

The Harbour of Piraeus in Late Antiquity. New Archaeological Evidence*

Piraeus is a small rugged peninsula jutting into the Saronic Gulf on the north-western coast of Attica, about 11 km to the southwest of Athens (fig. 1). According to the previous and present state of scholarship¹, the urban planning of Piraeus as a harbour city was completed in the early 5th century BC (fig. 2). Themistocles' urge to establish Piraeus via the erected Long Walls as a major *epineion* of Athens alongside Phaleron² (fig. 3), capitalized on the physical proximity of the Aegean islands. The Athenian policy from the 5th century BC onwards, including various governing entities until the Roman occupation, aimed for the harbour of the Piraeus to operate as a control post of the Aegean, from the Saronic Gulf up to the Hellespont, from not only a military but also from a financial perspective³.

The distinctive feature of the topography of the harbour city of Piraeus consists of three natural harbours, all identifiable by their ancient Greek names: Kantharos, the great harbour or the »Megas Limen«, bears a name deriving probably from the basin's shape⁴. On the west side of the Kantharos harbour, a narrow isthmus connects the Megas Limen to Zea, a circular, smaller harbour. On the north-eastern side of the peninsula stands Mounichia, the smallest of the three harbours⁵ (fig. 4).

According to ancient texts, Zea and Mounichia housed mainly military equipment⁶. In contrast, the Kantharos harbour seems to have served a range of functions over the centuries (fig. 5). It displayed major naval infrastructure, including military installations, such as shipsheds, near its entrance at the southeast, as well as facilities for the trade market and active commercial operations. The Kantharos trade facilities (Emporion) consisted mainly of five porticoes (stoas) within

the northern and southern parts of the eastern shore of the harbour's basin⁷. The storage and commerce facilities included the Long Arcade (Makra Stoa), the Alphetopolis, a grain-storage and transaction area, and the Diazeugma, an artificially raised, open pier structure used for the ships' unloading, by separating the shipsheds from the main dock and the mooring sites. The north-western bay might be identified with the shallow swampy area described in the texts as the »still harbour« (»Kophos Limen«), which contained the Choma, an assembly place for the crews. Another area reserved for public display of commodities and sampling of products was the Deigma. The north-western side of the basin was enclosed by the fortified promontory of Hiaetionia⁸.

All the above-mentioned areas and facilities' names, appear almost exclusively in the written sources⁹, since they are seldom visible in the archaeological record, except for a handful of inscribed stones (»Horoi«) determining the area of the mooring sites.

In concordance with the scholarship¹⁰, and considering the archaeological data from the excavation of the Dikastikon Megaron plot¹¹ (fig. 6), the Kantharos was reorganized as the main harbour of the Piraeus after Sulla's sack of the city of Athens in 87/86 BC. This development is attested in an inscription from the Athenian Acropolis, dated to the 1st century BC¹². The text of the inscription refers to an extensive restoration project of sacred lands and public properties in Athens, Piraeus and Salamis. In the section of the inscription dedicated to the lands and properties of Piraeus, the text mentions that the Deigma had already been restored by a certain Magnus (fig. 7). In the same text, reference is made to several facilities related to the function of the harbour, apart

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1 Milchhoefer, Piräeus 23-71. – Judeich, Topographie 375-403. – Panagos, O Peiraieus. – Garland, The Piraeus. – Travlos, PDAA 158. 160. 161. 163 fig. 213. – Eickstedt, Beiträge. – Steinhauer, Arsenal 471-480. – Steinhauer, Archaioi Peiraia 9-123. – Løven, Ancient Harbours. – Baika, AHC 447. 455. 478-483. – Grigoropoulos, The Piraeus. – After submitting this paper, the Danish Institute at Athens published a re-evaluated study on the architecture and topography of the shipsheds in the Piraeus: Løven, AHP II.

2 Travlos, PDAA 160.

3 Travlos, PDAA 53. 158. 161. – Bouras, Harbour Network 203. 205 fig. 1.

4 Eickstedt, Beiträge 9-15.

5 Chrysos, LIMHN – P – H 31-40.

6 Paus. I 1, 2. – Plut., Phocion 28, 3. – Cf. also Culley, Restoration 214. 220-223.

7 Steinhauer, Emporiko 481-487.

8 Hoepfner/Schwandner, Haus und Stadt 12-20, especially 18-20.

9 Garland, The Piraeus. – Eickstedt, Beiträge. – Grigoropoulos, After Sulla 31-38. – Steinhauer, Emporiko.

10 ADelt 30(1975)/Chronika 41-44. ADelt 36(1981) / Chronika 34,36. – Garland, The Piraeus. – Eickstedt, Beiträge. – Grigoropoulos, After Sulla. – Steinhauer, Ippodamos 191-209. – Steinhauer, Emporiko. – Grigoropoulos, Population 164-182. – Grigoropoulos/Tsaravopoulos, Quartier 277-298. – de Graauw APH 246-247.

11 Hoepfner/Schwandner, Haus und Stadt. – Grigoropoulos, After Sulla 261-272 (Appendix 3).

12 IG II² 1035: Culley, Restoration 211-215, especially 214 pl. 49.

from the stoas in Kantharos, including the dry docks, where ships were hauled to land to be caulked, and the chain barriers, which were used to cordon off the harbour entrances. Reference is also made to the existence of Neoria in the Kantharos harbour, though, since this is, according to Grigoropoulos¹³, an umbrella term used in antiquity for facilities of variable function, it is not clear whether this refers to shipsheds or shipyards. Rescue excavations have brought to light part of the commercial neighbourhood near the presumed Deigma area¹⁴, providing substantial evidence that this aspect of the character of the main Athens out-port was not passive throughout the Roman and Late Roman periods (fig. 8)¹⁵.

During the excavations (fig. 9) of the Ephorate of Antiquities of Piraeus and Islands for the construction of the TRAM line in Piraeus (fig. 10), running out from March until June 2016, we detected archaeological remains within a plot at Ethnikis Antistaseos 2 Street and Makras Stoas Street (fig. 11). According to the stratigraphic record, the archaeological data are as follows:

- a. Inside the plot, a line of three (figs 10-11) undisturbed stone blocks was found with pottery sherds dated to the 4th and 3rd centuries BC.
- b. Two disturbed stone blocks (fig. 12) formed Walls 9 and 10, respectively. In the area between them, 14 coins assigned to Constantine I and Gratianus were found, along with parts of bronze objects. Their current state of preservation does not allow us to present them here in full.
- c. In the southern outer perimeter of the remaining architectural structure a coin of Julian was found (fig. 13), dated AD 362-363 (Antioch mint).
- d. A well that served as a deposit and contained pottery vessels from the Hellenistic to late Roman period was found on the mounting of an oblong stonewall (figs 14a-c). The well was sealed at the top with pottery from the Roman/Late Roman period (figs 15a-c).

In this context, the following findings were also stratigraphically detected:

- a. A part of a cistern at the west end of the excavated plot, with an extant height of 1.63 m (fig. 16a). The cistern consists of middle-sized limestones, plaster, and mortar, and bears traces of trowel use. It was disturbed from drain works in the 1950s (figs 16b-d).

According to Koder's definition¹⁶, the discovery of a cistern is one of the elements of a qualitative Byzantine port facility; a cistern serves to collect and store a sufficient amount of water to replenish the water supply for the crews. The layout of the construction of this cistern correlates with that of the cistern found during the excavations for the New Acropolis Museum dated to the 6th century AD.

- b. An oblong stonewall was directed north-west to south-east (figs 17a-b).
- c. A second stonewall was found on the south-east end along the axis east-west.

These two walls consist of limestones, plaster, and sporadic bricks impact into the masonry, forming a Gamma-shaped type of construction. The layout of the walls shares common features with the stone work at Zachloritika of Aigialeia in Achaia (fig. 18a-b)¹⁷.

- d. A semi-circular wall (fig. 19), consisting of limestones, plaster, and bricks impact into the masonry.

The examination process of the plaster samples (fig. 20), taken to the Laboratory of the Department of Technical Research for Restoration¹⁸, revealed that the compound between the inert material and the plaster is rated fulfilling (1 to 3 ratio).

According to the existing plans, the archaeological remains stand at the north-eastern corner of the Kantharos basin, close to the land-boundary enclosure of the ancient Kantharos harbour (fig. 21).

Within the Gamma-shaped enclosure formed by the limestone walls, an extensive destruction layer was discovered (fig. 22); the overarching category of the archaeological material belongs to pottery sherds of Late Roman/Early Byzantine date. Overall, the material is comprised of the following categories:

- copper coins,
- small handleless bowls¹⁹,
- one cross-type handle of a multi-nozzled lamp (fig. 23)²⁰,
- parts of iron nails,
- glass sherds, not only from vessels, but also from windows²¹, and
- cover of amphorae²².

One amphora find (OM 3119: figs 24a-b) shares common features with amphorae types²³. Its most distinct features

13 Grigoropoulos, *The Piraeus*.

14 Steinhauer, *Archaioi Peiraias* 9-123.

15 Eickstedt, *Beiträge* 62-68. 278. 285.

16 Koder, *Byzantio* 104.

17 Koumoussi/Theodoropoulou, *Zachloritika* 39 fig. 18.

18 Ministry of Culture and Sports, Directorate of Restoration of Byzantine and Post-Byzantine Monuments, Laboratory of the Department of Technical Research for Restoration, Themistoklis Vlachoulis, Director, Aikaterini Kastelanou, Head of the Department of Technical Research for Restoration, Ourania Tserpeli, Chemical Engineer, Department of Technical Research for Restoration.

19 Similar bowls have been found in Zachloritika of Aigialeia/Achaia (Greek Ministry of Culture and Sports, Ephorate of Achaia, formerly Sixth Ephorate of Byzantine Antiquities, »Eleusis-Corinth-Patras Road Axis«-Project: Koumoussi/Theodoropoulou, *Zachloritika* 129-130.

20 A stone mold bearing a similar motif was found during the excavation of an Early Christian (5th to 7th century AD) settlement at Kardamaina, on the southern shore of the island of Kos: Kalopissi-Verti, *Kardamaina* 245-252.

21 Similar fragments of windows have been found in Gortyn: Baldini et al., *Gortina* 587 fig. 2.

22 For similar covers from sites in Albania and Italy see Pieri, *Commerce* 78.

23 Pieri, *Commerce* 78.

are the acute arched handles and the short neck, which are observed among the group of amphorae type LRA 2. Based on typological parallels²⁴, this type of amphora is dated from the 4th to the 6th century AD. In a preliminary examination, the amphora from the Piraeus excavation comes close to the LRA 2A amphora type. LRA 2 amphorae were produced in the Aegean islands and the Saronic Gulf (Halieis and Kounoupi in the Hermionid²⁵ (fig. 25), and range in date from the 4th to the 6th century AD.

Apart from Argolis, the existence of pottery workshops is attested in the town of Dilesi on the east coast of Boeotia²⁶. A possible local pottery production for LRA 2B amphorae has also been suggested for the city of Megara²⁷. More specifically, the stratigraphical data indicate that the amphora from the Piraeus can be dated not later than AD 530, due to the finding of a half *folles* coin of Emperor Justinian I (figs 26a-b).

The use of this particular type of amphora for the transport of goods, both for regional trade and for non-commercial purposes, such as the *annonna militaris*²⁸, increased from the 5th to the mid-6th century AD, especially within the Lower Danube area (as it is attested in cities and fortifications), Britain (in fortifications), on the Crimean peninsula, and in the Aegean Sea²⁹. Another example of this particular type of amphora, recently presented at the Symposium of the Christian Archaeological Society, comes from the excavation undertaken by the Ephorate of Antiquities of Larisa in

collaboration with the University of Thessaly at the fortified settlement of Velika in Larisa, Thessaly³⁰.

Findings in this area of Piraeus (fig. 27), dating from the 4th to the 6th century AD, were discovered in the past during rescue excavations by the Greek Archaeological Service, namely in Kolokotroni 118 Str. (part of a bath installation), and in Vassileos Konstantinou and Philellenen Str. (the Dikastikon Megaron plot)³¹. The extension of the excavation in Poseidonos Shore (Akte Poseidonos) and in Miaoulis Shore (Akte Miaouli), where a platform was discovered, shed light on the function of the harbour of Piraeus during the period examined and after. The findings in the area of the platform should be re-evaluated concerning the text of St. Nikon the Metanoite³² (10th century AD), upon his arrival (κατάπλους) in Athens and Piraeus travelling from Damala, Troizen³³.

The extant stratified archaeological remains from the excavations for the construction of the TRAM line in Piraeus are oriented towards the sea, at the cove of one of the oldest harbours of the Mediterranean Sea³⁴. The type of evidence, unearthed at this part of the Piraeus harbour, enables us not only to map the duration and extension of the use of the harbour of Kantharos in Late Roman times, but also to constitute parts of the monumental topography of Piraeus in Early Byzantine times. The mention of the harbour of Piraeus in the written sources³⁵ establishes one more focal point for its function from the 4th century AD onwards.

Bibliography

Sources

Const. VII Porph., De virtutibus et vitiis: Constantinus VII Porphyrogenitus Imperator Hist. et Scr. Eccl., Excerpta de virtutibus et vitiis. Excerpta historica iussu Imp. Constantini Porphyrogeniti confecta [A. G. Roos]. 1-4. Ed. U. Ph. Boissevain / C. de Boor / Th. Büttner-Wobst (Berolini 1903-1906, repr. Hildesheim 2003).

Niceph. Gregoras, Historia Romana: Nicephori Gregorae Byzantina Historia graece et latine. 1-3. Edd. L. Schopen / I. Bekker. CSHB [19] (Bonnae 1829-1855). Also German translation: Nikephoros Gregoras, Rhomäische Geschichte. Historia Rhomaike, übersetzt und erläutert 1-3. Transl. J. L. van Dielen. Bibliothek der griechischen Literatur 4. 8. 9 (Stuttgart 1973-1988).

Paus.: Pausanias. Description of Greece I: Books 1-2 (Attica and Corinth). Transl. W. H. S. Jones. Loeb Classical Library 93 (Cambridge MA 1918).

Plut., Phocion: Plutarch. Lives, Volume VIII: Sertorius and Eumenes. Phocion and Cato the Younger. Transl. B. Perrin. Loeb Classical Library 100 (Cambridge MA 1919).

Zosimus Hist., Historia nova: Zosime, Histoire Nouvelle. Texte établi et traduit 1-3. Ed. F. Paschoud. English translation: Zosimus: New History. Transl. R. T. Ridley (Canberra 1982).

Life of Nikon: The Life of Saint Nikon. Text, Translation, and Commentary. Ed., Transl. D. F. Sullivan. The Archbishop Iakovos Library of Ecclesiastical and Historical Sources 14 (Brookline MA 1987).

24 Pieri, Commerce fig. 45.

25 Zimmermann Munn, Hermionid 342-343.

26 Gerousi, Dilesi figs 5-8.

27 Korosis, Transport 305-311.

28 Rizos, Centres 687-689 fig. 29.

29 Karagiorgou, LR2 129-166. – Goutziokostas/Moniaros, Quaestura esp. 18. 25. 110-125.

30 Sdrolia, Velika. I would like to thank Sofia Didioumi, for allowing me to refer to this find.

31 ADelt 36(1981)/Chronika 34. 36. – See also ADelt 30(1975)/Chronika 41-44.

32 Life of Nikon 27-270. – Cf. also Lampsides, Nikon 14-158. 161-240.

33 Oikonomidis, Monachismos 29-35.

34 Baika, AHC 447. 455. 478-483. – Sophou, Chartis 255-258, pls. 112-113.

35 Zosimus Hist., Historia nova Book 2, Chapter 23, Section 2, Line 2: Τοῦ δὲ ναυτικοῦ, καθάπερ εἶρηται μοι, τοῦ μὲν Πειραιῶς ἐκπλεύσαντος εἰς δὲ Μακεδονίαν ὀρμιζομένου μεταπέμπεται τοὺς ναυάρχους ὁ Κωνσταντῖνος, [...] – *op. cit.* Book 5, Chapter 5, Section 8, Line 5: [...] ῥᾶστα τὴν πόλιν οἰόμενος εἰλεῖν διὰ τὸ μέγεθος παρὰ τῶν ἔνδον φυλαχθῆναι οὐ δυναμένῃν, καὶ προσέτι τοῦ Πειραιῶς ἐχομένου σπάνει τῶν ἐπιτηδείων μετ' οὐ πολὺ τοὺς πολιορκουμένους ἐνδῶσειν. *op. cit.* Book 2, Chapter 22, Section 3, Line 4: ἐκ τοῦ Πειραιῶς τὰς ναῦς μετεπέμπετο, κατὰ τὸ πλεόν ἐκ τῆς Ἑλλάδος οὔσας, [...] – Const. VII Porph. De virtutibus et vitiis Vol. 2, Page 277, Line 25: τοὺς δὲ ὑφ' αὐτῶ διαφθεῖρων καὶ παρασκευάζων χρημάτων δεῖσθαι πολλῶν, καὶ μάλιστα καὶ ἐς τὴν πολιορκίαν τοῦ Πειραιῶς. – Niceph. Gregoras, Historia Romana Vol. 1, Page 311, Line 13: ὥσπερ ἂν εἴ τις ἐκ τοῦ Πειραιῶς τὸν ἀπόπλου ἐξ τὸν Αἰγαῖον ποιῆσθαι ἐβούλετο, [...].

References

- Baika, AHC: K. Baika, Ancient Harbour Cities – New Methodological Perspectives and Recent Research in Greece. In: S. Ladstätter / F. Pirson / Th. Schmidts (eds), Häfen und Hafenstädte im östlichen Mittelmeerraum von der Antike bis in byzantinische Zeit. Harbors and Harbor Cities in the Eastern Mediterranean from Antiquity to the Byzantine Period: Recent Discoveries and Current Approaches. *BYZAS* 19, 1 (Istanbul 2014) 445-492.
- Baldini et al., Gortina: I. Baldini / Ch. Barbapiccola / Y. Brokalakis / V. Casali / S. Donadei / G. Marsili / L. Orlandi / D. Pellacchia, Preliminary Results of Investigations in the Basilica of Mitropolis, Gortyn: The Finds from Annex II. In: P. Karanastasi / A. Tzigounaki / Ch. Tsigonaki (eds), Αρχαιολογικό Έργο Κρήτης 3, Πρακτικά της 3^{ης} Συνάντησης, Ρέθυμνο, 5-8 Δεκεμβρίου 2013, Τόμος Α' (Rethymnon 2015) 585-603.
- Bouras, Harbour Network: C. Bouras, A Harbour Network in the Aegean during the Roman Period? In: K. Höghammar / B. Alroth / A. Lindhagen (eds), Ancient Ports. The Geography of Connections. Proceedings of an International Conference at the Department of Archaeology and Ancient History, Uppsala University, 23-25 September 2010. *BOREAS* 34 (Uppsala 2016) 201-223.
- Chrysos, ΛΙΜΗΝ – Π – Η: E. Chrysos, ΛΙΜΗΝ – Portus – Harbour in Metaphorical Use. In: F. Karagianni / U. Kocabaş (eds), Proceedings of the Symposium on City Ports from the Aegean to the Black Sea Medieval – Modern Networks 22nd-29th August 2015 (Bağcılar, İstanbul 2015) 31-40.
- Culley, Restoration: G. Culley, The Restoration of Sanctuaries in Attica: I.G., II², 1035. *Hesperia* 44, 1975, 207-223.
- De Graauw, APH: A. de Graauw, Ancient Ports and Harbours III: Ancient Port Structures, Sixth Edition (np, 2017). www.ancientportsantiques.com/wp-content/uploads/pdf/AncientPortsVol-III-Structures.pdf (31.1.2018).
- Eickstedt, Beiträge: K.-V. von Eickstedt, Beiträge zur Topographie des antiken Piräus. Βιβλιοθήκη της εν Αθήναις Αρχαιολογικής Εταιρείας 118 (Athēna 1991).
- Garland, The Piraeus: R. Garland, The Piraeus, from the Fifth to the First Century B.C. (Ithaca NY 1987).
- Gerousi, Dilesi: E. Gerousi, A Late Roman Workshop at Dilesi in Boeotia. In: N. Poulou-Papadimitriou / E. Nodarou / V. Kilikoglou (eds), LRCW 4: Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean. Archaeology and Archaeometry. The Mediterranean: a Market without Frontiers I (Oxford 2014) 193-202.
- Goutziokostas/Moniaros, Quaestura: A. Goutziokostas / X. M. Moniaros, Η Περιφερειακή Διοικητική Αναδιοργάνωση της Βυζαντινής Αυτοκρατορίας από τον Ιουστινιανό Α' (527-565). Η περίπτωση της Quaestura Iustiniana Exercitus (Thessalonikē 2009).
- Grigoropoulos, After Sulla: D. Grigoropoulos, After Sulla: a Study in the Settlement and Material Culture of the Piraeus Peninsula in the Roman and Late Roman Periods (unpubl. Diss. Durham University 2005).
- Population: D. Grigoropoulos, The Population of the Piraeus in the Roman Period: A Re-Assessment of the Evidence of Funerary Inscriptions. *Greece & Rome* 56, 2009, 164-182.
- The Piraeus: D. Grigoropoulos, The Piraeus from the 86 BC to Late Antiquity: Continuity and Change in the Landscape, Function and Economy of the Port of Roman Athens. *ABSA* 111, 2016, 239-268.
- Grigoropoulos/Tsaravopoulos, Quartier: D. Grigoropoulos / A. Tsaravopoulos, Un quartier commercial au Pirée de l'époque hellénistique à l'Antiquité tardive: le mobilier de la fouille préventive du terrain du »Palais de Justice«. In: V. Chankowski / P. Karvonis (eds), Tout vendre, tout acheter. Structures et équipements des marchés antiques. Actes du colloque d'Athènes, 16-19 juin 2009 (Bordeaux 2012) 277-298.
- Hoepfner/Schwandner, Haus und Stadt: W. Hoepfner / E.-L. Schwandner, Haus und Stadt im klassischen Griechenland. Wohnen in der klassischen Polis I (München 1994).
- Judeich, Topographie: W. Judeich, Topographie von Athen. Handbuch der Altertumswissenschaften III, 2, 2 (München 1905).
- Kalopissi-Verti, Kardamaina: S. Kalopissi-Verti, An Early Christian Stone Jewelry Mold Found in Excavations at Kardamaina, Kos. *Δελτίον ΧΑΕ* 20 (1998-1999), Περίοδος Δ'/DeltChrA 20 D, 1998-Period D'-To the Memory of Dimitrios I. Pallas (1907-1995), 1999, 245-252.
- Karagiorgou, LR2: O. Karagiorgou, LR2: a Container for the military *annonna* on the Danubian Border? In: S. Kingsley S. / M. Decker (eds), Economy and Exchange in the East Mediterranean during Late Antiquity. Proceedings of a Conference at Somerville College, Oxford, 29th May, 1999 (Oxford 2001) 129-166.
- Koder, Byzantio: J. Koder, Το Βυζάντιο ως χώρος. Εισαγωγή στην ιστορική γεωγραφία της Ανατολικής Μεσογείου στη Βυζαντινή Εποχή (Thessalonikē 2004).
- Koumoussi/Theodoropoulou, Zachloritika: A. Koumoussi / M. Theodoropoulou, Ζαχλωρίτικα Αιγιαλείας: Συμβολή στην ιστορική τοπογραφία και αρχαιολογία της περιοχής κατά την Πρωτοβυζαντινή περίοδο (Patras 2015).
- Korosis, Transport: V. Korosis, Transport and Storage Vessels and Coarse Wares from Megara, Attica (Greece). The Testimony of the Pottery in Relation to the City During the Early Byzantine Period. In: N. Papadimitriou / E. Nodarou / V. Kilikoglou (eds), LRCW 4: Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean Archaeology and Archaeometry. The Mediterranean: a Market without Frontiers I. *BAR International Series* 2616, I (Oxford 2014) 305-311.
- Lampsides, Nikon: O. Lampsides, Ὁ ἐκ Πόντου ὄσιος Νίκων ὁ Μετανοεῖτε. (Κείμενα – σχόλια). Ἐπιτροπὴ Ποντιακῶν Μελετῶν περιοδικό »Ἀρχεῖον Πόντου«, Παράρτημα 13. Πηγαὶ τῆς ἱστορίας τῶν Ἑλλήνων τοῦ Πόντου 4 (Athēna 1982).
- Løven, Ancient Harbours: B. Løven, The Ancient Harbours of the Piraeus 1: The Zea Shipyards and Slipways. 1: Architecture and Topography, Monographs of the Danish Institute at Athens 15, 1 (Athēna 2011).
- AHP II: B. Løven, The Ancient Harbours of the Piraeus II, Ch. 6, 1-6,4. Monographs of the Danish Institute at Athens 15, 3 (Athens 2019) 147-173.
- Milchhoefer, Piräus: A. Milchhoefer, Der Piräus. In: E. Curtius / J. A. Kauptert (eds), Karten von Attika. Erläuternder Text. Heft 1: Athen und Peiraieus (Berlin 1881).
- Oikonomidis, Monachismos: N. Oikonomidis, Ο Μοναχισμός στην Πελοπόννησο 4^{ος}-15^{ος} αι. (Athēna 2004).
- Panagos, O Peiraieus: Ch. Th. Panagos, Ο Πειραιεύς, Οικονομική και ιστορική έρευνα από των αρχαιοτάτων χρόνων μέχρι του τέλους της ρωμαϊκής αυτοκρατορίας (Athēna 1949; 2nd edition with newer data on the topography and the financial life of Piraeus by G. A. Steinhauer, Director of Antiquities (Athēna 1995).
- Papachatzis, Ta Attika: N. Papachatzis, Παισανίου Ελλάδος Περιήγησις, Παισανίου Αττικά (Athēna 1974).
- Pieri, Commerce: D. Pieri, Le commerce du vin oriental a l'époque Byzantine (V^e-VII^e siècles): le témoignage des amphores en Gaule. *Bibliothèque Archéologique et Historique* 174 (Beyrouth 2005).

Rizos, Centres: E. Rizos, Centres of the Late Roman Military Supply Network in the Balkans: a Survey of horrea. *Jahrbuch des Römisch-Germanischen Zentralmuseums* 60, 2013, 659-696.

Sdrolia, Velika: S. Sdrolia, Το Κάστρο της Βελίκας και οι οχυρώσεις της πρώιμης βυζαντινής περιόδου στη Θεσσαλία. Paper Presented at the 37th Symposium of the Christian Archaeological Society, Athens, 12-14 May 2017 [unpubl. paper].

Sophou, Chartis: E. N. Sophou, Χάρτης του Πειραιώς συνταχθείς το 1687 υπό των Ενετών. *Αρχαιολογική Εφημερίς* 1973, 246-258.

Steinhauer, Archaeios Peiraias: G. A. Steinhauer, Αρχαίος Πειραιάς: Η πόλη του Θεμιστοκλή και του Ιππόδαμου. In: G. A. Steinhauer / M. G. Malikouti / V. Tsokopoulos (eds), *Πειραιάς, Κέντρο Ναυτιλίας και Πολιτισμού* (Athēna 2000) 99-123.

Arsenal: G. A. Steinhauer, La découverte de l'Arsenal de Philon. In: *Proceedings of the 4th International Symposium on Ship Construction in Antiquity-Athens 1991* (Athens 1996) 471-480.

Emporiko: G. A. Steinhauer, Το εμπορικό λιμάνι του Πειραιά. In: V. Vasiliopoulou / S. Katsarou-Tsiveleki (eds), *Από τα Μεσόγεια στον Αργοσα-*

ρωνικό. Β' Εφορεία Προϊστορικών και Κλασικών Αρχαιοτήτων. Το Έργο μιας Δεκαετίας, 1994-2003. Πρακτικά Συνεδρίου, 18-20 Δεκεμβρίου 2003, Μαρκόπουλο (Markopoulo 2009) 481-487.

Ippodamos: G. A. Steinhauer, Ο Ιππόδαμος και η διαίρεσις του Πειραιώς. In: E. Greco / M. Lombardo (eds), *Atene e l'Occidente, i grandi temi: le premesse, i protagonisti, le forme della comunicazione e dell'interazione, i modi dell'intervento ateniese in Occidente. Atti del Convegno Internazionale, Atene 25-27 maggio 2006* (Paris 2007) 191-209.

Stuart/Revett, Athens: J. Stuart / N. Revett, *The Antiquities of Athens, Volume Three* (London 1794).

Travlos, PDAA: J. Travlos, *Pictorial Dictionary of Ancient Athens* (New York 1980).

Zimmerman Munn, Hermionid: M. L. Zimmermann Munn, A Late Roman Kiln site in the Hermionid, Greece. Speech Given at the The Eighty-Sixth General Meeting of the Archaeological Institute of America Toronto, December 27-30, 1984. *American Journal of Archaeology* 89/2, 1985, 320-356.

Summary / Zusammenfassung

The Harbour of Piraeus in Late Antiquity.

New Archaeological Evidence

While the harbours of Piraeus constituted one of the most impressive port complexes of antiquity, its significance changed with the transformation of Athens to a Roman provincial town. New archaeological evidence, however, presented in detail in the present paper, allows for a re-evaluation of the dynamics of Piraeus and its harbour facilities in the early Byzantine period between 4th and 6th centuries AD.

Der Hafen von Piräus in der Spätantike.

Neue archäologische Befunde

Während die Häfen von Piräus einen der beeindruckendsten Seeverkehrskomplexe der Antike darstellten, änderte sich seine Bedeutung mit der Umwandlung Athens in eine römische Provinzstadt. Neue archäologische Belege, die in der vorliegenden Arbeit vorgestellt werden, ermöglichen eine Neubewertung der Dynamik von Piräus und seiner Hafenanlagen in frühbyzantinischer Zeit zwischen dem 4. und 6. Jahrhundert n. Chr.

Fig. 1 Drawing map of the Piraeus peninsula. – (From Milchhoefer, *Piräeus* pl. III).





Fig. 2 Reconstruction of the merchant harbour-emporion at the Kantharos in the 5th century BC. – (From Panagos, *O Peiraius* 1968).

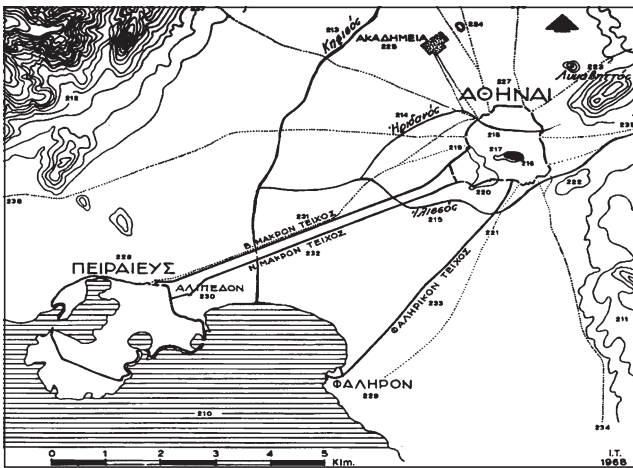


Fig. 3 The Long Walls between Athens and Piraeus in the 5th century BC. – (From Travlos, *PDAA* fig. 213).

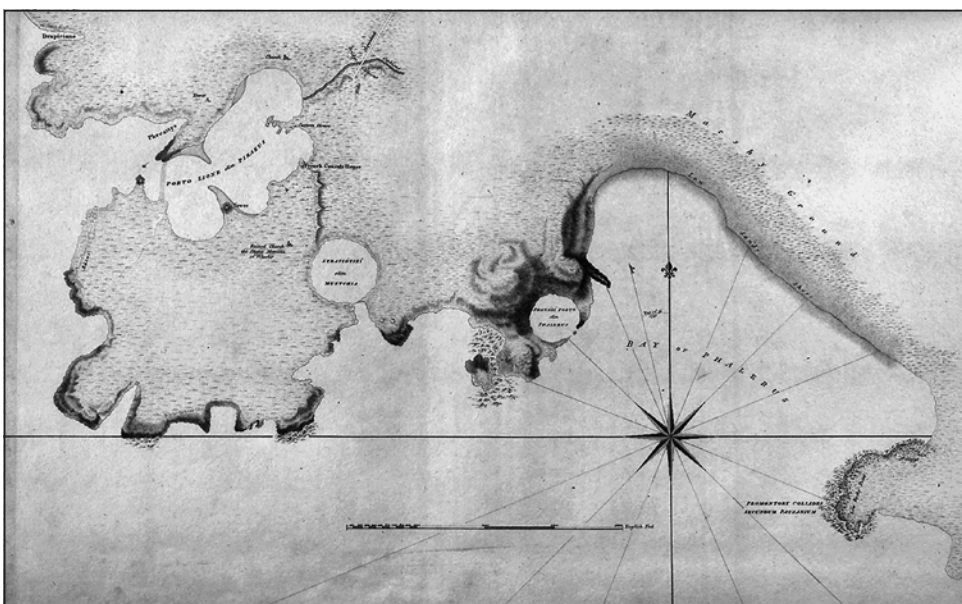


Fig. 4 Map of Piraeus by Stuart & Revett. – (From Stuart/Revett, *Athens* 61).

Fig. 5 Plan of the ancient city of Piraeus. – (From Papachatzis, Ta Attika 100-101).

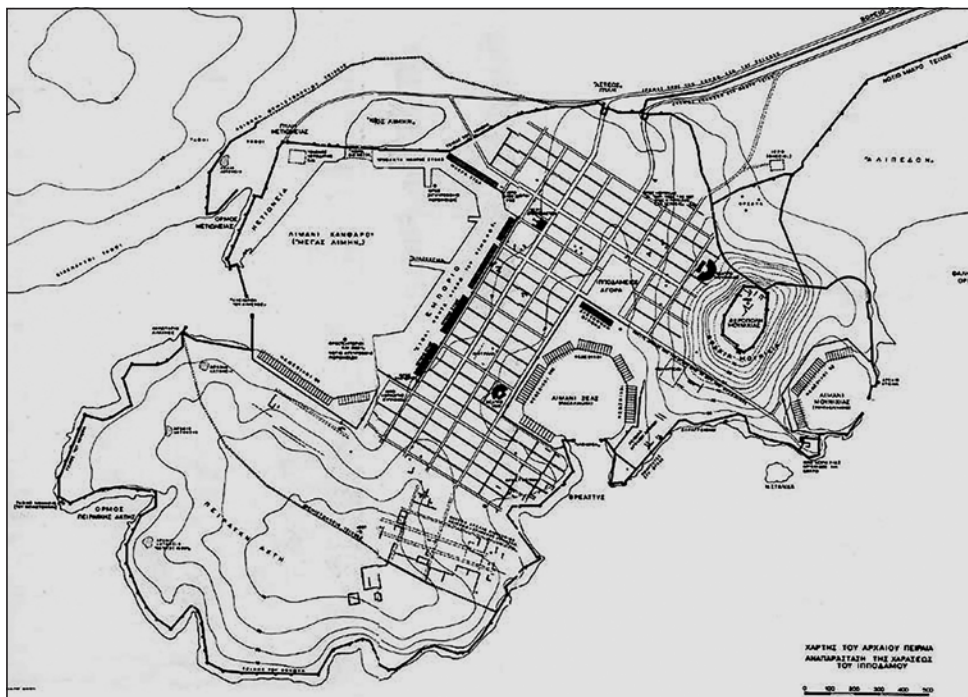


Fig. 6 General view of the Dikastikon Megaron site from the East, shortly after the excavation (Vassileos Konstantinou and Philellon Street). – (Courtesy of the Archive of the Ephorate of Antiquities of Piraeus and the Islands).

[-----] Π[ι]ραϊεύς παρ' Ἰππασίας τὰς π[ρ]οσόντας τὴν Ἀκτὴν· ψιλὰ [τὰ
 π]ροσόντα τῶν Διονυσιαίων καὶ τὰ προσόντα
 [-----] τῶν ἀρχαίων βουλευτηρίων· ψύκτρας τὰς πρὸς τ[ο]ῖς νευροῖς τοῦ
 λιμένος τοῦ ἐν Ζεαί πρὸς τοῖς κλει-
 [θροῖς· -----] στρατηγίων τῶν ἀρχαίων· τέμενος Ἀγαθῆς Τύχης· ψιλὸν τὸ
 45 [προσόντα -----] ἀνεμόνιο τῶν ἀρχαίων θεάτρων· ψιλὰ τὰ
 ἱερὸν Ἀθηνᾶς· Ἐρκάνης δ' ἰδρύσατο Θεμιστοκλῆς πρὸ τῆς
 περὶ Σαλαμῖνα ναυμαχίας· ψύκτρας τὰς ἐν τῷ μεγάλῳ
 [λιμένι -----] ἀπὸ τοῦ μέρους τοῦ περικλειομένου τοῖς νευροῖς καὶ τῶν Ἀφρο-
 δισιαίων καὶ ταῖς στοαῖς μέχρι τῶν κλειθρῶν·
 [-----] ἀπὸ τοῦ δίγματος τοῦ ἀνατεθέντος ὑπὸ Μάγνου καὶ τὸ προσὸν ὑπαίθρων,
 ὅπου τύποι καὶ·
 [μέτρα καὶ σταθμὰ κείνται -----] τέμενος τὸ π[ι]ρὰ τὰ μακρὰ τὴν Ἀθηνᾶς Πολιάδος·
 τέμενος Ἀγαθῆς Τύχης· τεμένη Θησέως· τέμενο-
 [ς -----] πρὸς Τμητῶν καὶ τὰ προσόντα μέταλλα καὶ τὸ διδόνον τῆς
 λιθοτομίας·
 50 [-----] ἀφέσεις τὰς ἀπὸ τῶν ὑσπλήγων τοῦ Παναθηναϊκοῦ σταδίου καὶ τὰ ὑπὸ
 [-----] τέμενος Ἀθηνᾶς [Δ]αμπράσι τὸ λεγόμενον Δορύνκειον· ναοὶ
 [-----] καθιερωθῆναι ἐν κατὰ χρῆσιν καὶ τῶν οἰκοδομηθέντων τόπων πρὸς τῶν
 βωμῶν· Τακίνιον
 [-----] ὅπου πρὸ τῶν προβολῶν θύσουσι ἦρωι Στρατηγῶν· ἱερὸν Εὐκλείας
 καὶ Εὐνομίας·

Fig. 7 Inscription IG II², 1035. – (From Culley, Restoration 214).

Fig. 8 Plots/sites with building remains dating between the Classical and the Late Roman period from Piraeus. – (From Eickstedt, Beiträge folding map 2).

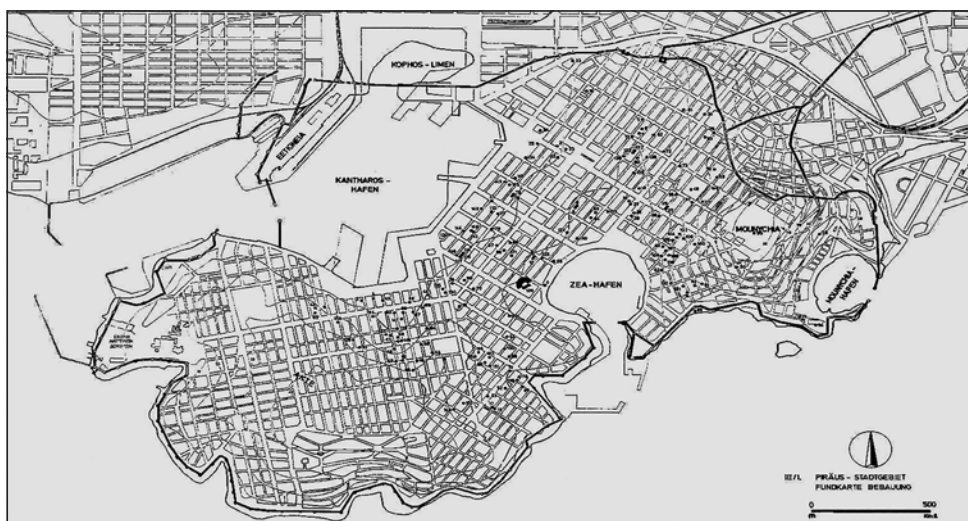




Fig. 9 Aerial view of the Ehtnikis Antistaseos 2 Street and Makras Stoas Street excavation site. – (Courtesy of the Ephorate of Antiquities of Piraeus and Islands / All drone photographs were taken by G. Asvestas).

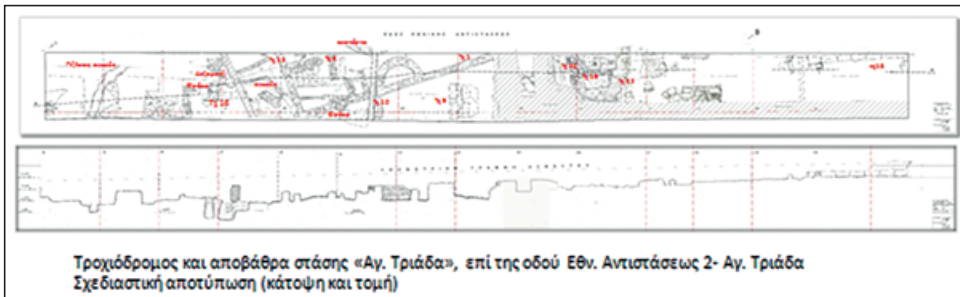


Fig. 10 General site plan drawing of the Ehtnikis Antistaseos 2 Street and Makras Stoas Street site. – (Courtesy of the Ephorate of Antiquities of Piraeus and Islands / Architects Ph. Apostolika, Th. Ioannidou / Drawer A. Mavraki).



Fig. 11 General view of the Ehtnikis Antistaseos 2 Street and Makras Stoas Street excavation site. – (Courtesy of the Ephorate of Antiquities of Piraeus and Islands).



Fig. 12 Wall 15. – (M. Papadimitriou / Ephorate of Antiquities of Piraeus and Islands, 2018).



Fig. 13 **A** coin of Julian, AD 362-363, Mint of Antioch (obverse). – (M. Papadimitriou / Ephorate of Antiquities of Piraeus and Islands, 2018). – **B** coin of Julian, AD 362-363, Mint of Antioch (reverse). – (M. Papadimitriou / Ephorate of Antiquities of Piraeus and Islands, 2018).



Fig. 14 **A** well. – (M. Papadimitriou / Ephorate of Antiquities of Piraeus and Islands, 2018). – **B** well, wall 1. – (M. Papadimitriou / Ephorate of Antiquities of Piraeus and Islands, 2018). – **C** architectural drawing of the well. – (M. Papadimitriou / I. Lassithiotake, Architect / Ephorate of Antiquities of Piraeus and Islands, 2018).

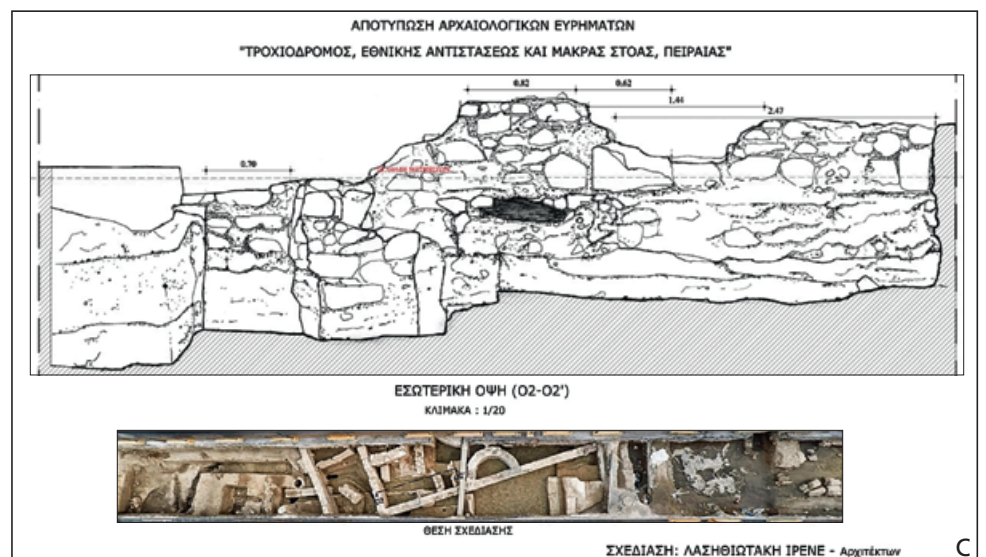
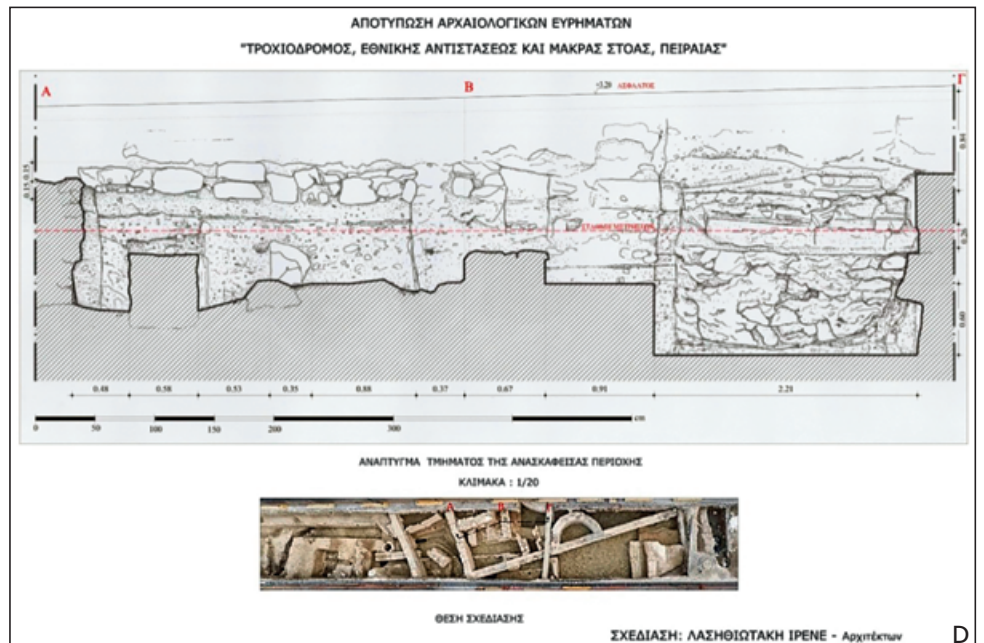




Fig. 15 **A** Well and deposit. – (M. Papadimitriou / Ephorate of Antiquities of Piraeus and Islands, 2018). – **B** Well and deposit (detail). – (M. Papadimitriou / Ephorate of Antiquities of Piraeus and Islands, 2018). – **C** Pottery sherds of Roman/Late Roman period. – (M. Papadimitriou / Ephorate of Antiquities of Piraeus and Islands, 2018).



Fig. 16 **A** Part of a cistern. – (M. Papadimitriou / Ephorate of Antiquities of Piraeus and Islands, 2018). – **B** Part of a cistern with visible drain works from the 1950s. – (M. Papadimitriou / Ephorate of Antiquities of Piraeus and Islands, 2018). – **C** Drain works from the 1950s. – (M. Papadimitriou / Ephorate of Antiquities of Piraeus and Islands, 2018). – **D** Architectural drawing of the cistern. – (M. Papadimitriou / I. Lassithiotake, Architect / Ephorate of Antiquities of Piraeus and Islands, 2018).



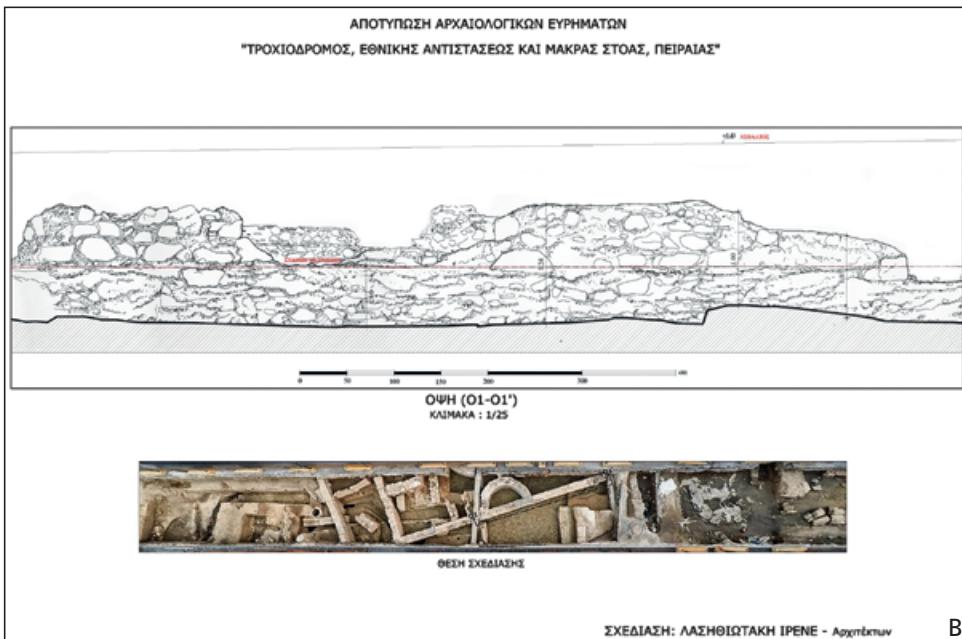


Fig. 17 **A** Oblong stone wall. – (M. Papadimitriou / Ephorate of Antiquities of Piraeus and Islands, 2018). – **B** Architectural drawing of the oblong stone wall. M. Papadimitriou / I. Lassithiotake, Architect / Ephorate of Antiquities of Piraeus and Islands, 2018).



Fig. 18 **A** Oblong stone wall. Extant length 16,80 m. – (M. Papadimitriou / Ephorate of Antiquities of Piraeus and Islands, 2018). – **B** Zachloritika of Aigialeia, Achaia, stone work (detail). – (From Koumoussi / Theodoropoulou, Zachloritika fig. 18 / Ephorate of Antiquities of Achaia (formerly 6th Ephorate of Byzantine Antiquities).



Fig. 19 Semi-circular wall. Width 0.65 m, extant height 1.31 m. – (M. Papadimitriou / Ephorate of Antiquities of Piraeus and Islands, 2018).



Fig. 20 Plaster samples. – (M. Papadimitriou / Ephorate of Antiquities of Piraeus and Islands, 2018).

Fig. 21 Architectural remains in Ethnikis Antistaseos 2 Street. – (M. Papadimitriou / Ephorate of Antiquities of Piraeus and Islands, 2018, after Grigoropoulos 2016, 251 fig. 5, based on Steinhauer, *Archaeios Peiraios*).

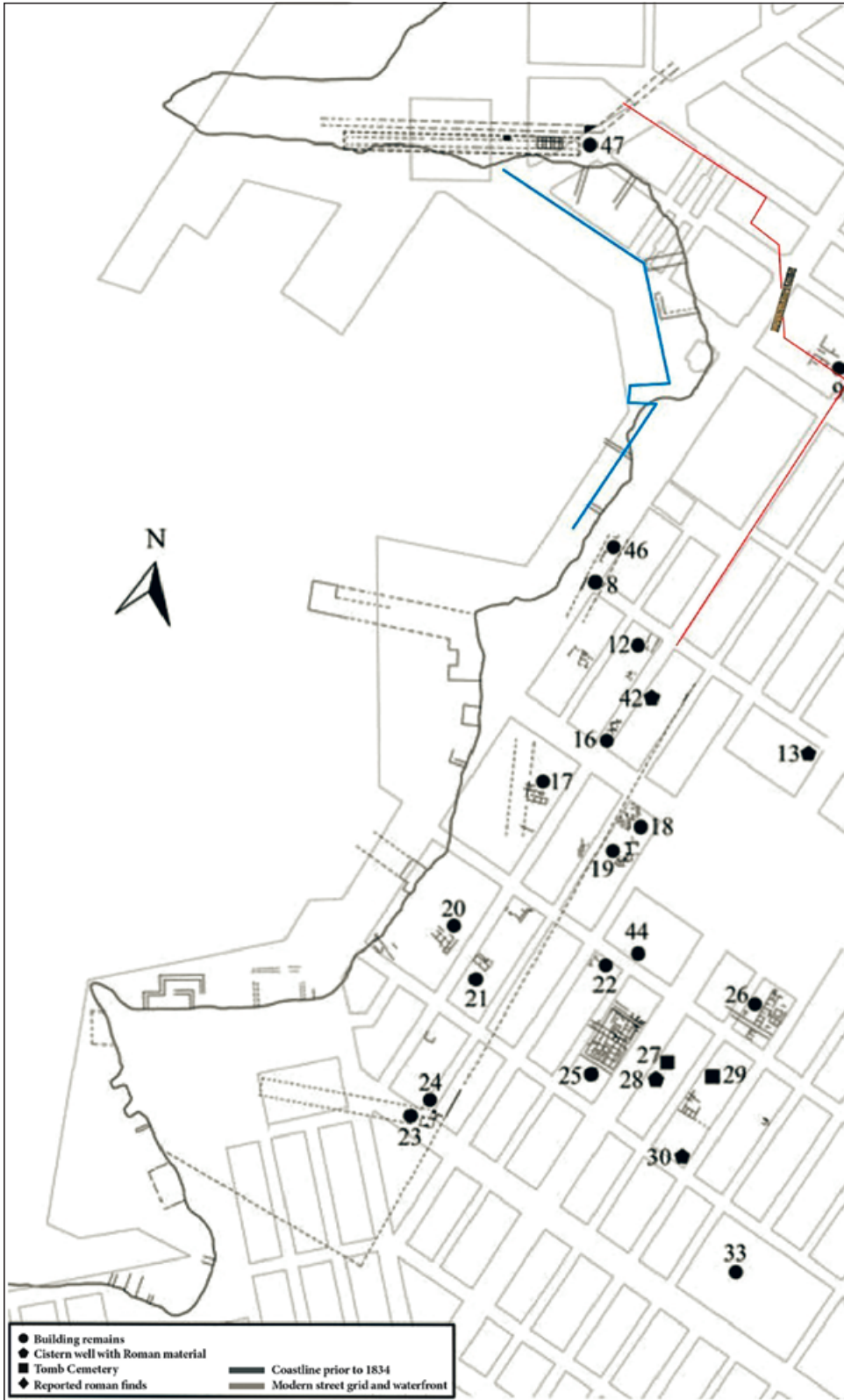


Fig. 22 The destruction layer. – (M. Papadimitriou / Ephorate of Antiquities of Piraeus and Islands, 2018).



Fig. 23 Cross-type handle of a multi-nozzled lamp. – (M. Papadimitriou / Ephorate of Antiquities of Piraeus and Islands, 2018). – Scale 1:1.

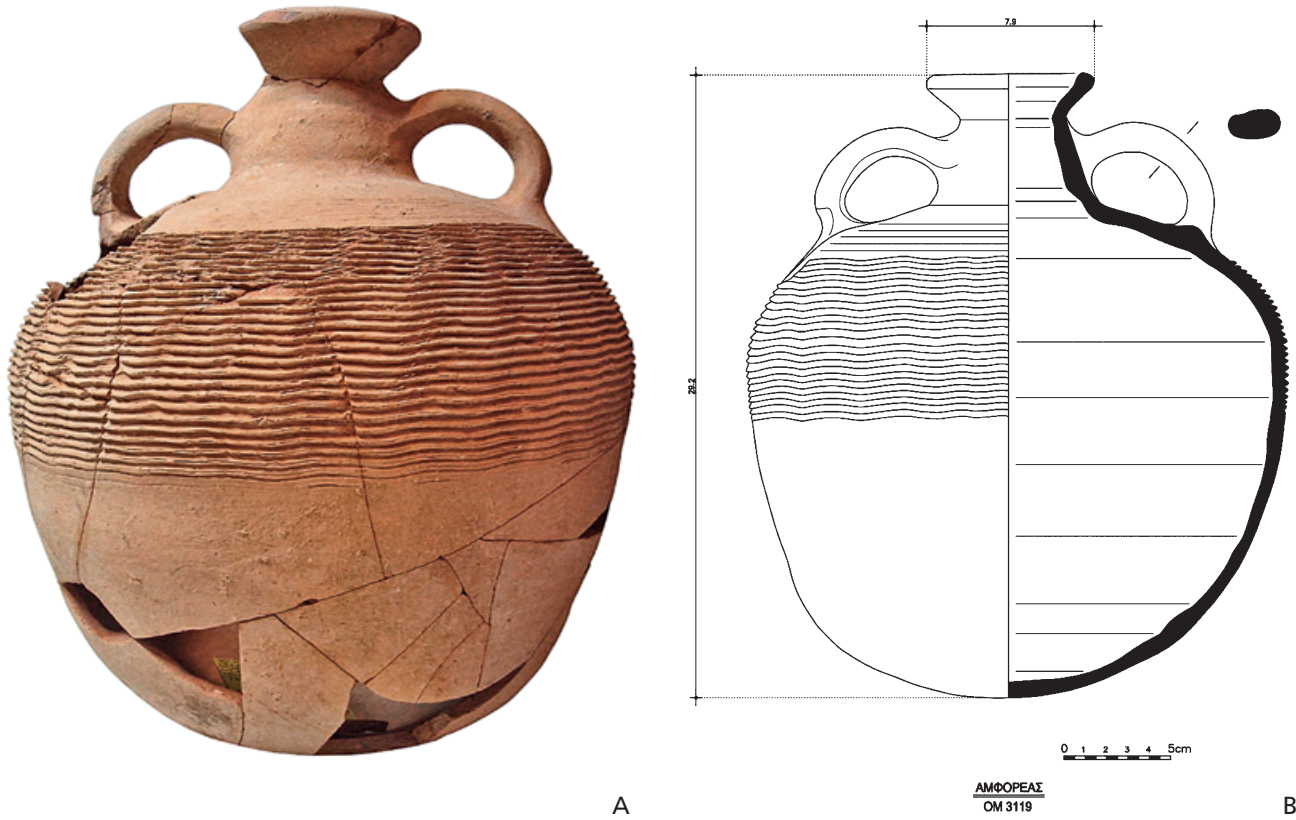


Fig. 24 **A** The OM 3119 amphora. – (M. Papadimitriou / Ephorate of Antiquities of Piraeus and Islands, 2018). – **B** Drawing of the OM 3119 amphora. – (Courtesy of Anastasia Mavraki / Ephorate of Antiquities of Piraeus and Islands).



Fig. 25 Map. – (M. Papadimitriou, 2018).



Fig. 26 **A** The Justinian half follis (obverse). – (M. Papadimitriou / Ephorate of Antiquities of Piraeus and Islands, 2018). – **B** The Justinian half follis (reverse). – (M. Papadimitriou / Ephorate of Antiquities of Piraeus and Islands, 2018).

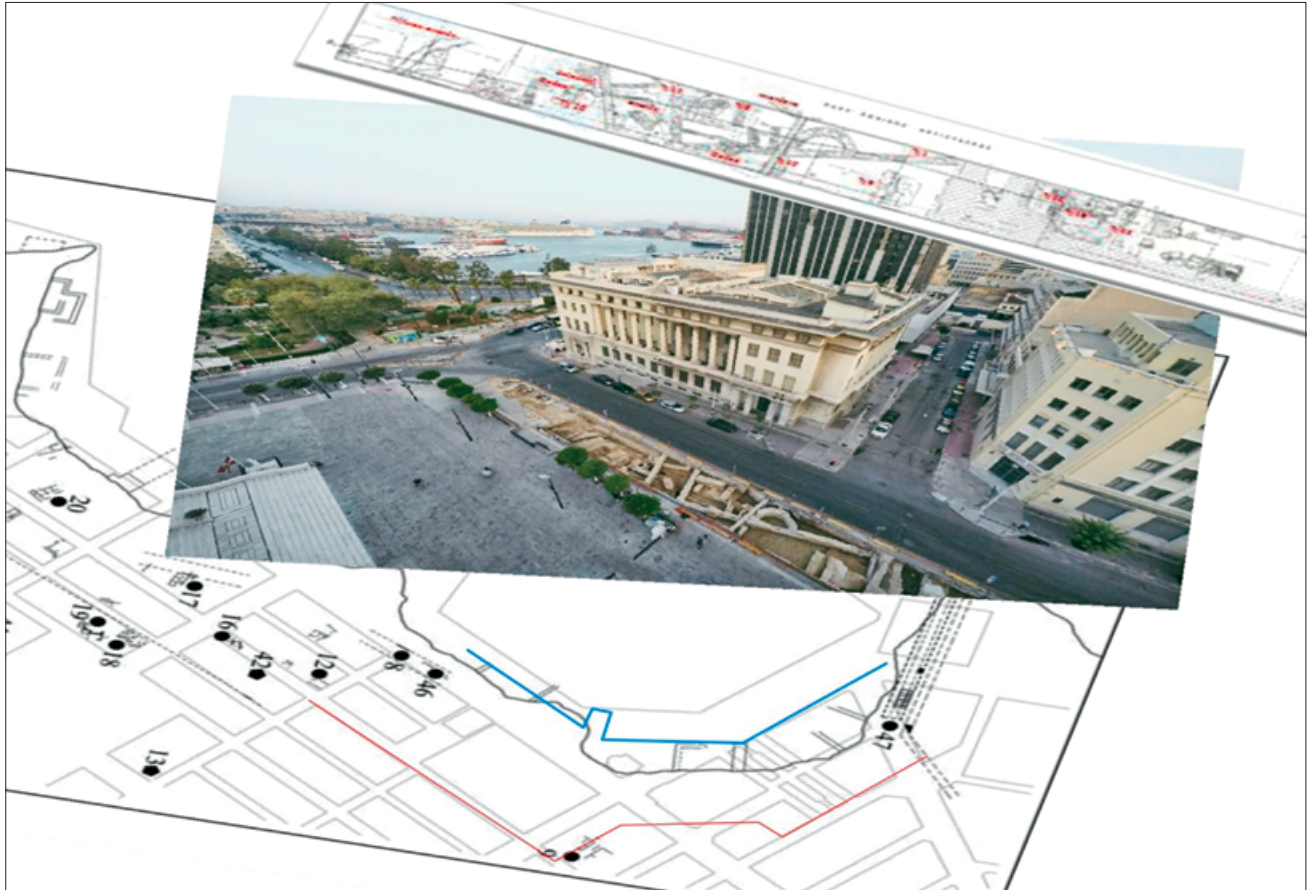


Fig. 27 Digital reconstruction of the Ethnikis Antistaseos 2 Street and Makras Stoas Street excavation plot. – (M. Papadimitriou / Ephorate of Antiquities of Piraeus and Islands, 2018).