lechaeon**Features 

Fig. 1 The port of Lechaeon in 1907 after Georgiades (1907, pl. I)

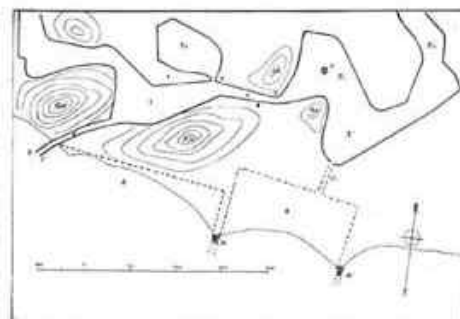


Fig. 2 The port of Lechaeon after Paris (1915, fig. 1)



Fig. 3 Aerial view of Lechaeon in 1960. A corner is evident at the extension of the western mole (Theodoulou 2002, fig. 3)



Fig. 4 Map of the harbour area with the visible remains  
(Theodoulou 2002, fig. 11)



Fig. 5 Map of the broader harbour area and the observations  
of Skias (1907, fig. 1)



Fig. 6 View of the channel guiding to the sea from the inner  
eastern basin. Ashlar blocks are visible determining the  
eastern side of it (Theodoulou 2002, fig. 8)





Fig. 7 View of the build up southern bank of the eastern basin, possibly a pier if the low land further was one more basin of the inner harbour (Theodoulou 2002, fig. 7)

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Fig. 8 View of the build southern bank of the eastern basin (Theodoulou 2002, fig. 6)

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Fig. 9 Vertical blocks at the build up northern bank of the eastern basin, possibly pollards for ships berthing (Theodoulou 2002, fig. 5)

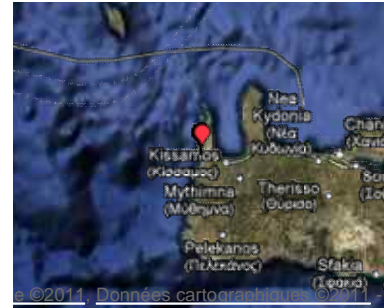
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Fig. 10 View of the technical islet in the western inner basin, probably a base for a statue of a lighthouse. (Theodoulou 2002, fig.10)

## Crete - Phalasarna

The ancient city of Phalasarna is located in the middle of the west coast of Crete, at the tip of the Gramvousa cape. Pottery from the surrounding area proves that the city was already inhabited in the Middle Minoan period, while its development is depicted by the Archaic and Classical tombs discovered in the nearby area. The city was at its peak between the middle of the 4th century B.C. and the middle of the 1st century B.C. During this period a "limen kleistos" (walled harbour) was constructed, coins were issued and naval trade and warfare was developed, exploiting the city's strategic position in-between the Aegean - Egypt and Western - Eastern Mediterranean sea crossroads. The Romans destroyed the city in 67 B.C., most probably because of its turning to piracy. Relics of houses, temples and quarries have been located around the harbour area. Today the port is found inland due to tectonic action in the Crete region. Excavation is taking place by the Ephorate of Underwater Antiquities.



Figures 

### Main features

Region	Crete
Use	Commercial - Military
Prosperity period (centuries)	4th B.C. - 1st B.C.
Existence of contemporary port	No, the harbour is inland today
Findings on site	Yes, the two basins, remains of defending walls and towers, a quay furnished with mooring stones and the two canals

### General description

The harbour of Phalasarna was established in an existing basin, which was dredged and reshaped. Access to the open sea was achieved by building a canal from the port to the sea that was also functioning as a drainage work. This canal was most probably walled and sealed by a chain, in order to create the "limen kleistos", as mentioned in Skylax (47). A second canal, which intersected the first one, discharged further north and was built probably for preventing siltation in the port.

The main basin, 75x100m wide, was enclosed by walls and protected with at least four fortification towers. In the inner side of the walls quays equipped with mooring stones were built. A stone stepladder was also discovered.

In the middle of 2nd century B.C. a second port basin was created northern than the first one. Its entrance was built from the remainders of a fortification tower. A small canal (50x50cm.) allowed water circulation. The existing walls-quays were used for mooring.

### Technical features

Construction period (centuries)	4th B.C., The harbour was constructed around 335 B.C. By the middle of 2nd c. B.C. the second basin was formed
Port configuration	Artificial Harbour, Inner Harbour
Port basin size	7500 m <sup>2</sup>
Main wind direction	S



Port land area	km <sup>2</sup>
Port entrance	The entrance to the harbour was made via an artificial canal, 100m long, which was formed through the marsh and the rocky beach, at the south of the basin.
Change of sea surface elevation	-6.6 m
Sedimentation	Yes
Outer port structures	
Inner port structures	Basins, Canals, Wharves
Land facilities	Temples, Defence Structures
Construction method	Carved stones
Neotectonic history	Lift
Shore line displacement	Silting

### Function and operations

Phalasarna bay seems to be active since Middle Minoan period as a naval station, in the form of a natural protected basin communicating with the sea. Around the middle of 4th century B.C. works took place in the basin and the entrance, so the city of Phalasarna acquired a modern internal closed harbour that determined its peak, being an important naval trading and warfare center.

Sea level rose about 20cm until the 2nd century B.C. and the port's functionality was affected, forcing builders to intervene and elevate the surrounding construction levels. After the 2nd century B.C. the port was used as a pirate hideout, which drew the Romans attention and led to its destruction. Boulders found in the canal prove that the entrance was deliberately blocked, while stone bullets located in the basin are evidence of hostilities. Total annihilation occurred during the 4th century A.D., probably in 365 A.D., when the whole area rose by about 6.6m due to a severe earthquake. The city and the port were buried irreversibly by tectonic action.

### Sources

References in ancient literature Skylax, Polybius, Pliny, Dionisius Kallipolites, Stadiasmus

Related researches Archeological, Geological, Seismicals

Findings in museums No

- Dominey-Howes D.T.M., Dawson A.G. and Smith D.E., 1998 "Late Holocene coastal tectonics at Falasarna, western Crete: a sedimentary study", *Geological Society of London Special Publication* 146 , pp. 341-350
- Flemming N.C., Czartoryska N.M.G. and Hunter P.M., 1973, "Archaeological evidence for eustatic and tectonic components of relative sea level change in the south Aegean" in Blackman D.J. (Ed), *Marine archaeology, Butterworths*, London, pp. 1-16
- Frost F.J., 1989, "The last days of Phalasarna", *Ancient History Bulletin* 3, pp. 15-17
- Frost F.J., 1997, "Tectonics and History at Phalasarna", in Swiny S., Hohlfelder, R.L., Swiny, H.W., (eds.) 1997, *Res Maritimae: Cyprus and the Eastern Mediterranean from Prehistory to late Antiquity*, Scholars Press Atlanta, pp. 107-115
- Frost F.J., Hadjidaki E., 1990, "Excavations at the Harbor of Phalasarna in Crete: The 1988 Season", *Hesperia* 59.3, pp. 513-527
- Hadjidaki E., 1988, "Preliminary Report of Excavation at the Harbour of Phalasarna in West Crete" *American Journal of Archaeology* 92, pp. 463-79
- Χατζηδάκη Ε., 1993, "Εφορεία Εναλίων Αρχαιοτήτων. Φαλάσαρνα", *Αρχαιολογικό Δελτίο* 48, σσ. 588-591

- Hadjidaki E., 1996, "The Hellenistic Harbour of Phalasarna in Western Crete: A Comparison with the Hellenistic Inner Harbour of Sraton's Tower" In Raban A. - Holum K.G. (eds.), *Caesarea Maritima: Retrospective after two millennia*, pp. 53-64
- Hadjidaki E., 2001, "The Roman Destruction of Phalasarna" *BAR international series* 940, pp. 155-66
- Hadjidaki E., Iniotakis H., 2000, "Hellenistic Ceramics from Phalasarna found from 1986-1990" *Ancient World* 31.1 (2000), pp. 54-73
- Hadjidaki, E., 2004. "Ancient Greek Harbours on Crete", *Τρίτο Πανελλήνιο Συνέδριο Λιμενικών Έργων, Εργαστήριο Λιμενικών Έργων*, Ε.Μ.Π., Αθήνα
- Papamarinopoulos S. - Stamou T., 1988, "Geophysical studies on West Crete and a detection of a harbour inland at Phalasarna" in Marinos P., G. Koukis (eds) *The engineering geology of ancient works, monuments and historical sites*, Greek National Group of IAEG, Athens, pp.1079-1084
- Pirazzoli H.A. et. al. 1992, "Historical Environmental Changes at Phalasarna Harbour, West Crete" in Swiny, S., Hohlfelder, R.L., Swiny, H.W., (eds.) 1997, *Res Maritimae: Cyprus and the Eastern Mediterranean from Prehistory to late Antiquity*, Scholars Press Atlanta, pp. 371-92
- Stiros, S.C. & S. Papageorgiou, 2001, "Seismicity of Western Crete and the destruction of the town of Kisamos at AD 365: Archaeological evidence", *Journal of Seismology* 5, pp.381-397
- Καμαριανάκης Τ., "Η Φαλάσαρνα και το κλειστό λιμάνι της, στη δυτική Κρήτη", [<http://www.rgzm.de/Navis2/Home/FramesE.cfm>], 27-2-06
- Χατζηδάκη Ε. - Στεφανάκης Μ., 2004, "Μυστικά της Φαλασσαρνας", *Κρητικό Πανόραμα*, εκδ. Μινώα, Αθήνα, σσ. 101-135

Other  
references

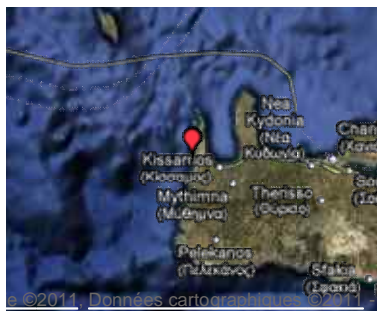
Protection  
regime

Author Theotokis Theodoulou

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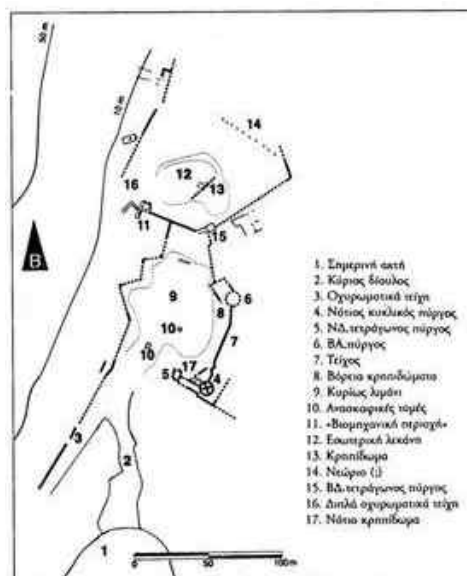
**Crete - Phalasarna**



Features 



Fig. 1. Map of west Crete showing Phalasarna (<http://www.ypai.gr/atlas/thesi.asp?idthesis=491>)



1. Σημερινή ακτή
2. Κύριος δόκιος
3. Οχυρωματικά τείχη
4. Νότιος κυκλικός πύργος
5. ΝΔ. τετράγωνος πύργος
6. ΒΔ. πύργος
7. Τείχος
8. Βόρεια κρηπίδα
9. Κύριος λαβή
10. Αποκαθαρτικός πύργος
11. «Βιομηχανική συσκευή»
12. Εσωτερικά λείψανα
13. Κρηπίδα
14. Ντύσο (il)
15. ΒΔ. τετράγωνος πύργος
16. Διπλά οχυρωματικά τείχη
17. Νότιο κρηπίδα

Fig. 2. Plan of the harbour (Chadjidaki 1993, 590, Pl. 2)





Fig. 3. Defensive circular tower of the harbour  
(<http://www.ypai.gr/atlas/thesi.asp?idthesis=491>)

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Fig. 4. Part of quay under excavation. A binding hole is visible on an ashlar, as well as a mooring stone at the far end on the section of the excavation trench (Chadjidaki 1993, Pl. 169)

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Fig. 5. Part of quay with binding holes and mooring stones  
(Hadjidaki-Stefanakis 2004, σ. 115)

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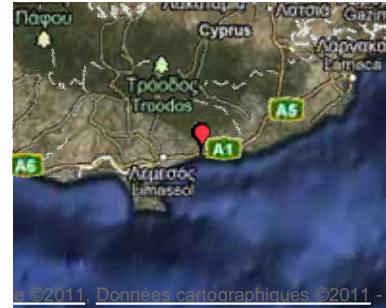
Fig. 6. Quay with mooring stones  
(Chadjidaki - Stefanakis 2004, p.118)



Fig. 7. General view of the harbour's basins from the acropolis  
(Hadjidaki-Stefanakis 2004, σ. 110)

## Cyprus - Amathus

The city of Amathus is located in the northern coast of Cyprus, 10 klm. east of the city of Limassol, in an area with intense urban and touristic development. The area around was the territory of the homonymous classical kingdom. A walled hill that overlooks the whole area, hosted the ancient administration center, a temple of Aphrodite and habitations. The city was moved to the northeast of the hill after Hellenistic times. To the south a small silted natural gulf, was probably the first city's port. At the end of 4th century B.C. a closed harbour, which is now totally submerged, was built at its southern side. Human presence in the area is testified by archaeological findings from the 11th century B.C. Native Cyprian populations took refuge in the kingdom of Amathus after the island's conversion to Greek civilization in the 12th century B.C. The city reached its peak during the Iron Age, being a stop post on the seaway connecting the Aegean with Egypt, Syria and Palestine through Cyprus. The discovery of imported goods from these destinations provides evidence to these affairs. The city was razed and finally abandoned in the 7th century A.C. as a result of Arabian raids.



Figures 

### Main features

Region	Cyprus
Use	Military
Prosperity period (centuries)	4th B.C. - 3rd B.C.
Existence of contemporary port	No
Findings on site	Yes

### General description

The remains of the ancient port of Amathus are today visible underwater. Three moles form a closed quadrilateral harbour basin. The entrance, about 20 meters wide, is located in the northeastern corner of the eastern side. The northern mole is 130 meters long, while the eastern and western are both 100 meters long. The city walls extend on the moles, creating a "limen kleistos" - enclosed harbour. The piers were built using eight layers of plinths, seven of which are preserved. The blocks were used in the facets while the internal space was filled with rocks and rubble. Protective stones were placed to the external side. Tenons can be seen in the two small sides of the plinths, which were obviously used for lifting and placing them with a crane. The preceding natural gulf in the northern side of the basin was obviously included to the new harbour's plan.

### Technical features

Construction period (centuries)	4th B.C. - 3rd B.C.
Port configuration	Artificial Harbour, Outer Harbour
Port basin size	13000 m <sup>2</sup>

Main wind direction	S
Port land area	km <sup>2</sup>
Port entrance	
Change of sea surface elevation	1 m
Sedimentation	
Outer port structures	Moles
Inner port structures	Basins, Wharves
Land facilities	Defence Structures
Construction method	
Neotectonic history	Sink
Shore line displacement	Silting

### Function and operations

The ancient "closed" harbour of Amathus was built at the end of the 4th century possibly for supporting the warfare of Demetrios Poliorketes or Ptolemy Soter and it was abandoned, maybe even before its completion, when Ptolemy Soter reseeded Cyprus at 294 B.C.

The naval trade and the war fleet of Amathus were stationed until then in the natural gulf north of the Hellenistic closed port. The basin of this natural port, which is today located under the old national road of Limassol - Nicosia, has been investigated with electromagnetic methods by the French Archaeological School of Athens that excavated the outer harbour from 1984 to 1986.

### Sources

References in ancient literature	<ul style="list-style-type: none"> <li>• Skylax <i>Periplus</i> 77.103</li> <li>• Strabo <i>Geography</i> XIV.6.3</li> <li>• <i>Stadiasmus</i> 297-317</li> </ul>
Related researches	Archeological, Geological
Findings in museums	No
Other references	<ul style="list-style-type: none"> <li>• Aupert P., 1996, <i>Guide d'Amathonte</i>, De Boccard, Paris</li> <li>• Aupert P., 1980, "Amathonte. Rapport Preliminaire (1975-1979)", <i>Report of the Department of Antiquities of Cyprus</i>, Nicosia, 217-231</li> <li>• Empereur J.-Y., 1985, "Le Port d'Amathonte", <i>Bulletin de Correspondance Hellenique</i> 109, 984-989</li> <li>• Empereur J.-Y., C.Verlinden, 1986, "Le Port d'Amathonte", <i>Bulletin de Correspondance Hellenique</i> 110, 899-907</li> <li>• Empereur J.-Y., C.Verlinden, 1986, "The Underwater Excavation at the Ancient Port of Amathus in Cyprus", <i>The International Journal of Nautical Archaeology</i> 15.4, 1-13</li> <li>• Empereur J.-Y., C.Verlinden, 1986, "Le Port Antique d' Amathonte ? Chypre", <i>Archeologia</i> 215, 32-37</li> <li>• Empereur J.-Y., C.Verlinden, 1987, "The Underwater Excavation at the Ancient Port of Amathus in Cyprus", <i>The International Journal of Nautical Archaeology</i> 16.1, 7-18</li> <li>• Empereur J.-Y., C.Verlinden, 1987, "Le Port d' Amathonte", <i>Bulletin de Correspondance Hellenique</i> 111, 755-759</li> <li>• Empereur J.-Y., 1995, "Le Port Hellenistique d' Amathonte" in V. Karageorgis- D. Michaelides (eds), <i>Proceedings of the International Symposium: Cyprus and the Sea</i>, University of Cyprus-Cyprus Ports Authority, Nicosia, 131-138</li> <li>• Maragou A., 1997, <i>The ports of Cyprus</i>, Cultural Center of Popoular Bank, Nicosia, 224-228 (in Greek)</li> <li>• Aupert P. (ed), <i>Amathonte</i> VI, "Le Port d' Amathonte", Ecole Francaise d' Athen</li> </ul>

- Aupert P., 1979 "Rapport sur les Travaux de la Mission de l' Ecole Francaise a Amathonte en 1978. Les Activite sur le Terrain. Le Port d' Amathonte" *Bullentin de Correspondance Hellenique* 103, 725-728
- Aupert P. (ed), 1999, *Οδηγός Αμαθούντας*, Πολιτιστικό Ίδρυμα Τράπεζας Κύπρου, Λευκωσία
- Raban A., 1995, "The heritage of ancient harbour engineering in Cyprus and the Levant" in V. Karageorgis- D. Michaelides (eds), *Proceedings of the International Symposium Cyprus and the Sea*, University of Cyprus-Cyprus Ports Authority, Nicosia, 158-161
- Nicolaou K., 1966, "Ancient ports in Cyprus", *Deltion Tmimatos Politistikis Anaptyxeos, Ministry of Education of Cyprus* 6-7 (1966), Nicosia, 96-97 (in Greek)
- Theodoulou T., 2002, "The port of the kingdom of Amathus" [<http://www2.rgzm.de/navis2/home/FramesGR.cfm>]
- "Mission archeologique d'Amathonte Chypre - Amathonte : le port" [[http://www.diplomatie.gouv.fr/fr/actions-france\\_830/archeologie\\_1058/les-carnets-archeologie\\_5064/orient-ancien\\_5067/chypre-amathonte\\_5505/resultats-port\\_15671.html](http://www.diplomatie.gouv.fr/fr/actions-france_830/archeologie_1058/les-carnets-archeologie_5064/orient-ancien_5067/chypre-amathonte_5505/resultats-port_15671.html)]

Protection  
regime

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Editor Theotokis Theodoulou





## Cyprus - Amathus

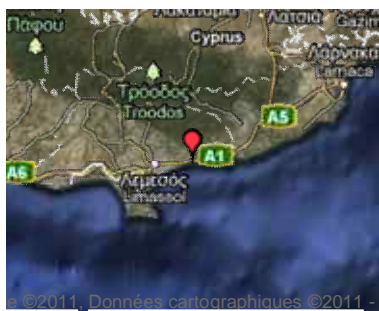
Features 

Fig. 1. Amathus. The acropolis and the submerged structures of the Hellenistic harbour  
(Aupert P. (ed), Οδηγός Αμαθούνας, Πολιτιστικό Ίδρυμα Τράπεζας Κύπρου, Λευκωσία, 1999, εξώφυλλο)

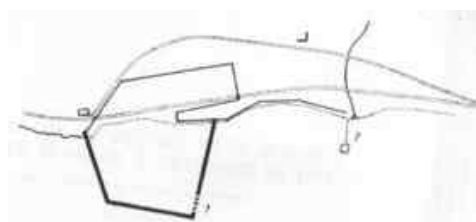


Fig. 2. Hypothetical plan of both the internal and external harbour according to the electromagnetic survey  
(Aupert P. (ed), 1979, "Rapport sur les Travaux de la Mission de l' Ecole Francaise a Amathonte en 1978. Les Activite sur le Terrain. Le Port d' Amathonte" Bullentin de Correspondance Hellenique 103 (1979), 728, fig. 1bis)

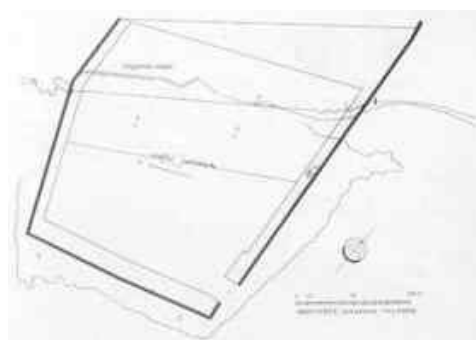


Fig. 3. General plan of the external Hellenistic harbour  
(Aupert P. (ed), Οδηγός Αμαθούνας, Πολιτιστικό Ίδρυμα Τράπεζας Κύπρου, Λευκωσία, 1999, 94, Σχ. 18)

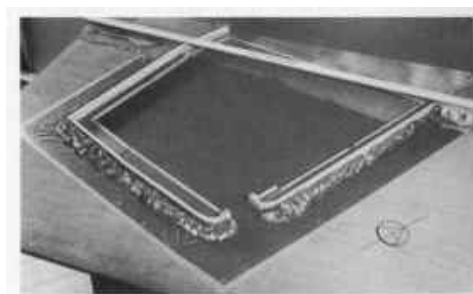
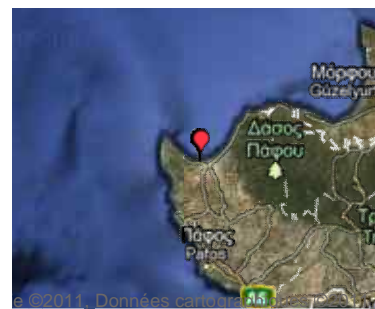


Fig. 4. Model of the external Hellenistic harbour  
(Aupert P. (ed), Οδηγός Αμαθούνας, Πολιτιστικό Ίδρυμα  
Τράπεζας Κύπρου, Λευκωσία, 1999, 95, εικ. 37)



## Cyprus - Marion



Figures 

### Main features

Region	Cyprus
Use	Not defined
Prosperity period (centuries)	4th B.C. - 3rd B.C.
Existence of contemporary port	Yes
Findings on site	Yes

### General description

#### Technical features

Construction period (centuries)	4th B.C. - 3rd B.C.
Port configuration	Outer Harbour, Artificial Harbour
Port basin size	m <sup>2</sup>
Main wind direction	NE
Port land area	km <sup>2</sup>
Port entrance	
Change of sea surface elevation	1.5 m
Sedimentation	Yes
Outer port structures	Moles
Inner port structures	Unknown
Land facilities	Unknown
Construction method	
Neotectonic history	Unknown
Shore line displacement	Unknown

### Function and operations

#### Sources

References in ancient literature	
Related researches	None
Findings in museums	No, -
Other references	
Protection regime	



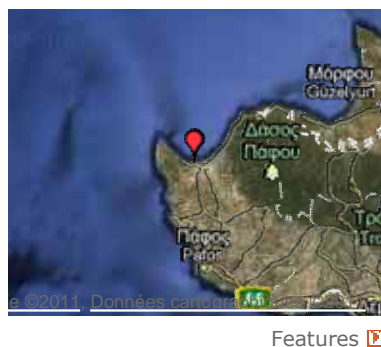
**Cyprus - Marion**

Fig. 1 General view of Cyprus. In the rectangle the area of the ancient kingdom of Marion



Fig. 2 View of the harbour at Latchi. Parallel to the modern western mole there are evident the remains of the ancient mole structure.

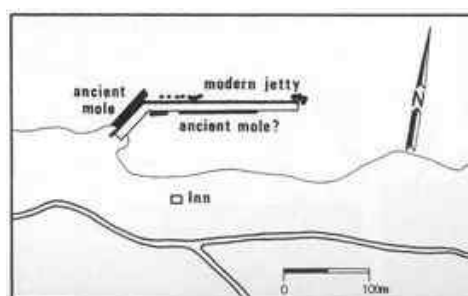


Fig. 3 Plan of the harbour remains at Latchi in 1971, after A. Raban (1995, 164, fig. 38)



Fig. 4 View of the blocks at the western mole in 1971  
(Raban1995, 164, fig. 37)

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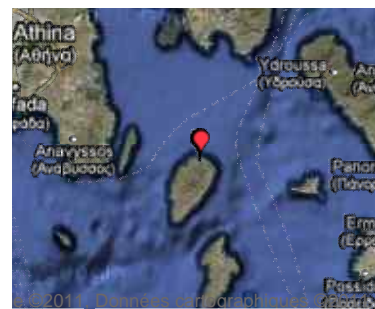


Fig. 5 View of the blocks at the western mole in 2003, before  
modern reinforcement covered them at all (Theodoulou 1995)

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## Kea - Otzias bay



Figures 

### Main features

Region	Aegean sea
Use	Loading Pier
Prosperity period (centuries)	
Existence of contemporary port	No
Findings on site	Yes, Quay

### General description

#### Technical features

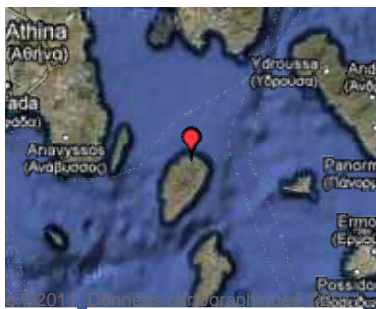
Construction period (centuries)	4th B.C.
Port configuration	Artificial Harbour, Outer Harbour
Port basin size	m <sup>2</sup>
Main wind direction	NW
Port land area	km <sup>2</sup>
Port entrance	-
Change of sea surface elevation	2.4 m
Sedimentation	No
Outer port structures	
Inner port structures	Wharves
Land facilities	
Construction method	
Neotectonic history	
Shore line displacement	

### Function and operations

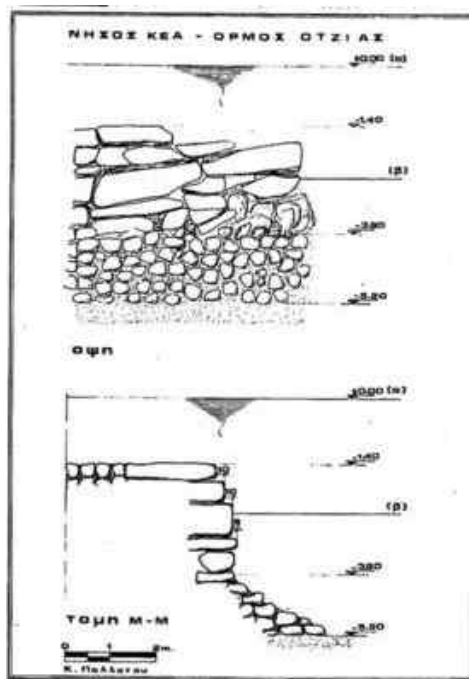
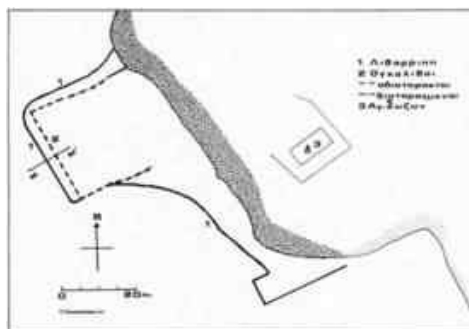
#### Sources

References in ancient literature	-
Related researches	Archeological
Findings in museums	No
Other references	
Protection regime	

### Kea - Otzias bay



Features 





## Kythnos - Madraki bay



Figures 

### Main features

Region	Aegean sea
Use	Not defined
Prosperity period (centuries)	
Existence of contemporary port	Yes
Findings on site	Yes

### General description

### Technical features

Construction period (centuries)	
Port configuration	Artificial Harbour, Outer Harbour
Port basin size	m <sup>2</sup>
Main wind direction	SW
Port land area	km <sup>2</sup>
Port entrance	
Change of sea surface elevation	m
Sedimentation	No
Outer port structures	Moles
Inner port structures	Unknown
Land facilities	Unknown
Construction method	
Neotectonic history	Unknown
Shore line displacement	Unknown

### Function and operations

### Sources

References in ancient literature	
Related researches	Archeological
Findings in museums	Yes
Other references	
Protection regime	



## Kythnos - Madraki bay



Features 



Fig. 1 The temple after the excavation season of 2006.  
Vriokastro islet at the far end  
(<http://www.ha.uth.gr/resources/downloads/kythnos2006.pdf>).



Fig. 2 General view of the Mandraki bay ([www.culture.gr](http://www.culture.gr)).



Fig. 3 View of the wall at the northern side of the the harbour  
([www.culture.gr](http://www.culture.gr))





## Lemnos - Ag. Sotiras



### Main features

Region	Aegean sea
Use	Not defined
Prosperity period (centuries)	
Existence of contemporary port	Yes
Findings on site	Yes

### General description

### Technical features

Construction period (centuries)	
Port configuration	Artificial Harbour, Outer Harbour
Port basin size	m <sup>2</sup>
Main wind direction	
Port land area	km <sup>2</sup>
Port entrance	
Change of sea surface elevation	m
Sedimentation	Yes
Outer port structures	Moles
Inner port structures	
Land facilities	Unknown
Construction method	
Neotectonic history	Unknown
Shore line displacement	Silting

### Function and operations

### Sources

References in ancient literature	
Related researches	None
Findings in museums	No
Other references	
Protection regime	
Author	Theotokis Theodoulou

## Lemnos - Hefaistia



### Main features

Region	Aegean sea
Use	Not defined
Prosperity period (centuries)	
Existence of contemporary port	No
Findings on site	Yes

### General description

### Technical features

Construction period (centuries)	
Port configuration	Artificial Harbour, Outer Harbour
Port basin size	m <sup>2</sup>
Main wind direction	NE
Port land area	km <sup>2</sup>
Port entrance	
Change of sea surface elevation	m
Sedimentation	Yes
Outer port structures	Breakwaters
Inner port structures	
Land facilities	Unknown
Construction method	
Neotectonic history	Unknown
Shore line displacement	Silting

### Function and operations

### Sources

References in ancient literature	
Related researches	None
Findings in museums	
Other references	
Protection regime	
Author	Theotokis Theodoulou

## Lemnos - Neftina



### Main features

Region	Aegean sea
Use	Not defined
Prosperity period (centuries)	
Existence of contemporary port	Yes
Findings on site	Yes

### General description

### Technical features

Construction period (centuries)	
Port configuration	Outer Harbour, Artificial Harbour
Port basin size	m <sup>2</sup>
Main wind direction	
Port land area	km <sup>2</sup>
Port entrance	
Change of sea surface elevation	m
Sedimentation	Yes
Outer port structures	Moles
Inner port structures	Unknown
Land facilities	
Construction method	
Neotectonic history	Unknown
Shore line displacement	Silting

### Function and operations

#### Sources

References in ancient literature	
Related researches	None
Findings in museums	
Other references	
Protection regime	
Author	Theotokis Theodoulou

## Lemnos - Thanos bay Stvi)



### Main features

Region	Aegean sea
Use	Not defined
Prosperity period (centuries)	
Existence of contemporary port	No
Findings on site	Yes

### General description

### Technical features

Construction period (centuries)	
Port configuration	
Port basin size	m <sup>2</sup>
Main wind direction	
Port land area	km <sup>2</sup>
Port entrance	
Change of sea surface elevation	m
Sedimentation	Yes
Outer port structures	
Inner port structures	
Land facilities	
Construction method	
Neotectonic history	
Shore line displacement	

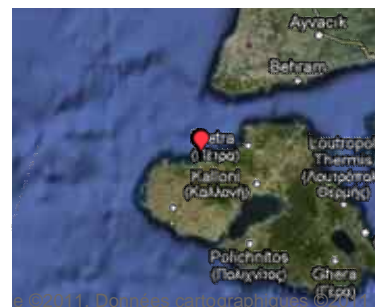
### Function and operations

### Sources

References in ancient literature	
Related researches	None
Findings in museums	No
Other references	
Protection regime	
Author	Theotokis Theodoulou

[\\_MAP](#)[\\_HARBOURS](#)[\\_BACKGROUND](#)[\\_CONTACT](#)

## Lesvos - Antissa



### Main features

Region	Aegean sea
Use	Not defined
Prosperity period (centuries)	4th B.C. - 2nd B.C.
Existence of contemporary port	No
Findings on site	Yes

### General description

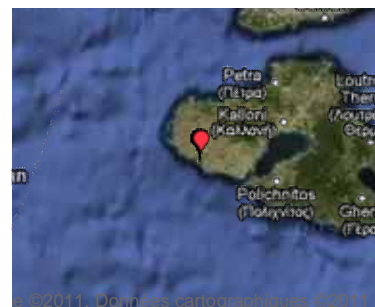
### Technical features

Construction period (centuries)	4th B.C.
Port configuration	Artificial Harbour, Outer Harbour
Port basin size	m <sup>2</sup>
Main wind direction	
Port land area	km <sup>2</sup>
Port entrance	
Change of sea surface elevation	1.5 m
Sedimentation	Yes
Outer port structures	Moles
Inner port structures	Basins
Land facilities	Unknown
Construction method	
Neotectonic history	Unknown
Shore line displacement	Silting

### Function and operations

### Sources

References in ancient literature	
Related researches	Archeological
Findings in museums	No
Other references	
Protection regime	
Author	Yiannis Kourtzellis

**Lesvos -  
Eressos****Main features**

Region	Aegean sea
Use	Not defined
Prosperity period (centuries)	4th B.C. - 7th A.D.
Existence of contemporary port	Yes
Findings on site	Yes

**General description****Technical features**

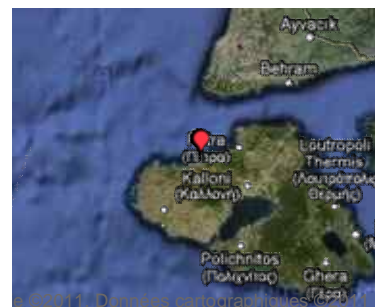
Construction period (centuries)	4th B.C.
Port configuration	Artificial Harbour, Outer Harbour
Port basin size	m <sup>2</sup>
Main wind direction	
Port land area	km <sup>2</sup>
Port entrance	
Change of sea surface elevation	1.5 m
Sedimentation	Yes
Outer port structures	Moles
Inner port structures	Unknown
Land facilities	Unknown
Construction method	
Neotectonic history	Unknown
Shore line displacement	Silting

**Function and operations****Sources**

References in ancient literature	
Related researches	
Findings in museums	No
Other references	
Protection regime	
Author	Yiannis Kourtzellis

[\\_MAP](#)[\\_HARBOURS](#)[\\_BACKGROUND](#)[\\_CONTACT](#)

## Lesvos - Kalo Limani



### Main features

Region	Aegean sea
Use	Not defined
Prosperity period (centuries)	
Existence of contemporary port	Yes
Findings on site	Yes

### General description

### Technical features

Construction period (centuries)	
Port configuration	Artificial Harbour, Outer Harbour
Port basin size	m <sup>2</sup>
Main wind direction	
Port land area	km <sup>2</sup>
Port entrance	
Change of sea surface elevation	1.5 m
Sedimentation	Yes
Outer port structures	Breakwaters
Inner port structures	Basins
Land facilities	
Construction method	
Neotectonic history	Unknown
Shore line displacement	Silting

### Function and operations

### Sources

References in ancient literature	
Related researches	Archeological
Findings in museums	No
Other references	
Protection regime	
Author	Yiannis Kourtzellis



## Lesvos - Mytilini (N. harbour)



Figures 

Region	Aegean sea
Use	Commercial
Prosperity period (centuries)	4th B.C. - 7th A.D.
Existence of contemporary port	No
Findings on site	Yes

### Main features

### General description

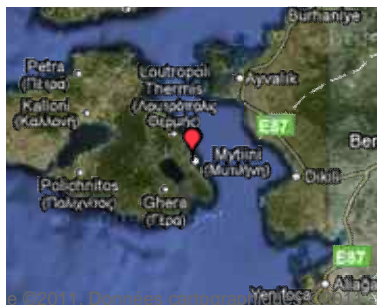

Construction period (centuries)	4th B.C.
Port configuration	Artificial Harbour, Outer Harbour
Port basin size	20 m <sup>2</sup>
Main wind direction	NE
Port land area	km <sup>2</sup>
Port entrance	
Change of sea surface elevation	m
Sedimentation	
Outer port structures	Breakwaters
Inner port structures	Basins, Canals
Land facilities	Stoes, Defence Structures, Lighthouses
Construction method	
Neotectonic history	Unknown
Shore line displacement	Silting

### Technical features

### Function and operations

#### Sources

References in ancient literature	
Related researches	None
Findings in museums	No
Other references	
Protection regime	

**Lesvos - Mytilini (N. harbour)**Features 

Satellite view of the harbours of Mytilini (Google Earth)

The castle of Mytilini with the eastern ancient breakwater  
(Paraskevaides 2002)Lighthouse at the end of the eastern breakwater on a gravure  
of the 18th century (Paraskevaides 2002)



View of the remains of the northern breakwater at the area of Kalamaris (Paraskevaides 2002)

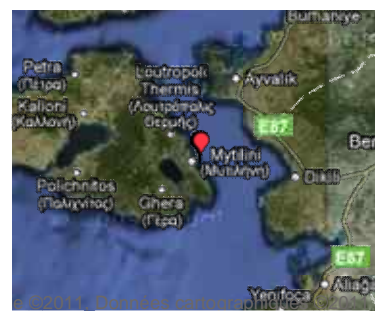
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General view of the northern harbour. A third breakwater (former?) is visible at the inner side of the eastern one (Google Earth)



## Lesvos - Mytilini (South harbour)



Figures 

### Main features

Region	Aegean sea
Use	Military
Prosperity period (centuries)	4th B.C. - 7th A.D.
Existence of contemporary port	Yes
Findings on site	Yes

### General description

#### Technical features

Construction period (centuries)	4th B.C.
Port configuration	Artificial Harbour, Outer Harbour
Port basin size	m <sup>2</sup>
Main wind direction	S
Port land area	km <sup>2</sup>
Port entrance	
Change of sea surface elevation	m
Sedimentation	
Outer port structures	Breakwaters
Inner port structures	Canals, Basins
Land facilities	Defence Structures
Construction method	
Neotectonic history	
Shore line displacement	Unknown

### Function and operations

#### Sources

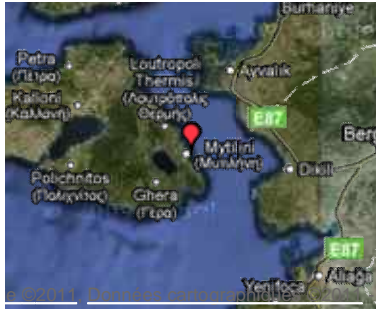
References in ancient literature	
Related researches	None
Findings in museums	No
Other references	
Protection regime	



[\\_MAP](#)   [\\_HARBOURS](#)   [\\_BACKGROUND](#)   [\\_CONTACT](#)



**Lesvos - Mytilini (South harbour)**



Features



Satellite view of the harbours of Mytilini (Google Earth)



Satellite view of the south harbour of Mytilini (Google Earth)



View of the breakwater Fanari and Christougenon street, at the same location of the ancient s/w breakwater of the south harbour basin



[\\_MAP](#)[\\_HARBOURS](#)[\\_BACKGROUND](#)[\\_CONTACT](#)

## Lesvos - Pyrra



### Main features

Region	Aegean sea
Use	Not defined
Prosperity period (centuries)	4th B.C. - 2nd B.C.
Existence of contemporary port	Yes
Findings on site	Yes

### General description

#### Technical features

Construction period (centuries)	4th B.C.
Port configuration	Artificial Harbour, Outer Harbour
Port basin size	m <sup>2</sup>
Main wind direction	
Port land area	km <sup>2</sup>
Port entrance	
Change of sea surface elevation	m
Sedimentation	Yes
Outer port structures	Breakwaters
Inner port structures	No
Land facilities	Shipheds
Construction method	
Neotectonic history	Sink
Shore line displacement	Silting

### Function and operations

#### Sources

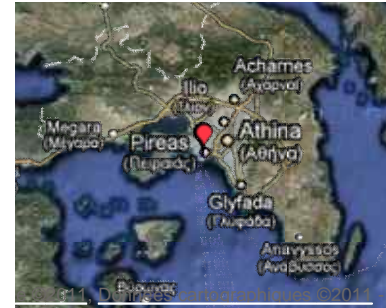
References in ancient literature	
Related researches	None
Findings in museums	No
Other references	
Protection regime	
Author	Yiannis Kourtzellis



## Piraeus - Kantharos

Kantharos is the larger of the three natural gulfs of Piraeus peninsula (the other two being Zea and Mounichia) in the South Athenian coast and it was used by Athenians as their main trading port. The formation and operation of Kantharos gulf as a harbour played an important role in the peak of the city that led to the Athenian hegemony.

Visible remains of the ancient establishments are minimal, although testimonies for their existence found in ancient literature as well as evidence brought up by recent research provide a clear image of the harbour installations and the surroundings in antiquity.



Figures 

### Main features

Region	Saronic Gulf
Use	Commercial - Military
Prosperity period (centuries)	5th B.C. - 4th B.C.
Existence of contemporary port	Yes
Findings on site	No, harbourworks until 19th c. but now covered under modern constructions

### General description

"Megas Limin" or "Kantharos", a name derived most probably from the basin's shape that resembled the homonymous vessel, is located in the Northwest of the Piraeus peninsula. It was the "εμπόριον" (= the merchant harbour) of Piraeus although the existence of ship sheds near the port's entrance, at the Southeast, indicates a partial use for military purposes.

North of the ship sheds area was the main dock, separated by a "διάζευγμα" (=pier).

The indicative stones ("όρος") that have been found determine the area of the "νορθημεία" (=the mooring sites) for the merchant and passenger vessels on both sides of the pier. In the northeastern cove a pier has been traced, probably related with the "μακρά στοά" (long arcade) that was located there. Four more stoaes were located in the eastern part of the port's basin, among which the most important is mentioned as "deigma" (sample's exhibition).

The northwestern bay was a shallow swampy area, considered as the "κωφός λιμνήν" mentioned in the written sources. At the entrance of this area what is mentioned, as "δια μέσου χώμα" (=earth in between) must be sought. The fortified promontory of Hiaetionia was closing the northwestern side of the basin (Imag. 1, 2).

### Technical features

Construction period (centuries)	5th B.C. - 4th B.C.
Port configuration	Natural Harbour, Inner Harbour
Port basin size	m <sup>2</sup>
Main wind direction	SW
Port land area	km <sup>2</sup>
Port entrance	At the SE, 50m. wide, safed probably with a chain (Papachatzis 1974, 98), among two rectangular towers of the city wall (Spon 1676, 234).
Change of sea surface elevation	1.5 m



Sedimentation	No
Outer port structures	Moles
Inner port structures	Quays, Piers
Land facilities	Shipheds, Temples, Store Buildings, Stoes, Defence Structures, Lighthouses
Construction method	Ashlars of sand stone. Several quarryies have been located in Hiaetionia promontory and Piraeus penisnsula.
Neotectonic history	
Shore line displacement	

### Function and operations

Fishermen and farmers inhabited the Piraeus peninsula until the dawn of the 5th century B.C. In the meantime Phaliro gulf was used as Athens harbour. Piraeus was extensively domiciled and the ports were constructed and walled after Themistokles urge, when he was elected as the "archon eponymous" in 493-492 B.C. Until the middle of the 5th century B.C. the entire Piraeus peninsula was fortified and connected to Athens with the so called "μακρά τείχη" (=long walls). At the same time the city of Piraeus kept growing.

The importance of Piraeus ports is directly related to the development of the Athenian state, so Kantharos became the prominent trading port of the Mediterranean during the 5th century B.C. The crucial character of Kantharos for Athens is depicted by the integrated program for urban development (hypodamian system), the fortification works for which Athens spent tremendous wealth (Isocrates mentions 1000 ingots for ship sheds building) and the governors and economical officers appointed to the port to sustain its impeccable function that are mentioned in the written sources.

The ports of Piraeus among which Kantharos is included paid host to the Athenian war fleet, which allowed the development of the Athenian democracy and hegemony. Simultaneously, trade fleets accompanied by war vessels ensured a constant supply of imports like grain and row materials and the export of the Athenian products like pottery, oil, honey, etc.

### Sources

- Αιλιανός, *Ποικίλη Ιστορία* 2. 13
- Αππιανός, *Λιβικά* 96, *Μιθριδάτειος* 30, 40, 41
- Αριστοτέλης, *Πολιτικά*, II 8, *Αθ. Πολιτεία*, 19, 37, 38, 54, 24, 46, 49, 61
- Αριστοφάνης, *Ιππείς* 815, *Ειρήνη* 145
- Βιτρούβιος 7. 152. 12
- Δείναρχος, *Κατά Φιλοκλέους* 1, 13, *Κατά Δημοσθένους* παρ. 17
- Δημοσθένης 34. 37, 19. 60, 19. 125
- Διογένης Λαέρτιος, 6. 1
- Διόδωρος Σικελιώτης, 11. 41, 12. 49, 14. 33, 14. 85, 18. 64, 18. 68, 20. 45
- Δίων Χρυσόστομος, 6. 87, 25. 4
- Ηρόδοτος, 6. 116, 8. 76, 77, 107, 92. 5, 93
- Θεόφραστος, *Χαρακτήρες* 23
- Θουκυδίδης, 1. 93, 93. 3, 107, 2. 13, 13. 8, 93, 94, 7. 11, 12. 4, 8. 90
- Ισοκράτης, *Αεροπογειτικός* 66, *Περί Αντιδόσεως* 307
- Καλλιμάχος *Ύμνος εις την Αρτεμιν*, 259
- Λυκούργος, *Κατά Λεωκράτους* παρ. 11
- Ξενοφών *Ελληνικά*, 4. 10, 2, 2. 4, 4. 31, 4. 11, *Ανάβασις* 7, 1. 27
- Πausanias, I. 1. 2, 1. 1. 3, 1. 4, 2, 3, 25. 5 8. 10. 4
- Πλάτων, *Γοργίας* 455
- Πλίνιος, *NH.* 38. 1, 7. 37. 125
- Πλούταρχος, *Θεμιστοκλής*, 32, 19. , *Δημήτριος* 8, *Κίμων* 13, *Σύλλας* 14
- Πολύαινος, *Στρατηγικά* I 40. 3
- Στράβων, 9. 1, 1. 15, 2, 395, I. 3

References in ancient literature

Related researches Archeological

Findings in

museums

Yes

- Alten G., 1881, "Die Befestigungen der Hafenstadt Athens" Erlautender Text Heft I, Berlin, pp. 10-15
- Blackman D. J., 1968, "The ship-sheds", in J. S. Morrison & R. T. Williams, *Greek oared ships*, Cambridge, pp. 181-192
- Blackman D. J., 1973, "Evidence of sea level change in ancient harbours and coastal installations" in *Marine Archaeology, Symposium of Colston Research Society*, pp. 115-139
- Blackman D. J., 1982, "Ancient Harbours in the Mediterranean", *IJNA* 11. 2, pp. 79-104 and 11. 3, pp. 185-221.
- Blackman D. J., 1987, "Triremes and shipsheds", *Tropis II*, Athens (1990), pp. 35-52
- Blackman D. J., 1996, "New evidence for ancient ship dimensions" *Tropis IV*, Athens (1996), pp. 113-125
- Bradford J., 1957, *Ancient Landscapes*, London
- Casson L., 1971, *Ships and seamanship in the ancient world*, Princeton
- Casson L., 1974, *Travel in the ancient world*, London
- Casson L., 1991, *The ancient mariners, seafarers and sea fighters of the Mediterranean in ancient times*, New Jersey (1st edition, Oxford 1959)
- Curtius E. - Kaupert J. A., 1881, *Karten von Attika*, ErlautenderText, Heft I, Der Peiraeus von A. Milchofer, Berlin
- Day J., 1927, "The Kophos Limen of the Piraeus", *A.J.A.* 31, pp. 441-449
- Dodwell E., 1819, *A classical and topographical tour through Greece during the years 1801-1805 and 1806*, London
- Eickstedt K.-V. von, 1991, *Beitrage zur topographie des Antikes Piraeus*, Athenes
- Foucart P., 1887, "Les fortifications du Piree en 394-393", *B.C.H.* 11, pp. 129-144.
- Frost H., 1972, "Ancient harbours and anchorages in the eastern Mediterranean", in *UNESCO* 1972, pp. 95-114
- Frost H., 1987, "Where did they build Ancient Warships" in *Tropis II. Proceedings of the 2nd International Symposium on ship construction in antiquity, Delphi 1987*, Athens (1990), pp. 181-185

Other references

- Hoepfner W. - Schandrnner E., 1994, *Haus und Stadt im Klassischen Griechenland*, Neubearbeitung, Munchen, pp. 22-50
- Garland R., 1987, *The Piraeus, from the fifth to the first century B.C.*, Ithaca N.Y.
- Georgiades A. S., 1907, *Les ports de la Grece dans l' Antiquite, qui subsistent encore aujourd'hui*, Athenes
- Goodchild R.G., 1956, "Harbours, docks and lighthouses", in Ch. Singer & al., *A history of technology*, Oxford, v. II, pp. 516-524
- Judeich W., 1905, "Topographie von Athen" in Mommers Handb. d. Klass. *Alturtumswissenschaft* III 2/2/1905, pp. 375-403
- Judeich W., Judeich W., 1905, *Topograph von Athen*, (III, 2, 2), Munchen
- Mazarakis Ainian Ph., 1992, *Les Structures Portuaires en Grece Antique*. Memoire presente en vue de l' obtention du titre de Licencie, Univ. Libre de Bruxelles
- Milshoefer A., 1881, "Der Peiraeus", in Curtius E. & Kaupert J.A., 1881, pp. 23-71
- Negris P., 1904, "Vestiges antiques submerges", *Ath. Mitt.* 29, pp. 340-363
- Noack F., 1908, "Bemerkungen zu den Piraeusmauern", *Ath. Mitt.* 33, pp. 33-38
- Spon, 1676, *Voyage d'Italie, de Dalmatie, de Grece et du Levant*, v. II
- Steinhauer G., 1996, "La decouverte de l'arsenal de Philon", in *Tropis IV*, Athens, pp. 471-480
- Touchais G., 1979, "Chronique des fouilles en 1978" : Le Piree, *B.C.H.* 103, p. 541
- Travlos I., 1988, *Bildlexikon zur Topographie des antiken Attika* Αγγελόπουλος Η., 1898, *Περί Πειραιώς και των λιμένων αυτού κατά τους αρχαίους χρόνους*, Αθήνα
- Αλεξανδρή Ο., 1973/74, "Πειραιεύς", *Α.Δ.* 29B, σσ. 99, 144 & 151
- Δραγάσης Ι. Χ. - Αγγελόπουλος Η. , 1899, "Περί των εν Πειραιεί ανασκαφών", *Π.Α.Ε.* 1899, σσ. 37-41

- Δραγάσης Ι. Χ. , 1885, "Εκθεσης των εν Πειραιεί ανασκαφών", *Π.Α.Ε.*, σσ. 63-68
- Δραγάσης Ι. Χ. , 1885β, "Πειραιϊκές αρχαιότητες", *Α.Ε.*, σσ. 85-92
- Λιάνγκουρας Α. , 1967, "Πειραιεύς", *Α.Δ.* 22Β, σσ. 142-143
- Ματζαρόγλου Π., 1977, *Πειραιϊκό Λεύκωμα*, Αθήνα *Ναυτικόν Μουσείον της Ελλάδος*, Οδηγός Μουσείου, Πειραιάς 1984
- Ορλάνδος Α.Κ.- Τραυλός Ι.Ν., 1986, *Λεξικόν Αρχαίων Αρχιτεκτονικῶν ὄρων*, Αθήνα
- Πανάγος Χ.Θ., 1968, *Ο Πειραιεύς, Οικονομική και ιστορική έρευνα από των αρχαιοτάτων χρόνων μέχρι του τέλους της ρωμαϊκής αυτοκρατορίας*, Αθήνα (2η έκδοση με νεώτερα στοιχεία για την τοπογραφία και την οικονομική ζωή του Πειραιά από τον Έφορο Αρχαιοτήτων Γ. Σταϊνχάουερ, Αθήνα 1995)
- Παπαχατζής Ν., 1974, *Παυσανίου Ελλάδος Περιήγησις*, том. Ι, Αττικά, Αθήνα
- *Παρνασσός*, 1880, "Αρχαιολογικά ευρήματα του Πειραιώς", Αθήνα
- *Παρνασσός*, 1881, "Πειραιώς αρχαιολογήματα", том. V τευχ. 12, Αθήνα, σ. 1054
- Σοφού Ε.Ν., 1973, "Χάρτης του Πειραιώς συνταχθείς 1687 υπό των ενετών" *Α.Ε.*, σσ. 246-58, πιν. 112-113
- Σταϊνχάουερ Γ.Α., 1995, "Τοπογραφία του Πειραιά. Νεώτερες αρχαιολογικές ανακαλύψεις" στο Πανάγος Χ.Θ. 1968
- Σταϊνχάουερ Γ.Α., 1998, *Τα μνημεία και το αρχαιολογικό μουσείο του Πειραιά*, Τουμπής, Αθήνα
- Σταϊνχάουερ Γ.Α., 2000, "Αρχαίος Πειραιάς: Η πόλη του Θεμιστοκλή και του Ιππόδαμου" στο Σταϊνχάουερ Γ. Α. - Μαλικουτη Μ. Γ. - Τσοκόπουλος Β., *Πειραιάς, Κέντρο Ναυτιλίας και Πολιτισμού*, Αθήνα, σσ. 9-123
- Τραυλός Ι.Ν. ,1972, "Πειραιεύς" *Εγκυκλοπαίδεια Δομή*, σσ. 442-456

Protection regime

Author Theotokis Theodoulou

Editor Theotokis Theodoulou



**Piraeus - Kantharos**Features 

Fig. 1. Plan of the ancient city of Piraeus  
(Papachatzis 1974, 100-101)



Fig. 2. Representation of the ancient city of Piraeus  
Representation  
(Papachatzis 1974, 104)



Fig. 3. Graphic representation of the Emporion at the  
Kantharos basin in the 5th c. B.C.  
(Panagos 1968, 198)



Fig. 4. Plan of Cantharus harbour, indicating the sites of the naval base, the Emporion, the lay out of the porticos and the fortifications around the basin (Steinhauer 2000, 89)



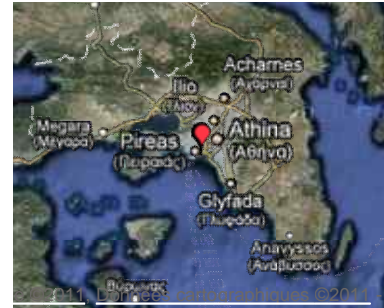
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**WOW**CREATIVEPROJECTS

## Piraeus - Mounichia

The harbour of Mounichia is located in the eastern side of the Piraeus peninsula. It is the smallest of its three natural gulfs. In the overlooking hill (Profitis Hlias) traces of prehistoric inhabitation have been established. The history of the area follows that of the Piraeus peninsula after the 5th century B.C. So it was fortified and transformed to a naval base. However the protective walls were destroyed at the end of the 5th century B.C. and the harbour was re-included in the Konon's program of fortifications thus acquiring the character of an enclosed basin "λιμὴν κλειστός" (Panagos 1968, 245, Papachatzis 1974, 98, 121).



Figures 

### Main features

Region	Saronic Gulf
Use	Military
Prosperity period (centuries)	5th B.C. - 4th B.C.
Existence of contemporary port	Yes
Findings on site	Yes, remains of the moles, the ship sheds and the city walls.

### General description

It is a natural protected harbour with a northeastern entrance formed by two headlands which were extended with two fortified moles that ended to towers. The northwestern mole was 190m long while the northeastern one was 95m long. The latter one ended to a circular tower on tetragonal foundations with a side of 12m. Remains of the foundations are still visible as well as remnants of the northeastern mole with sections of the tower. At approximately the middle of the mole there is a depression that hosted a building (8.3x10.15m) most probably explained as a temple or a lighthouse (Mazarakis - Ainian 1992, 81).

In the basin's perimeter ship sheds have been located (Threpsiadis 1935,159-195) and we must certainly presume that free space was available for repairs ("neorion") as well as more harbour works and buildings like docks storehouses, arsenals etc. According to its military use, it was surrounded by a wall that isolated the sea basin in a distance of 60m from the coast. (Dragatsis-Aggelopoulos, 1899,37-41 and 1900,35-37).

At the area of Mounichia harbour inscriptions and the written sources evident the existence of sanctuaries dedicated to Zeus Milichios, Zeus- Philios, Aesculapius, the goddess "Soteira ellimenia" (Savior in the port) and the goddess Bendis from Thrace. Most known and confirmed by excavations is the temple of Artemis Mounichia that is located in the hill were the Nautical Club stands today.

### Technical features

Construction period (centuries)	5th B.C. - 4th B.C.
Port configuration	Natural Harbour, Inner Harbour
Port basin size	79200 m <sup>2</sup>
Main wind direction	SE
Port land area	km <sup>2</sup>
Port entrance	37m. wide, in between the two moles. At the towers on the two moles' tips ended the chain which safed the basin
Change of sea surface elevation	1.5 m

Sedimentation	
Outer port structures	Moles
Inner port structures	Quays
Land facilities	Shiphsheds, Temples, Lighthouses, Defence Structures, Store Buildings
Construction method	Ashlar blocks
Neotectonic history	
Shore line displacement	

### Function and operations

The port was used as a naval base like the port of Zea. According to the written sources 82 neosoikoi existed there during the 4th century B.C.

### Sources

- |                                  |   |
|----------------------------------|---|
| References in ancient literature | <ul style="list-style-type: none"> <li>• Αππιανός, <i>Μιθριδάτειος</i> 40</li> <li>• Αριστοτέλης, <i>Αθηναίων Πολιτεία</i> 19</li> <li>• Δείναρχος, <i>Κατά Φιλοκλέους</i> 6</li> <li>• Δημοσθένης, <i>Περί στεφάνου</i> 262</li> <li>• Διόδωρος Σικελιώτης XIV, 33 - XVIII, 48 - XX, 45</li> <li>• Ευριπίδης, <i>Ιππόλυτος</i> 761</li> <li>• Ηρόδοτος, <i>Ιστορίαι</i>, VIII, 76</li> <li>• Θουκυδίδης, <i>Ξυγγραφή</i> II, 13 - VIII, 92,5</li> <li>• Καλλίμαχος, <i>Ύμνος εις ῥτεμιν</i> 259</li> <li>• Κλήμης Αλεξανδρεύς, <i>Στρωματεῖς</i> I, 24</li> <li>• Ξενοφών, <i>Ελληνικά</i> II, 4, 11, 37</li> <li>• Πausanίας, <i>Ελλάδος Περιήγησις</i> I, 25, 4 - II, 8, 5</li> <li>• Πλούταρχος, <i>Δημοσθένης</i> 28, <i>Φωκίων</i> 27, 31, <i>Δημήτριος</i> 8, 34, <i>ῥατος</i> 34, <i>Ερωτικός</i> 9</li> <li>• Στράβων, <i>Γεωγραφικά</i> IX, I</li> <li>• Τίμαιος, <i>Λέξεις Πλάτωνος</i> 260</li> </ul> |
|----------------------------------|---|

Related researches	Archeological
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Findings in museums	
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|------------------|--|
| Other references | <ul style="list-style-type: none"> <li>• Alten G., 1881, "Die Befestigungen der Hafenstadt Athens" Erlautender Text Heft I, Berlin, pp. 10-15</li> <li>• Blackman D., 1968, "The Shiphsheds" in J.S. Morrison and R.T. Williams, <i>Greek Oared Ships 900-322 B.C.</i>, Cambridge, pp. 181-192, pl. 29-30</li> <li>• Curtius E. - Kaupert J. A., 1881, <i>Karten von Attika</i>, Berlin pp. 57-59</li> <li>• Graser B., 1872, "Meine messungen in den altathenischen Kriegshafen", <i>Philologus</i> XXXI, Gottingen, pp. 1-65</li> <li>• Judeich W., 1905, "Topographie von Athen" in Mommers Handb. d. Klass, <i>Alturtumswissenschaft</i> III 2/2/1905, p. 92</li> <li>• Mazarakis Ainian Ph., 1992, <i>Les Structures Portuaires en Grece Antique</i>. Memoire presente en vue de l' obtention du titre de Licencie, Univ. Libre de Bruxelles</li> <li>• Αγγελόπουλος Η., 1898, <i>Περί Πειραιώς και των λιμένων αυτού κατά τους αρχαίους χρόνους</i>, Αθήνα</li> <li>• Δραγάτσης, Ι., 1885, "Εκθεσις περι των εν Πειραιεί ανασκαφών", <i>ΠΑΕ</i>, Αθήναι, σσ. 63-71, Πιν. 2, 3</li> <li>• Δραγάτσης, Ι. - Αγγελόπουλος Η., 1899, "Περί των εν Πειραιεί ανασκαφών", <i>ΠΑΕ</i>, Αθήναι, σσ. 37-41</li> <li>• Δραγάτσης, Ι. - Αγγελόπουλος Η., 1900, "Ανασκαφή εν Πειραιεί", <i>ΠΑΕ</i>, Αθήναι, σσ. 33-37</li> <li>• Θρεψιάδης Ι. 1935, "Ανασκαφικά έρευναι εν Καστέλλα του Πειραιώς" <i>Π.Α.Ε.</i>, σσ. 159-195</li> <li>• Πανάγος Χ.Θ., 1968, <i>Ο Πειραιεύς, Οικονομική και ιστορική έρευνα από των αρχαιοτάτων χρόνων μέχρι του τέλους της ρωμαϊκής</i></li> </ul> |
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*αυτοκρατορίας*, Αθήνα (2η έκδοση με νεώτερα στοιχεία για την τοπογραφία και την οικονομική ζωή του Πειραιά από τον Έφορο Αρχαιοτήτων Γ. Σταϊνχάουερ, Αθήνα 1995), 240-250

• Παπαχατζής Ν., 1974, *Παυσανίου Ελλάδος Περιήγησις*, τομ. Ι, Αττικά, Αθήνα, 119-122

• Σταϊνχάουερ Γ.Α., 2000, "Αρχαίος Πειραιάς: Η πόλη του Θεμιστοκλή και του Ιππόδαμου" στο Σταϊνχάουερ Γ. Α. - Μαλικουτη Μ. Γ. - Τσοκόπουλος Β., *Πειραιάς, Κέντρο Ναυτιλίας και Πολιτισμού*, Αθήνα, σσ. 9-123

• Τραυλός Ι.Ν. ,1972, "Πειραιεύς" *Εγκυκλοπαίδεια Δομή*, σσ. 442-456

Protection regime

Author Theotokis Theodoulou

Editor Theotokis Theodoulou



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**WOW**CREATIVEPROJECTS

## Piraeus - Mounichia

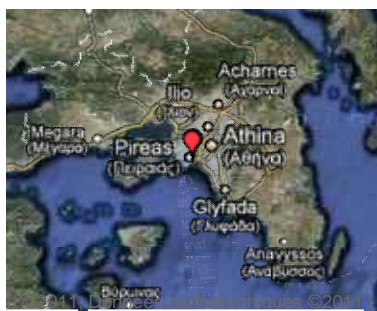
Features 

Fig. 1. Plan of the ancient city of Piraeus  
(Papachatzis 1974, 100-101)



Fig. 2. Representation of the ancient city of Piraeus  
Representation  
(Papachatzis 1974, 104)

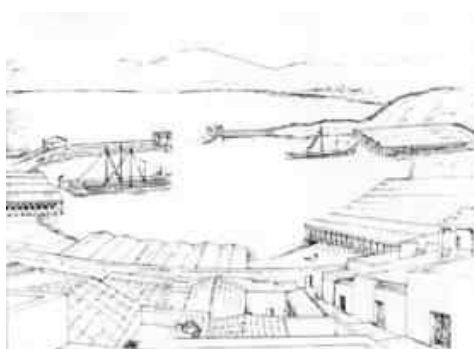


Fig. 3. Graphic representation of the dockyard of Mounichia  
(Panagos 1968, 242-243)



Fig. 4. Mounichia harbour (Tourkolimano) as it was in early



seventies  
(Papachatzis 1974, 103)

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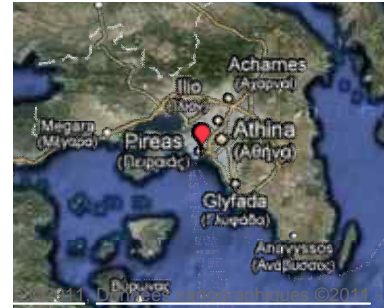
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**WOW**CREATIVEPROJECTS

## Piraeus - Zea

The port of Zea in the eastern coast of the Piraeus peninsula was the main naval base of Athens fleet. Remains of the ship sheds, the walls that protected the basin, the quays and the auxiliary buildings have been located in the area, however most of them are not visible anymore, being covered by buildings or modern port installations.

Most probably, it was the first out of the three gulfs of Piraeus (Mounichia, Zea, Kantharos) that was formed appropriately for mooring the Athenian fleet after the Themistocles (493-492 B.C.) vision, who conceived a plan for developing the nautical ability of Athens and therefore the Piraeus ports.



Figures 

### Main features

Region	Saronic Gulf
Use	Military
Prosperity period (centuries)	5th B.C. - 4th B.C.
Existence of contemporary port	Yes
Findings on site	Yes, remnants of the ship sheds, the moles, the related city walls and the Arsenal of Philon

### General description

The entrance to the basin of Zea was to the south, protected with two walled piers. In the eastern side ship sheds have been detected, some of which have been uncovered. It is possible that such buildings extended to the whole perimeter of the harbour, with the exception of area of the gulfs cove. In a small distance to the northwest remains of the famous Philon's Arsenal ("Σκευοθήκη του Φίλωνος") have been found, where the spare and removable parts of the triremes were guarded.

Researches have been conducted to the area by:

1. Gracer 1872, was the first to dwell on the area, found 41 ship sheds in Zea and Mounichia.
2. Milchofer 1881, removed some remains of the ship sheds in the eastern side of Zea (columns not grooved) and marble ophthalmoi (=eyes).
3. Dragatsis and Dorpfeld 1885, excavated 10 ship sheds in the eastern side of Zea basin.
4. Blackman 1968, noticed the existence of sloped surfaces (ramps) in submerged remains of ship sheds found in Zea harbour.
5. Danish Institute 2000-today, under the supervision of archaeologist P. Loven applies a program for recording ancient remains in the port of Zea. An important element of the research is the proof for the theory that two ships were placed longwise in the ship shed (Loven 2005)

### Technical features

Construction period (centuries)	5th B.C. - 4th B.C.
Port configuration	Natural Harbour, Inner Harbour
Port basin size	m <sup>2</sup>
Main wind direction	S
Port land area	km <sup>2</sup>

Port entrance	At the south in between the two walled moles.
Change of sea surface elevation	1.5 m
Sedimentation	No
Outer port structures	Moles
Inner port structures	
Land facilities	Shiphsheds, Defence Structures, Store Buildings
Construction method	Ashlar blocks
Neotectonic history	
Shore line displacement	

### Function and operations

The port of Zea was the main navy yard of Athens. Walls were built and transformed it to a protected naval base at the beginning of 5th century B.C. Most probably another wall in the perimeter isolated the port from the main city. Inside the port area, the remains of the ship sheds have been located and the existence of other facilities can be assumed. Researchers (Danish Institute) discovered separate constructing phases at the ship sheds. In the middle of the 3rd century B.C. the Philon's Arsenal was built, most probably belonging to an extensive building program in the decade after 355 B.C. (Papaxantzis 1974, p.107).

### Sources

References in ancient literature	<ul style="list-style-type: none"> <li>• Αιλιανός, <i>Ποικίλη Ιστορία</i> 2. 13</li> <li>• Αππιανός, <i>Λιβικά</i> 96, <i>Μιθριδάτειος</i> 30, 40, 41</li> <li>• Αριστοτέλης, <i>Πολιτικά</i>, II 8, <i>Αθ. Πολιτεία</i>, 19, 37, 38, 54, 24, 46, 49, 61</li> <li>• Αριστοφάνης, <i>Ιππείς</i> 815, <i>Ειρήνη</i> 145</li> <li>• Βιτρούβιος 7. 152. 12</li> <li>• Δείναρχος, <i>Κατά Φιλοκλέους</i> 1, 13, <i>Κατά Δημοσθένους</i> παρ. 17</li> <li>• Δημοσθένης 34. 37, 19. 60, 19. 125</li> <li>• Διογένης Λαέρτιος, 6. 1</li> <li>• Διόδωρος Σικελιώτης, 11. 41, 12. 49, 14. 33, 14. 85, 18. 64, 18. 68, 20. 45</li> <li>• Δίων Χρυσόστομος, 6. 87, 25. 4</li> <li>• Ηρόδοτος, 6. 116, 8. 76, 77, 107, 92. 5, 93</li> <li>• Θεόφραστος, <i>Χαρακτήρες</i> 23</li> <li>• Θουκυδίδης, 1. 93, 93. 3, 107, 2. 13, 13. 8, 93, 94, 7. 11, 12. 4, 8. 90</li> <li>• Ισοκράτης, <i>Αεροπογειτικός</i> 66, <i>Περί Αντιδόσεως</i> 307</li> <li>• Καλλίμαχος <i>Ύμνος εις την ΄ρτεμιν</i>, 259</li> <li>• Λυκούργος, <i>Κατά Λεωκράτους</i> παρ. 11</li> <li>• Ξενοφών <i>Ελληνικά</i>, 4. 10, 2, 2. 4, 4. 31, 4. 11, <i>Ανάβασις</i> 7, 1. 27</li> <li>• Πausanias, I. 1. 2, 1. 1. 3, 1. 4, 2, 3, 25. 5 8. 10. 4</li> <li>• Πλάτων, <i>Γοργίας</i> 455</li> <li>• Πλίνιος, <i>NH.</i> 38. 1, 7. 37. 125</li> <li>• Πλούταρχος, <i>Θεμιστοκλής</i>, 32, 19. , <i>Δημήτριος</i> 8, <i>Κίμων</i> 13, <i>Σύλλας</i> 14</li> <li>• Πολύαινος, <i>Στρατηγικά</i> I 40. 3</li> <li>• Στράβων, 9. 1, 1. 15, 2, 395 , I. 3</li> </ul>
Related researches	Archeological
Findings in museums	<p>Yes, columns of the ship sheds, pyramidal anchors possibly from triremes or for mooring purposes and marble ophalmoi, now at the Piraeus Archaeological Museum</p> <ul style="list-style-type: none"> <li>• Blackman D., 1968, "The Shiphsheds" in J.S. Morrison and R.T. Williams, <i>Greek Oared Ships 900-322 B.C.</i>, Cambridge, pp. 181-192, pl. 29-30</li> <li>• Dorpfeld W., 1883, "Die Skeuothek des Philon", <i>Ath. Mitt.</i> 8, pp. 147-164.</li> </ul>

- Foucart P., 1882, "L'arsenal de Philon", *B.C.H.* 6, pp. 540-555
- Graser B., 1872, "Meine messungen in den altathenischen Kriegshafen", *Philologus* XXXI, Gottingen, pp. 1-65
- Loven P., 2002 and 2005, σχετικά με την έρευνα του Δανικού Ινστιτούτου άρθρα, υπό έκδοση στα *Tropis VIII & Tropis IX* (ed. Tzalas X.)
- Milchofer, A., 1881, "Der Peiraieus", in Curtius, E., Kaupert, J.A., *Karten von Attika; Heft I, Athen und Peiraieus*, Berlin, pp. 23-72
- Steinhauer G., 1996, "La decouverte de l'arsenal de Philon", in *Tropis IV*, Athens, pp. 471-480
- Zea Harbour Project, <http://www.zeaharbourproject.dk/> (15-12-05)
- Αγγελόπουλος Η., 1898, *Περί Πειραιώς και των λιμένων αυτού κατά τους αρχαίους χρόνους*, Αθήνα
- Δραγάσης, Ι., 1885, "Εκθεσις περι των εν Πειραιεί ανασκαφών", *ΠΑΕ*, Αθήναι, σσ. 63-71, Πιν. 2, 3
- Δραγάσης, Ι. - Αγγελόπουλος Η., 1899, "Περί των εν Πειραιεί ανασκαφών", *ΠΑΕ*, Αθήναι, σσ. 37-41
- Πανάγος Χ.Θ., 1968, *Ο Πειραιεύς, Οικονομική και ιστορική έρευνα από των αρχαιοτάτων χρόνων μέχρι του τέλους της ρωμαϊκής αυτοκρατορίας*, Αθήνα (2η έκδοση με νεώτερα στοιχεία για την τοπογραφία και την οικονομική ζωή του Πειραιά από τον Έφορο Αρχαιοτήτων Γ. Σταϊνχάουερ, Αθήνα 1995)
- Παπαχατζής Ν., 1974, *Παυσανίου Ελλάδος Περιήγησις*, τομ. Ι, Αττικά, Αθήνα
- *Παρνασσός*, 1881, "Οι νεώσοικοι της Ζέας και τα περί αυτούς ευρήματα", τομ. XI, τευχ. 36, Αθήνα, σ. 109
- Πετριτάκη Μ., 1997, "Οδός Μουτσοπούλου και Σηραγγείου", *Α.Δ.*, σσ. 77-78
- Σασσόγλου-Παλιαδέλη Χ., 1978, "Μαρμάρινοι οφθαλμοί από το λιμάνι του Πειραιά", *Α.Ε.*, σσ. 119-135
- Σταϊνχάουερ Γ.Α., 2000, "Αρχαίος Πειραιάς: Η πόλη του Θεμιστοκλή και του Ιππόδαμου" στο Σταϊνχάουερ Γ. Α. - Μαλικούτη Μ. Γ. - Τσοκόπουλος Β., *Πειραιάς, Κέντρο Ναυτιλίας και Πολιτισμού*, Αθήνα, σσ. 9-123
- Τραυλός Ι.Ν., 1972, "Πειραιεύς" *Εγκυκλοπαίδεια Δομή*, σσ. 442-456
- Βλέπε επίσης Βιβλιογραφία Κανθάρου

## Other references

Protection regime

Author Theotokis Theodoulou

Editor Theotokis Theodoulou



## Piraeus - Zea

Features 

Fig. 1. Plan of the ancient city of Piraeus  
(Papachatzis 1974, 100-101)



Fig. 2. Representation of the ancient city of Piraeus  
Representation  
(Papachatzis 1974, 104)



Fig. 3. Representation of ship-sheds of Zea at Piraeus Nautical  
Museum  
(Papachatzis 1974, 107)



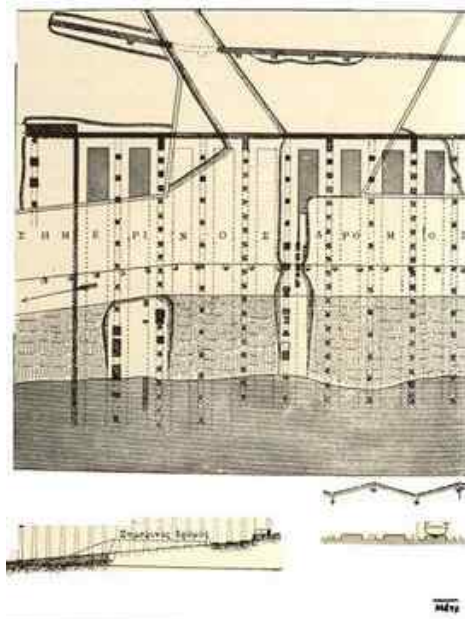


Fig. 4. Dorpfeld's plan of twelve shipsheds in the eastern part of Zea harbour (Dragatsis 1885, Πιν. 2)



Fig. 5. Shipsheds' remains at Saggariou st. from the eastern side of Zea basin (Papachatzis 1974, 108)



Fig. 6. Shipsheds' remains in a basement at Saggariou 1 st. at



the eastern side of Zea basin  
([http://www.zeaharbourproject.dk/4/4\\_01\\_01\\_03.htm](http://www.zeaharbourproject.dk/4/4_01_01_03.htm))

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Fig. 7. Submerged rock foundation trench for the colonnade dividing shipsheds of the east side of Zea basin  
([http://www.zeaharbourproject.dk/4/4\\_01\\_01\\_05.htm](http://www.zeaharbourproject.dk/4/4_01_01_05.htm))

## Portocheli - Alieis



Figures 

### Main features

Region	Peloponese
Use	Not defined
Prosperity period (centuries)	5th B.C. - 4th B.C.
Existence of contemporary port	No
Findings on site	Yes

### General description

### Technical features

Construction period (centuries)	4th B.C.
Port configuration	Artificial Harbour, Outer Harbour
Port basin size	m <sup>2</sup>
Main wind direction	NW
Port land area	km <sup>2</sup>
Port entrance	
Change of sea surface elevation	2 m
Sedimentation	
Outer port structures	Moles
Inner port structures	Wharves
Land facilities	Defence Structures
Construction method	
Neotectonic history	
Shore line displacement	Silting

### Function and operations

### Sources

References in ancient	<ul style="list-style-type: none"> <li>• Herodotus, <i>The Histories</i> VII 137</li> <li>• Thucydides, <i>History of the Peloponnesian War</i> VII 12.3-4, I 105.1; II 56.4, IV 45.2</li> <li>• Diodorus Siculus, <i>Historical Library</i> XI 78.1-2</li> </ul>
-----------------------	---

literature	<ul style="list-style-type: none"><li>• Xenophon, <i>Hellenica</i> I 5.10</li><li>• Pausanias, <i>Description of Greece</i> II 36.1</li><li>• Strabo, <i>Geography</i> VIII 6.11</li></ul>
Related researches	
Findings in museums	
Other references	
Protection regime	
Author	Theotokis Theodoulou
Editor	Theotokis Theodoulou



## Portocheli - Alieis

Features 



Fig.1. Map of harbour area of Halieis.  
(Faraklas 1973, fig. 21)

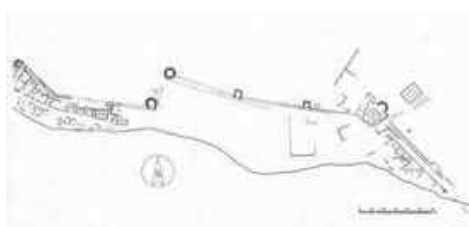


Fig.2. Sketch of the remains at the harbour area of Halieis  
(Jameson 1969m fig. 2)

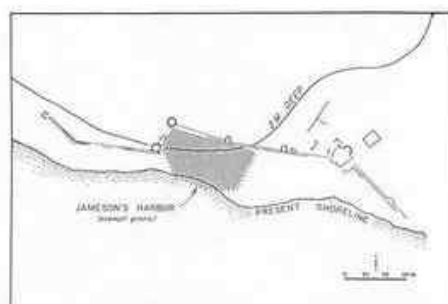


Fig.3. Reconstruction of the harbour area of Halieis  
(Frost 1985, 64)

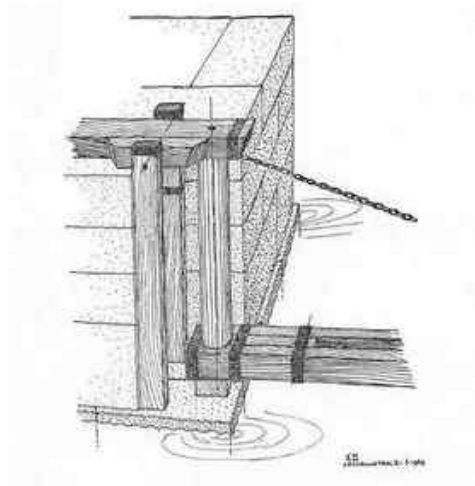


Fig. 4. Reconstruction of the boom mechanism at the harbour entrance  
(Jameson 1969, fig. 7a)



## Salamis - Ambelaki

The remains of the Classical / Hellenistic capital of Salamis are located at the area of Ambelaki bay, on the Pounta promontory, at the east side of the island. Submerged structural features of harbour-works in the inner bay indicate the site of the harbour. In this small bay the Athenian fleet was gathered before the famous naval battle in 480 BC.

The existence of the harbour is witnessed from the middle of 4th c. BC by Skylax who laconically notes: "Salamis is an island, a city and a port" (Periplus, 57).



Figures 

### Main features

Region	Saronic Gulf
Use	Naval Base
Prosperity period (centuries)	5th B.C. - 3rd B.C.
Existence of contemporary port	No
Findings on site	Yes

### General description

The harbour-works of the Ambelaki bay consist of remains of ashlar masonry including moles and other structures, whose function can not be determined without further underwater investigation and excavation.

A partly submerged row of blocks running E-W is located on the west side of the bay that probably dates to Classical / Hellenistic period.

On the east side of the bay there is yet another oblong structure (mole?), running NE-SW for 37.30m.

A third structure exists on the north side of the bay, made of blocks (1.2 to 1.30m. long), probably in second use. It runs N-S for 54.50m, having a width of 1.4 to 1.6m. Furthermore structures such as foundations, wall segments etc seem to be related with the harbour and its function. Meanwhile, the oral tradition attest to the existence of underwater stone-paved platforms or corridors, which could resemble ship-shed ramps (?).

### Technical features

Construction period (centuries)	5th B.C. - 3rd B.C.
Port configuration	Artificial Harbour, Outer Harbour
Port basin size	m <sup>2</sup>
Main wind direction	W
Port land area	km <sup>2</sup>
Port entrance	
Change of sea surface elevation	1.5 m
Sedimentation	



Outer port structures	Moles
Inner port structures	
Land facilities	Defence Structures, Other
Construction method	
Neotectonic history	Sink
Shore line displacement	

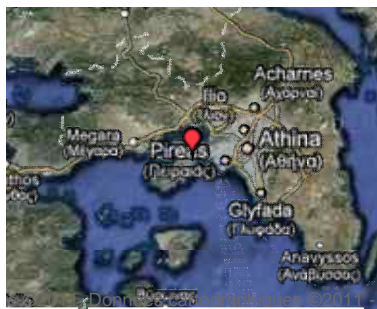
### Function and operations

The harbour installations at the Ambelaki bay were obviously the seaward gate of the Classical and Hellenistic city of Salamis, as it is evident from the pottery collected from the wider area. Not only the merchantile transactions, well expected for an island with heavy interdependence with a nearby large urban center, but also naval installations could had served the needs of the Athenian fleet due to its proximity and its pivotal position on the straits controlling navigation from south.

### Sources

References in ancient literature	<ul style="list-style-type: none"> <li>• Curtius E. - Kaupert J. A., 1881, <i>Karten von Attika</i>, Berlin</li> <li>• Hammond N.G.L., 1976, "Salamis, Attica, Greece" in Stillwell R. (ed.) <i>The Princeton Encyclopedia of Classical Sites</i>, N.J. Princeton University Press, Princeton [<a href="http://icarus.umkc.edu/sandbox/perseus/pecs/page.4012.a.php">http://icarus.umkc.edu/sandbox/perseus/pecs/page.4012.a.php</a>]</li> <li>• Lolos Y., 1995, "Notes on Salaminian harbours", <i>Tropis III</i>, 3rd International symposium on ship construction in antiquity, Athens, 1989, pp. 283-308</li> <li>• Πάλλας Δ., 1949, "Σαλαμινιακά", <i>Αρχαιολογική Εφημερίς</i>, Αρχαιολογική Εταιρεία, Αθήνα, σσ. 112-134</li> <li>• Πάλλας Δ., 1987, "Αρχαιολογικές επισημάνσεις στη Σαλαμίνα", <i>Αρχαιολογικόν Δελτίον</i> 42, ΥΠΠΟ, Αθήνα, σσ. 168-230</li> <li>• Παπαχατζής Ν., 1974, <i>Παυσανίου Ελλάδος Περιήγησις. Αττικά, Αθήνα</i></li> </ul>
Related researches	
Findings in museums	No
Other references	<ul style="list-style-type: none"> <li>• Skylax, <i>Periplus</i>, 57</li> <li>• Pausanias, <i>Description of Greece</i>, I.53.3</li> <li>• Strabo, <i>Geography</i>, IX.1.9</li> </ul>
Protection regime	
Author	Theotokis Theodoulou
Editor	Theotokis Theodoulou



**Salamis - Ambelaki**Features 

Map of Ambelaki bay, where they are the remnants of the  
Classical / Hellenistic harbour  
(Lolos 1995, fig. 4)



Ancient harbour-works on the west side of Ambelaki bay from  
NW (Lolos 1995, fig. 7)



Ancient harbour-works on the west side of Ambelaki bay from  
W (Lolos 1995, fig. 8)



Ancient harbour-works on the west side of Ambelaki bay from SW (Lolos 1995, fig. 9)

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Mole remains on the south side of Ambelaki bay from SW (Lolos 1995, fig. 10)

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Mole remains remains on the north side of Ambelaki bay from  
N (Lolos 1995, fig. 11)

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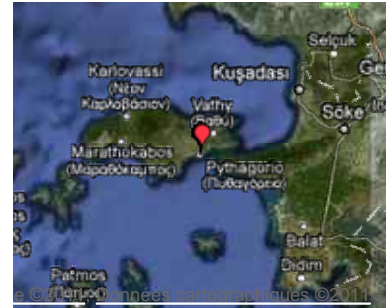
Mole remains remains on the north side of Ambelaki bay from  
S (Lolos 1995, fig. 12)

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City wall remnants of the ancient city at Ambelaki  
[<http://www.ypai.gr/atlas/thesi.asp?idthesis=279> ]

## Samos - Pythagoreion



Figures 

### Main features

Region	Aegean sea
Use	Commercial - Military
Prosperity period (centuries)	6th B.C. - 5th B.C.
Existence of contemporary port	Yes
Findings on site	Yes

### General description

### Technical features

Construction period (centuries)	6th B.C.
Port configuration	Artificial Harbour, Outer Harbour
Port basin size	m <sup>2</sup>
Main wind direction	SW
Port land area	km <sup>2</sup>
Port entrance	
Change of sea surface elevation	m
Sedimentation	Yes
Outer port structures	Breakwaters, Moles
Inner port structures	Unknown
Land facilities	Shiphsheds
Construction method	
Neotectonic history	Unknown
Shore line displacement	Unknown

### Function and operations

## Sources

References in  
ancient literatureRelated  
researches

Archeological

Findings in  
museums

No

Other references

- Jantsen U., 1968, "Samos 1967", *Archaeologischer Anzeiger* 21B, 148-151
- Jantsen U., 1970, "Samos. Forschungen in der Stadt Samos (1965-68)" *Αρχαιολογικόν Δελτίον* 24, 372-376
- Kienast J.H., 1978, "Die Stadtmauer von Samos", *Samos XV*, Bonn, 36-38
- Simossi A., 1988, "Underwater excavation research in the ancient harbor of Samos: September - October 1988", *International Journal of Nautical Archaeology* 20.4, 281-298
- Simossi A., 1993, *Le port de guerre de Thasos*, D.E.A., Aix-En-Provence
- Stillwell, R. (ed.), 1976, *The Princeton encyclopedia of classical sites*, pp.802-803.
- Toelle, R., 1976, *Herodot und Samos*, "Mole und Hafen", Bochum
- Toelle, R., 1969, *Die antike Stadt Samos*, Mainz.
- Ζαφειροπούλου Φ., 1987, *Σάμος*, Αθήνα. (Zafiropoulou F., 1987, *Samos*, Athens (in Greek))
- Σίμωσι Α., 1994, "Σάμος, Πυθαγόρειο", *Αρχαιολογικόν Δελτίον* 49, *Χρονικά* B.2 [1999], 858-862 (Simossi A., 1994, "Samos, Pythagorion", *Archaeologikon Deltion* 49, *Chronika* B.2, [1999], 858-862 (in Greek))
- Σίμωσι Α., 1993, "Σάμος. Αρχαίο λιμάνι Σάμου (δεύτερη περίοδος ανασκαφικής έρευνας)", *Αρχαιολογικόν Δελτίον* 48, *Χρονικά* B.2 [1998], 592-595 (Simossi A., 1993, "Samos, Ancient port of Samos (second excavating period)", *Archaeologikon Deltion* 48, *Chronika* B.2 [1998], 592-595 (in Greek))

Protection regime

Author

Theotokis Theodoulou

Editor

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## Samos - Pythagoreion

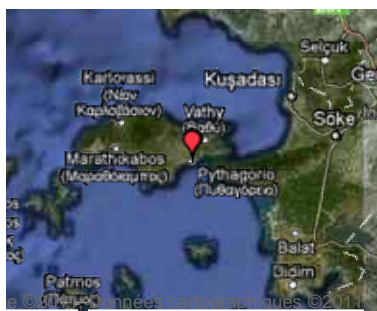
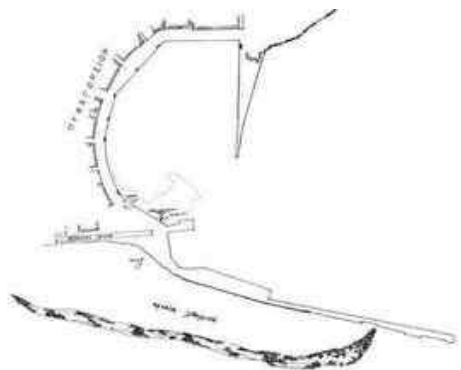
Features 

Fig. 1. General plan of the port of Pythagoreion, Samos (Simossi 1993, fig. 6)

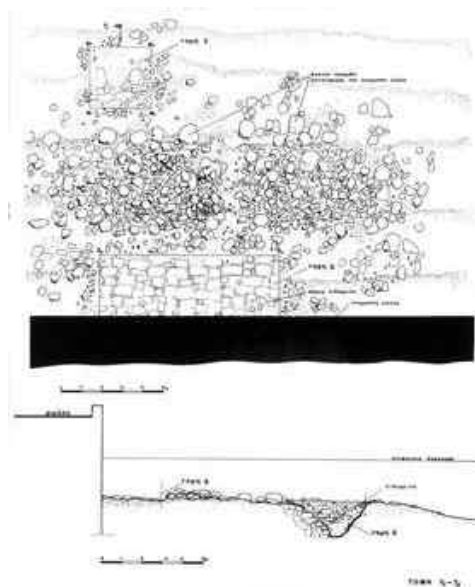


Fig. 2 Plan and section of the ancient stone structure that is identified with the breakwater of the ancient harbour of Samos (Simossi 1994, fig. 3)



Fig. 3 General view of the harbour of Samos



Fig. 5. Relics of the Byzantine city wall

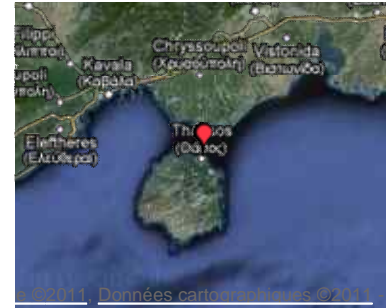


## Thassos - Commercial Harbour

Settlers from Paros inhabited Thassos around 680 B.C. The island's strategic position upon the trade routes from Aegean to Thrace and Black Sea, the metal-rich subsoil (gold, silver), the vineyards and the forests enhanced the city's development to a significant naval and trade power. Thassos was an important member of the Athenian alliance and functioned as an advanced naval base of Athens. Thasian coins have been found in Egypt and Syria, while the characteristic Thasian amphora has been located in the Mediterranean and the Black Sea. The city was at its peak until the Roman period, when a decline began, but it flourished again during the Early Byzantine period.

The city of Thassos is located in the Northern part of the island, around the bay of Panagia, which was formed to two ports: an enclosed military harbour and a trade pier/breakwater.

The merchant harbour was built northeast of the naval base and was protected by a breakwater to the north.



Figures 

### Main features

Region	Aegean sea
Use	Commercial
Prosperity period (centuries)	6th B.C. - 2nd B.C.
Existence of contemporary port	No
Findings on site	Yes

### General description

The harbour intercommunicated with the ancient city agora by two gates. It was build outside the perimeter of the city walls as an extension of the naval base to the northeast. The breakwater to the North was the only construction of the merchant harbour. The construction was extended to East-West direction, being 115m. in length and 18-30m. in width. The breakwater head is of circular shape (with a diameter of 20m.), which can be attributed to the possible existence of a tower. The breakwater was fortified with walls in the exposed side and a quay was existed in the interior. The usage of the harbour ended during the 7th century B.C. Today the breakwater's remains can be seen in an average depth of -1 to -2m.

### Technical features

Construction period (centuries)	6th B.C.
Port configuration	Artificial Harbour, Outer Harbour
Port basin size	m <sup>2</sup>
Main wind direction	NW
Port land area	km <sup>2</sup>
Port entrance	
Change of sea	

surface elevation	1 m
Sedimentation	
Outer port structures	Moles
Inner port structures	Quays
Land facilities	Shipheds, Temples, Defence Structures
Construction method	
Neotectonic history	
Shore line displacement	

### Function and operations

Every kind of the island's trade goods were transported from the harbour. The famous wine of Thasos was exported in the recognizable Thasian amphorae with the pointed base. Specific laws, some of which have been found on inscriptions in the nearby city's agora, regulated the wine's trade. From the same inscriptions it is known that specific state officers were assigned to the supervision of the wine's transportation. Consequently respective regulations can be assumed for the commercial transactions in general.

### Sources

References in ancient literature	<ul style="list-style-type: none"> <li>• Herodotous, <i>Histories</i> VI.46</li> <li>• Thucydites, <i>History of the Peloponnesian War</i> I.101.1, I.200.2, 3.4.104-105, 8.64.2-4</li> <li>• Xenophon, <i>Hellenica</i> 12</li> <li>• Pliny, <i>Naturalis Historia</i>, VII.209</li> <li>• Ploutarch, <i>Lives</i> (Kimon) 14.2</li> <li>• Pseudoskylax, <i>Periplous</i> 67</li> </ul>
Related researches	Archeological
Findings in museums	Yes
	<ul style="list-style-type: none"> <li>• Archontidou A., Empereur J. -Y., 1987, "Thasos, 3 : Le port", <i>B.C.H.</i> 111, 622-626</li> <li>• Archontidou-Argyri A., Simossi A., Empereur J. -Y., 1989, "The underwater excavation at the ancient port of Thasos, Greece", <i>I.J.N.A.</i> 18.1, 51-59.</li> <li>• Blackman, D.J., 1982, "Ancient Harbours in the Mediterranean", <i>I.J.N.A.</i>, 11.2, 79-104</li> <li>• Blackman, D.J., 1982, "Ancient Harbours in the Mediterranean", <i>I.J.N.A.</i>, 11.3, 185-211</li> <li>• Empereur J-Y., Verlinden C., 1986, "Thasos: Le port", <i>B.C.H.</i> 110, 984-989</li> <li>• Empereur J-Y., Verlinden C., 1987, "Thasos: Le port", <i>B.C.H.</i> 111, 755-759</li> <li>• Empereur J-Y., Simossi A., 1988, "Thasos, 2: Le port", <i>B.C.H.</i> 112, 736-742</li> <li>• Empereur J-Y., Simossi A., 1989, "Thasos: Le port", <i>B.C.H.</i> 113, 2, 734-740</li> <li>• Empereur J-Y., Simossi A., 1990, "Thasos: Le port", <i>B.C.H.</i> 114, 2, 881-887</li> <li>• Empereur J-Y., Simossi A., 1991, "Thasos: Le port", <i>B.C.H.</i> 115, 2, 712-720</li> <li>• Empereur J-Y., Simossi A., 1992, "Thasos: Le port", <i>B.C.H.</i> 116, 2, 721-726</li> <li>• Empereur J-Y., Simossi A., 1993, "Thasos: Le port", <i>B.C.H.</i> 117, 2, 647-652</li> <li>• Grandjean Y., Salviat F., 2000, <i>Guide de Thasos</i>, EFA, 52-57</li> <li>• Kozelj T., Wurch-Kozelj M., 2003, "Ancient harbours in Greece and Cyprus", <i>3rd Panhellenic Symposium of Harbour Works</i>, Athens Nov. 24th-27th 2003, NTUA, Athens (in Greek)</li> </ul>

Other  
references

- Kozelj T., 1988, "Les carriers des epoques grecque, romaine et byzantine: techniques et organization" in Clayton F., *Ancient marble quarrying and trade*, BAR
- Kozelj T., Wurch-Kozelj M., 2000, "The reconstruction of the drawbridge of the Gattilusi's fortress on Thassos", in Lazzarini L., *Interdisciplinary Studies on Ancient Stone*, ASMOSIA V (Association for the Study of Marble and Other Stones in Antiquity), Venice, 41-45
- Lianos N.A., 1993, "The area of the ancient closed of Thasos (A preliminary report)", 1993, *Tropis V*, 133-160
- Micha P., 2002, "The ports of Thasos" in [http://www2.rgzm.de/navis2/home/FramesGR.cfm], 15.2.06
- Perrot G., 1864, *Memoire sur l'le de Thasos*, Paris
- Saulnier J-M., 1992, *Thasos a l' epoque paleochretienne et byzantine etude de numismatique et d' histoire* , Paris, 302-308
- Simossi A., 1993, *Le port de guerre de Thasos*, D.E.A., University Aix-En Provence 1, Juin 1993
- Simossi A., 1995, "Les Neoria du port de guerre de Thasos: une decouverte recente", *Melanges Claude Vatin*, 1995, 163-178
- Archontidou A., Empereur J.-Y., 1987, "Greek-French investigation at the ancient harbour of Thasos. Report of two excavation periods", <1>Reconstruction - Conservation - Protection of Monuments, 2, Ministry of Culture, Athens, 3-77 (in Greek)
- Karadima Ch., 2003, "The wines of Thasos", [http://www.thassos-island.gr/greek/proionta/krasi.htm], 3-3-2003
- Lianos N., Simosi A., Empereur J.-Y., 1985, "Underwater investigations at the harbour of Thasos", *A.A.A.* 18, 119-136 (in Greek)
- Simosi A., Empereur J.-Y., 1985, "Underwater investigations at the harbour of Thasos", *A.A.A.* 18, 119-136 (in Greek)
- Simosi A., Empereur J.-Y., 1987, *A.A.A.* 20, 75-92 (in Greek)
- Simosi A., Empereur J.-Y., 1990, "Thasos. Ancient harbour", *A.D.* 45, 529-532 (in Greek)
- Simosi A., Empereur J.-Y., 1991, "Thasos. Underwater excavation", *A.D.* 46, 525-526 (in Greek)
- Simosi A., Empereur J.-Y., 1992, "Thasos. Commercial harbour", *A.D.* 47, 694-696 (in Greek)
- Simosi A., 1994-1995, "The ancient military harbour of Thasos", *A.D.* A' 49-50, 133-160 (in Greek)

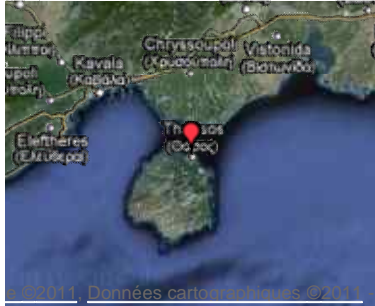
Protection  
regime

Author Theotokis Theodoulou

Editor Theotokis Theodoulou



## Thassos - Commercial Harbour



Features 

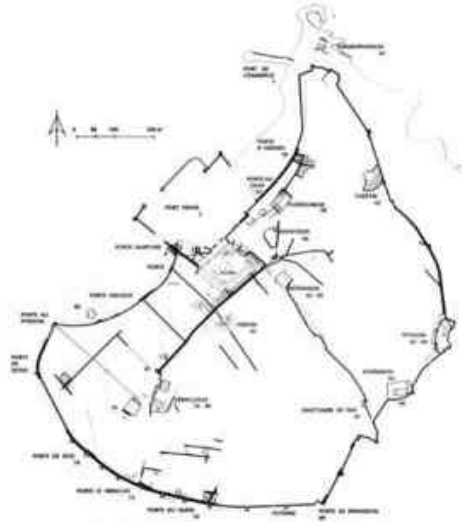


Fig. 2. General plan of the ancient defenced city of Thassos with the military closed harbour and the commercial harbour at the northeast (Grandjean-Salviat 2000, fig. 12)

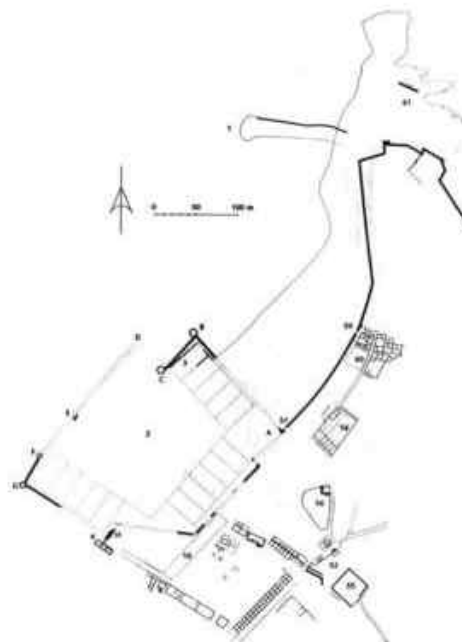


Fig. 2. Plan of the two harbours of ancient Thassos (Simossi 1994-5, 136)



Fig. 3. General view of the two harbours of ancient Thasos as it is today. The submerged mole of the commercial harbour on the upper left corner

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Fig. 4. View of the submerged mole of the ancient commercial harbour

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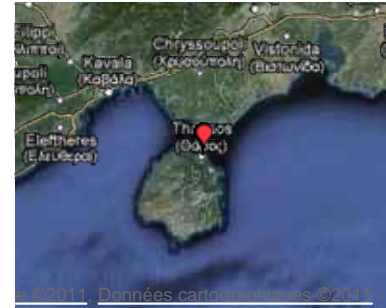




## Thassos - Military Harbour

Settlers from Paros inhabited Thassos around 680 B.C. The island's strategic position upon the trade routes from Aegean to Thrace and Black Sea, the metal-rich subsoil (gold, silver), the vineyards and the forests enhanced the city's development to a significant naval and trade power. Thassos was an important member of the Athenian alliance and functioned as an advanced naval base of Athens. Thasian coins have been found in Egypt and Syria, while the characteristic Thasian amphora has been located in the Mediterranean and the Black Sea. The city was at its peak until the Roman period, when a decline began, but it flourished again during the Early Byzantine period.

The city of Thassos is located in the Northern part of the island, around the bay of Panagia, which was formed to two ports: an enclosed military harbour and a trade pier/breakwater. The naval base is nowadays overbuild by the modern fishing boat shelter. The visible remains are dated from the Early Byzantine period.



Figures 

### Main features

Region	Aegean sea
Use	Military
Prosperity period (centuries)	6th B.C. - 2nd B.C.
Existence of contemporary port	Yes
Findings on site	Yes

### General description

The military harbour had a quadrilateral shape and was located in front of the city's market, intercommunicating by two gates. The northeastern side (A-B Fig. 2) was 148.6m long and then extended southwestern (B-C) for another 45m, as long as the length of the ship sheds was. Equivalently, the southern side (H-G) extended northeastern (G-F) for 31m. Right after this section, the contemporary harbour's entrance begins. The western sea-exposed side existed in the extension of this part (F-D), until the Early Byzantine period. The original entrance is presumed to have been located in between section D-C. The city's walls were built upon the breakwaters. Their width was approximately 3m. They consisted of marble blocks in the exterior, while the interior was filled with smaller stones.

Researchers (French Archaeological School and Ephorate of Underwater Antiquities - Ministry of Culture), have determined the existence of three complexes of ship sheds inside the harbour's basin at the northeastern, the southeastern and western sides, hosting 7, 6 and 7 ships respectively. The buildings are dated to the middle of the 5th century B.C. and therefore are the oldest remnants from edifices of this use from the Classical period.

### Technical features

Construction period (centuries)	6th B.C.
Port configuration	Natural Harbour, Inner Harbour
Port basin size	22500 m <sup>2</sup>

Main wind direction	NW
Port land area	km <sup>2</sup>
Port entrance	
Change of sea surface elevation	1 m
Sedimentation	
Outer port structures	Moles
Inner port structures	Basins
Land facilities	Temples, Shipsheds, Defence Structures, Stoes
Construction method	
Neotectonic history	
Shore line displacement	

### Function and operations

The harbour was used as a naval base from the 6th century B.C. until the 2nd century B.C. After the renovations during the Early Byzantine period (4th-7th century A.C.) it was transformed to a trade port and since the 10th century A.D. the installations were used solely for trading purposes.

### Sources

References in ancient literature	<ul style="list-style-type: none"> <li>• Herodotous, <i>Histories</i> VI.46</li> <li>• Thucydites, <i>History of the Peloponnesian War</i> I.101.1, I.200.2, 3.4.104-105, 8.64.2-4</li> <li>• Xenophon, <i>Hellenica</i> 12</li> <li>• Pliny, <i>Naturalis Historia</i>, VII.209</li> <li>• Ploutarch, <i>Lives</i> (Kimon) 14.2</li> <li>• Pseudoskylax, <i>Periplous</i> 67</li> </ul>
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- Kozelj T., Wurch-Kozelj M., 2003, "Ancient harbours in Greece and Cyprus", *3rd Panhellenic Symposium of Harbour Works*, Athens Nov. 24th-27th 2003, NTUA, Athens (in Greek)
- Kozelj T., 1988, "Les carriers des epoques grecque, romaine et byzantine: techniques et organization" in Clayton F., *Ancient marble quarrying and trade*, BAR
- Kozelj T., Wurch-Kozelj M., 2000, "The reconstruction of the drawbridge of the Gattilusi's fortress on Thassos", in Lazzarini L., *Interdisciplinary Studies on Ancient Stone*, ASMOSIA V (Association for the Study of Marble and Other Stones in Antiquity), Venice, 41-45
- Lianos N.A., 1993, "The area of the ancient closed of Thasos (A preliminary report)", 1993, *Tropis V*, 133-160
- Micha P., 2002, "The ports of Thasos" in [http://www2.rgzm.de/navis2/home/FramesGR.cfm], 15.2.06
- Perrot G., 1864, *Memoire sur l'le de Thasos*, Paris
- Saulnier J-M., 1992, *Thasos a l' epoque paleochretienne et byzantine etude de numismatique et d' histoire*, Paris, 302-308
- Simossi A., 1993, *Le port de guerre de Thasos*, D.E.A., University Aix-En Provence 1, Juin 1993
- Simossi A., 1995, "Les Neoria du port de guerre de Thasos: une decouverte recente", *Melanges Claude Vatin*, 1995, 163-178
- Archontidou A., Empereur J.-Y., 1987, "Greek-French investigation at the ancient harbour of Thasos. Report of two excavation periods", <I>Reconstruction - Conservation - Protection of Monuments, 2, Ministry of Culture, Athens, 3-77 (in Greek)
- Karadima Ch., 2003, "The wines of Thasos", [http://www.thassos-island.gr/greek/proionta/krasi.htm], 3-3-2003
- Lianos N., Simosi A., Empereur J.-Y., 1985, "Underwater investigations at the harbour of Thasos", *A.A.A.* 18, 119-136 (in Greek)
- Simosi A., Empereur J.-Y., 1985, "Underwater investigations at the harbour of Thasos", *A.A.A.* 18, 119-136 (in Greek)
- Simosi A., Empereur J.-Y., 1987, *A.A.A.* 20, 75-92 (in Greek)
- Simosi A., Empereur J.-Y., 1990, "Thasos. Ancient harbour", *A.D.* 45, 529-532 (in Greek)
- Simosi A., Empereur J.-Y., 1991, "Thasos. Underwater excavation", *A.D.* 46, 525-526 (in Greek)
- Simosi A., Empereur J.-Y., 1992, "Thasos. Commercial harbour", *A.D.* 47, 694-696 (in Greek)
- Simosi A., 1994-1995, "The ancient military harbour of Thasos", *A.D.* A' 49-50, 133-160 (in Greek)

Other  
references

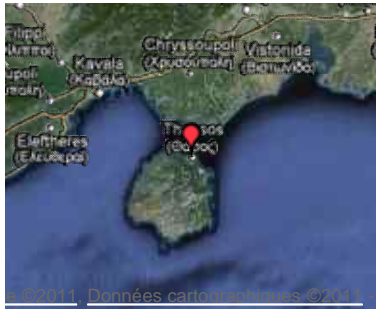
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### Thassos - Military Harbour



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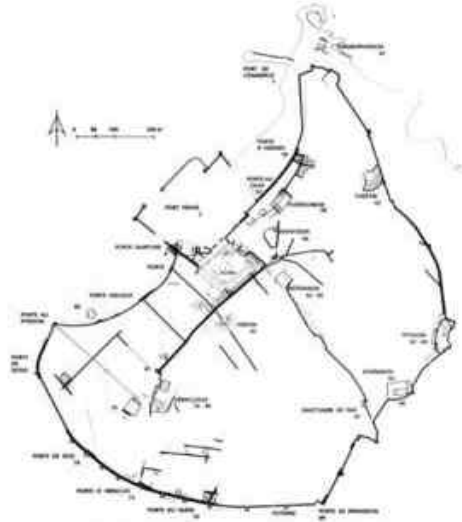
Features 

Fig. 1. General plan of the ancient defenced city of Thassos with the military closed harbour and the commercial harbour at the northeast (Grandjean-Salviat 2000, fig. 12)

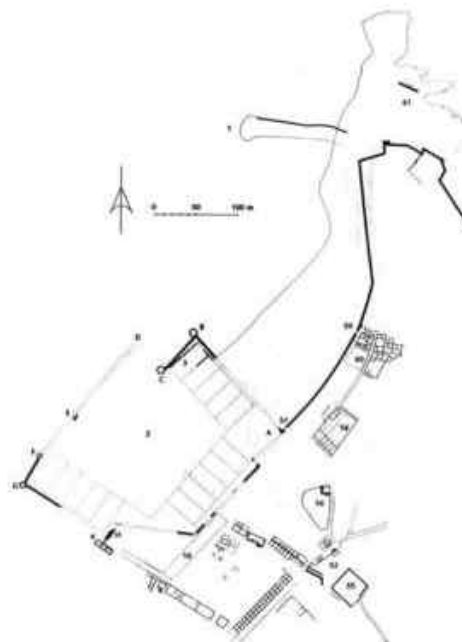


Fig. 2. Plan of the two harbours of ancient Thassos (Simossi 1994-5, 136)



Fig. 3. General view of the two harbours of ancient Thasos as it is today. The submerged mole of the commercial harbour on the upper left corner



Fig. 4. Remains of a circular tower at the military harbour's southwest angle

