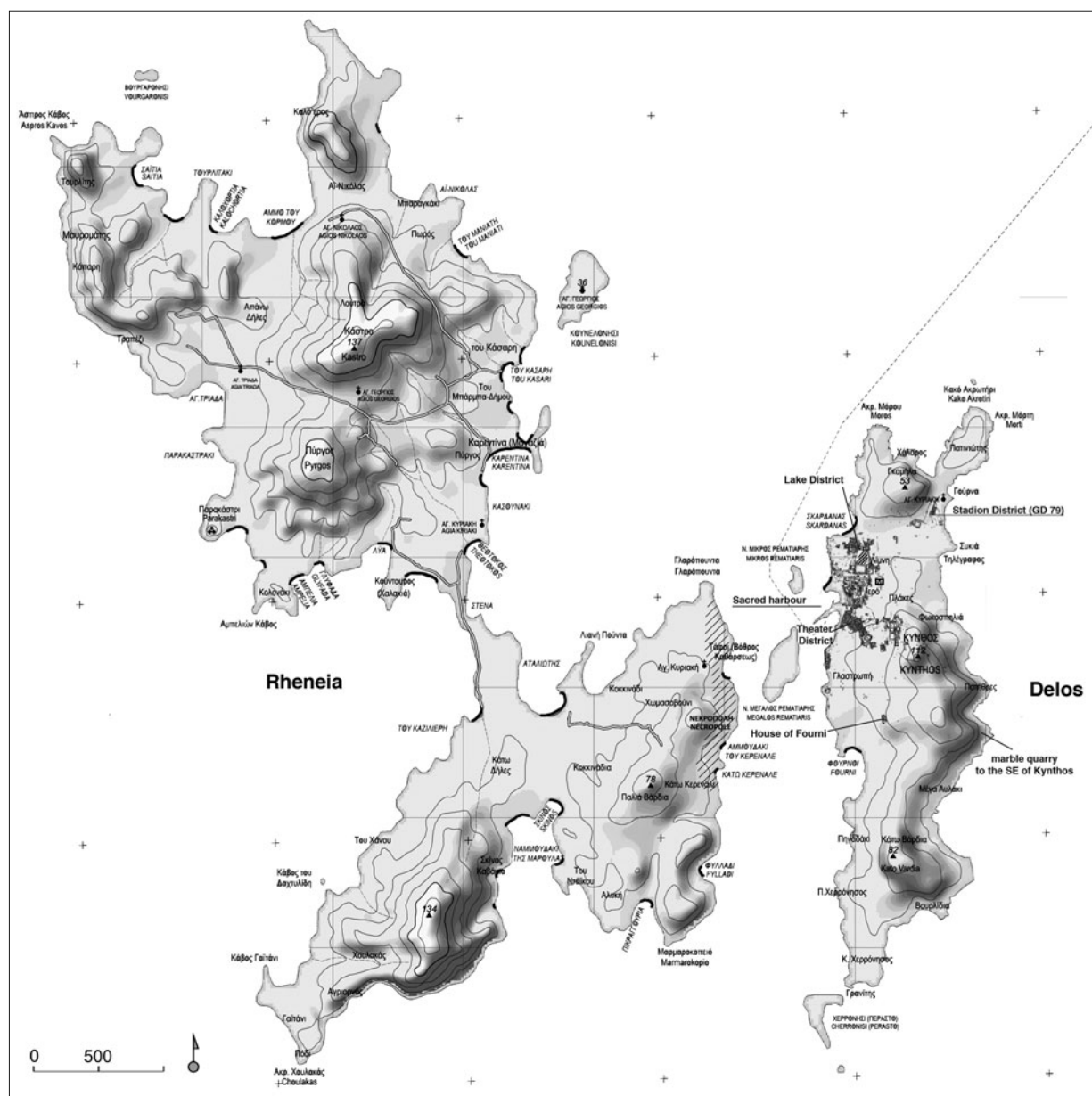


ARCHAEOLOGY IN GREECE 2014–2015

Hellenistic & Roman Delos: the city & its *emporion*

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Map 9. Delos and Rheneia (after Anavasi map: <http://www.mountains.gr/>). © EfA and Anavasi.

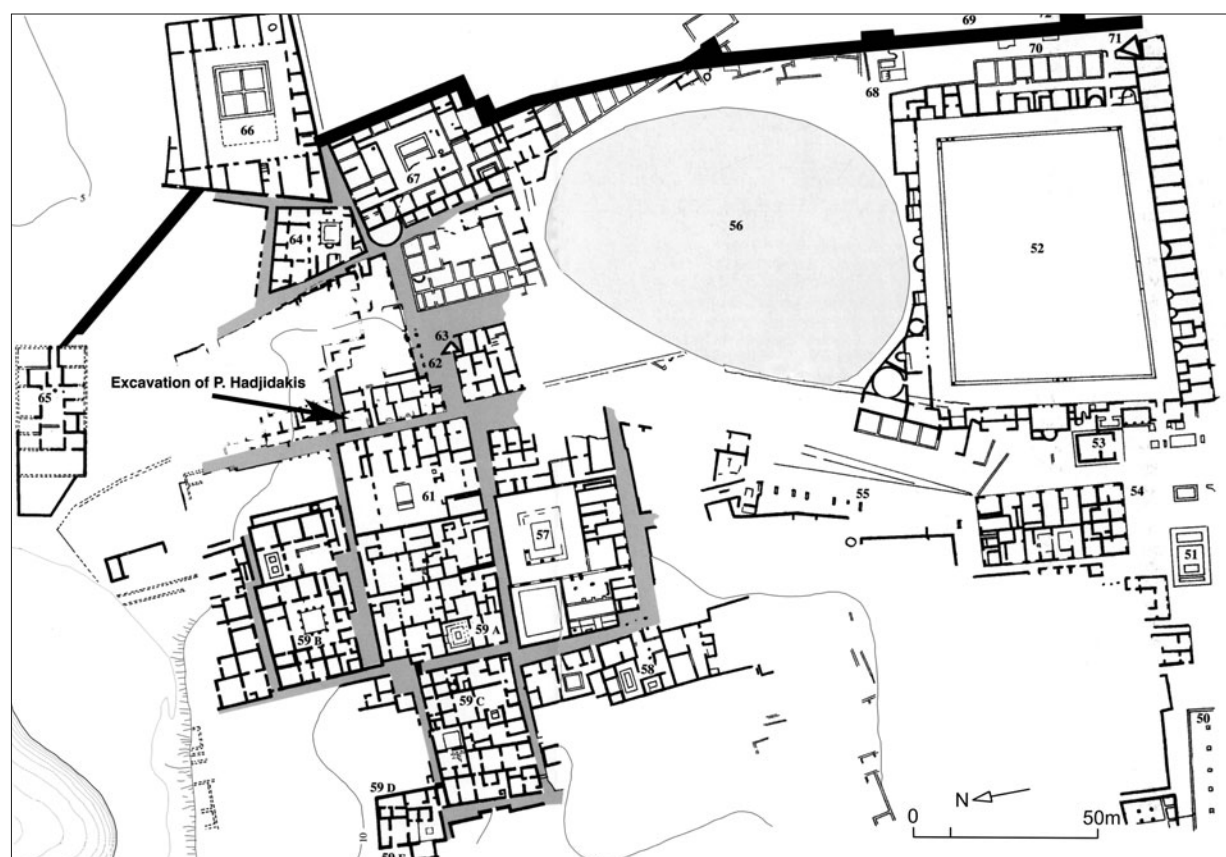
Much progress has been made in the study of the *emporion* of the port-city of Delos (**Map 9**) in recent years, with new excavations and preparations towards their publication, reassessments of previously excavated material as well as analyses of the history, religion, art and architecture of Delos in the Late Hellenistic and Roman periods. Home of the Sanctuary of Apollo since the Archaic period, Delos commanded a huge cult network that intertwined religious with economic and political activities due to its advantageous

geographical position at the centre of the Aegean world. The latest research has focused on these religious, political and economic networks (for example Constantakopoulou 2007; Chankowski 2008; Collar 2013; Migeotte 2014; Raptopoulos 2014; Le Quéré 2015), while the important contribution of Véronique Chankowski on the economy of the island in the Hellenistic period awaits publication (see Chankowski 2011). Delos prospered in the Late Hellenistic period, when the Roman authorities granted the port of Delos duty-free status, and when the island reverted to Athenian control in 167 BC, turning it into a commercial base that connected the eastern and western Mediterranean. This report concentrates on recent developments in research on Hellenistic and Roman Delos.

Note on the text: GD plus a number indicates the numbering of the monuments in the *Guide de Délos* (Bruneau and Ducat 2005). The *Guide de Délos* refers to GD 2 as the Agora of the Hermaistai or the Competaliastai, but Claire Hasenohr (2002), who studies this monument, supports the identification as the Agora of the Competaliasts, which is used in this article.

The emporion of Delos

Recent archaeological investigations have provided new evidence for the *emporion* of Delos in the Late Hellenistic period. Work has included the excavation of workshops and shops along the Street of the Lions in the Northern District (ID847, ID1351), the excavation of the Agora of the Competaliasts (GD 2) and preparation of its publication (ID727), the L'Agence nationale de la recherche (ANR) research programme on the storage spaces on the island (ID730, ID1368, ID2636) and the study of the Agora of Theophrastos (GD 49; ID1369), as well as the first underwater survey around the island in the Stadion District (GD 79).



122. Delos: plan of the Lake District (after Bruneau and Ducat 2010: foldout 3). The numbers on this plan indicate the numbering of the monuments in the *Guide de Délos* (Bruneau and Ducat 2005; 2010), designated as GD plus number throughout this article. © Efa.

Commercial activities in the Lake District (Ephorate of Antiquities of the Cyclades)

The northern stretch of the Street of the Lions in the Lake District, as well as a cluster of Hellenistic structures on the eastern side of the street, dedicated to manufacturing and commerce, were excavated by Panayotis Hatzidakis (21st EPCA) (**Fig. 122; ID847, ID1351**). The remains include a workshop for the manufacture of metal figurines, a painter's workshop, with remains of paints, palettes and fragments of figures, and shops for the sale of bread and wine, including a bakery (**Fig. 123**). The group of structures associated with manufacturing and commerce is located opposite the House of the Diadou-menos (**Figs 122, 124; GD 61**). The northern stretch of the Street of the Lions leads to the bay of Skardhana and the House of Skardhana (GD 65). The evidence for workshops and shops in this area, including workshops and shops integrated within the residential neighbourhood (for example the House of the Seals, GD 59D), suggests that this area served to accommodate small-scale commercial activities that developed alongside the Delian *emporion* (see Karvonis 2008).



123. Delos: view of the excavation directed by Panayotis Hatzidakis. © Ministry of Culture, Education and Religious Affairs.

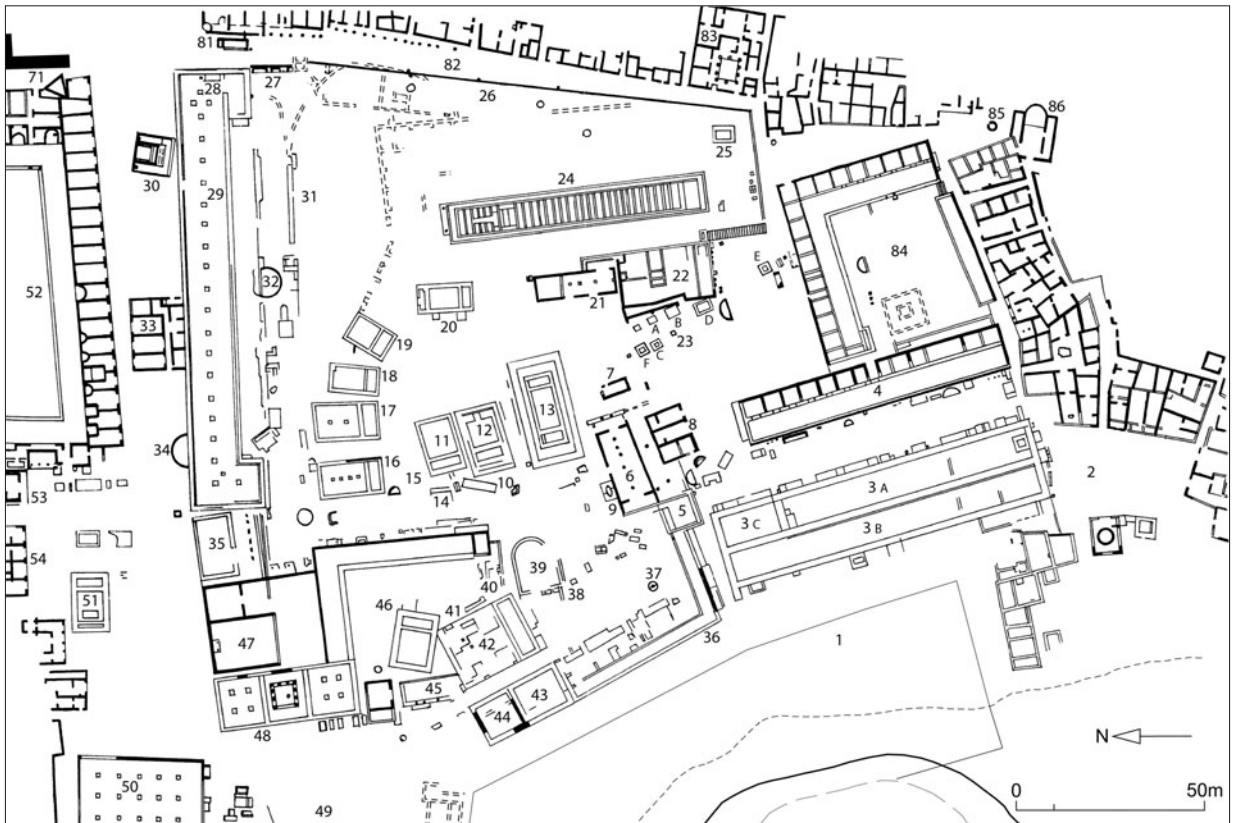
Agora of the Compataliasts (EfA)

The excavation of the Agora of the Compataliasts (**Figs 124, 125; ID727**), directed by Claire Hasenohr (EfA/Bordeaux 3), has made a significant contribution to our understanding of the operation of the Delian *emporion* in the main harbour area, where activities relating to 'wholesale' trade on Delos took place. Development in this zone started during the third century BC, when Delos was established as an entrepôt during the period of the island's independence. The landfill (χῶμα) mentioned in inscriptions from 217 BC onwards, was used to fill the waterfront towards the west of the Sanctuary of Apollo (Moretti 1998: 259–61; Duchêne and Fraisse 2001: 147–53). This landfill created the areas on which the Agora of the Compataliasts (GD 2), with accompanying Shops α, β and γ, the Portico of Philip and the West Portico (GD 3), and the Agora of Theophrastos (GD 49) later stood (Hasenohr 2012a: 247–49; 2012b: 102–05). Between 130 and 120 BC, the Agora of the Compataliasts was created on a previously-levelled area (Hasenohr 2002; 2004–2005). The agora was embellished with porticoes that fronted the eastern and southern façades of the square, which gave access to Shops α, β and γ (Hasenohr 2002: 91–99).

The volume standards for liquids, or *sekomata*, found in the shops of this area and accompanying inscriptions indicate that, at the beginning of the first century BC, the square and adjoining shops were devoted to the sale of oil and wine according to the Athenian standards of volume and overseen by the Athenian *epimeletes* Ariarathes (Hasenohr 2012a: 252–62; Chankowski and Hasenohr 2015: 29–36). There are five inscribed *sekomata* (Hasenohr 2012a: no. 4; Chankowski and Hasenohr 2015). A decree from Athens dated to the last quarter of the second century mentions the new standards for measures (*IG II²* 1013; see discussion in Chankowski and Hasenohr 2015: 37–39) and the Athenian *epimeletes* would have implemented these on Delos at this time (Hasenohr 2012a: 260; Chankowski and Hasenohr 2015: 33–36). The volume standards found in this area have a significantly larger capacity (i.e. 35–39 litres) than the volume standards found in the shops that were further away from the harbour, within the Theatre District located to the southeast of the agora (Hasenohr 2012a: 257–59; cf. Déonna 1938: 176–85). This suggests that while the measures found in the Theatre District served the local retail trade, the measures of the Agora of the Compataliasts were used for calculating the oil and wine for shipboard food supplies (Hasenohr 2012a: 260–61; 2012b: 99–105). Furthermore, the shops in the latter area were significantly bigger than the shops of the Theatre District, and were furnished with mezzanines that could accommodate the storage needs of this trade (Karvonis and Malmayr 2012: 272–74).



124. Delos: plan of the central area (Moretti et al. 2015: pl. 5). The numbers on this plan indicate the numbering of the monuments in the *Guide de Délos* (Bruneau and Ducat 2005; 2010), designated as GD plus number throughout this article. © EJA.



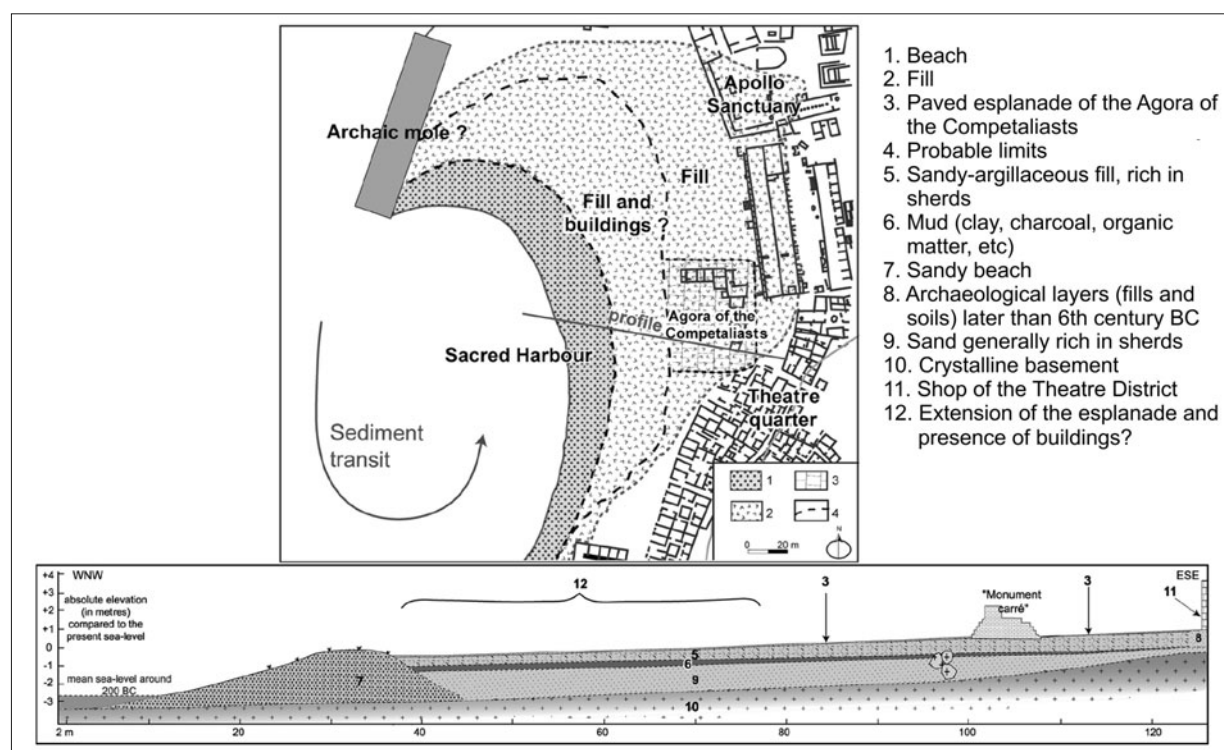
125. Delos: plan of the Sanctuary of Apollo and its surrounding monuments (after Bruneau and Ducat 2005: foldout 1). The numbers on this plan indicate the numbering of the monuments in the *Guide de Délos* (Bruneau and Ducat 2005; 2010), designated as GD plus number throughout this article. © EfA.

In conjunction with the investigation of the Agora of the Competalists (GD 2), the EfA has taken core samples from the sacred port (GD 1) and from adjacent areas of the Agora of Theophrastos (GD 49), the Sanctuary of Apollo and the Agora of the Competalists (GD 2), in order to provide data for sea level change since antiquity, as well as to record the western boundaries of these areas. These studies have confirmed that the sea level has risen by 2–2.5m since the Late Hellenistic era and suggest that the westward boundaries of these regions were at a distance of about 20m from the existing shoreline (**Fig. 126**; Desruelles *et al.* 2004; 2007; Fouache *et al.* 2005; Dalongeville *et al.* 2007; *cf.* Mourtzas 2011). In addition, the EfA has conducted resistivity survey and electromagnetic survey in the area of the Sanctuary of Apollo, in order to trace the ancient shoreline (**ID726**, **ID842**).

ANR research programme on storage spaces (EfA)

The ANR research programme directed by Véronique Chankowski (EfA/Lyon 2) on the storage spaces of the island has analysed storage spaces in domestic and commercial settings in the Theatre District, the Lake District and the Stadion District (GD 79; **ID730**, **ID1368**, **ID2636**; http://www.entrepots-anr.efa.gr/p-presentation_fr.htm). The programme conducted structural and functional analyses of storage areas in shops, workshops and houses (Chankowski *et al.* 2010).

The study of storage spaces in commercial settings by Pavlos Karvonis (Academy of Athens) and Jean-Jacques Malmay (Institut de recherche sur l'architecture antique, Centre national de la recherche scientifique) showed how shops located in close proximity to the port (for example room 6 on street 4 [Rue 4] and rooms 30 and 47 on the Street of the Theatre [Rue du théâtre]) were furnished with shelves and mezzanines, which may have served as storage spaces (**Fig. 127**; Karvonis and Malmay 2009; 2012). The study of the thresholds of the shops – for example next to the Agora of the Competalists (room 4 of Shop

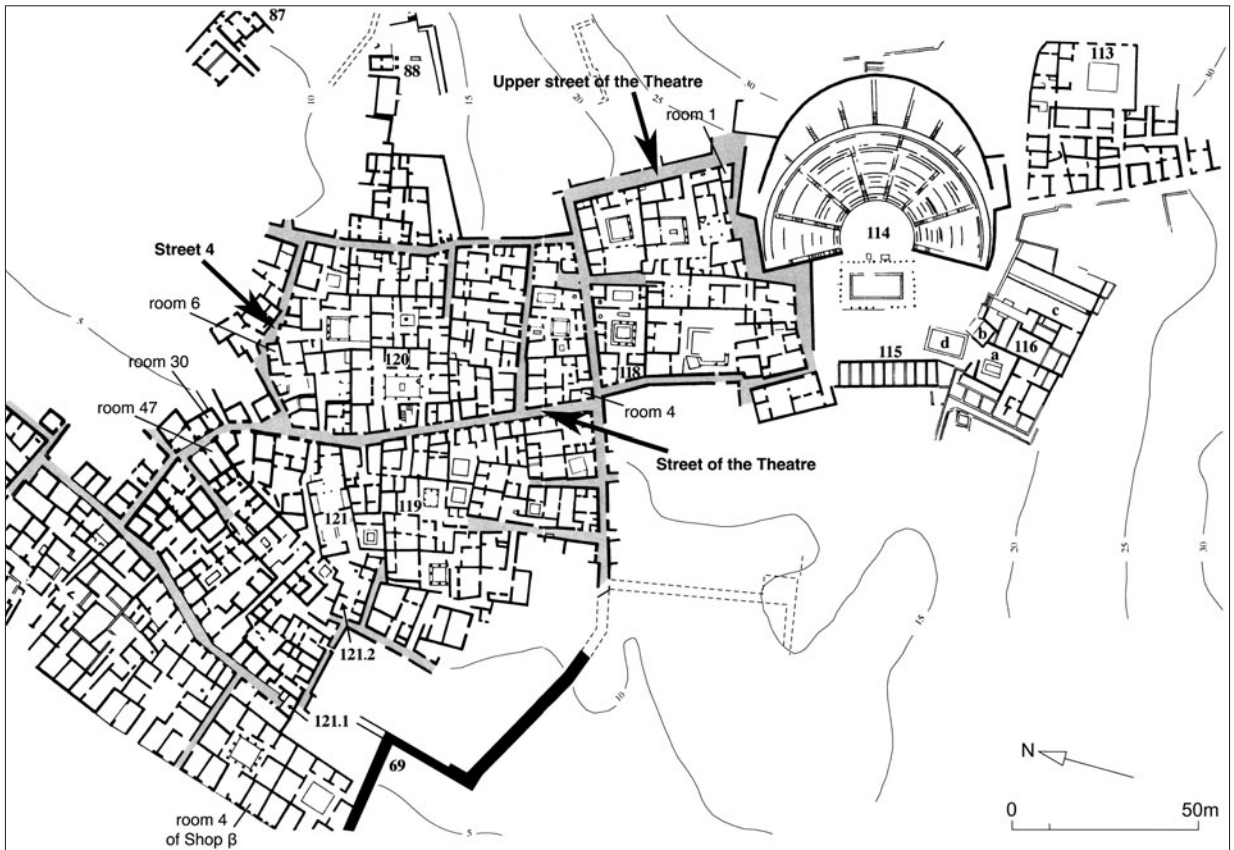


126. Delos: plan and section of the reconstructed basin of the Sacred Harbour bay at the end of the second century BC (after Desruelles et al. 2007: fig. 5). © Stéphane Desruelles et al.

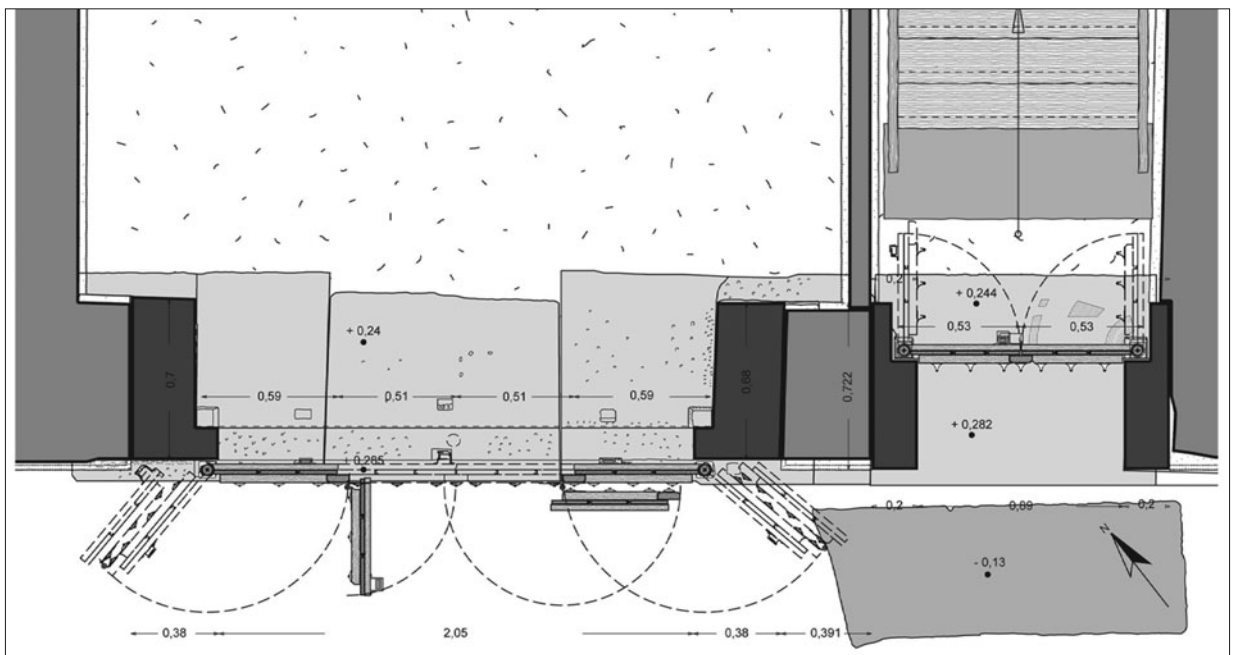
β) and in the Theatre District (room 6 on street 4, rooms 30 and 47 on the Street of the Theatre) – has led to the identification of a complex system of closure, whereby a large opening provided access to the shop on the ground floor and a side door provided access to the upper floor (**Fig. 128**; Karvonis and Malmay 2009: 218–16). The upper floor was thus accessible through a separate entrance from the street and could be let separately. In addition, pots embedded in soil led to the identification of shops selling liquids or cereals – for example room 4 on the Street of the Theatre and room 1 on the Upper Street of the Theatre ('Rue supérieure du Théâtre'; **Fig. 127**). Furthermore, the study of the shops on the seafront ('Magasins du bord de mer'), to the south of the main harbour area, for example the Shop with the Bathtub ('Magasin à la baignoire', GD 122A; **Fig. 124**) and the Shop with Columns ('Magasin des colonnes', GD 122B; **Fig. 124**), is currently underway, and Karvonis and Malmay are now preparing the publication of these shops.

Study of domestic architecture

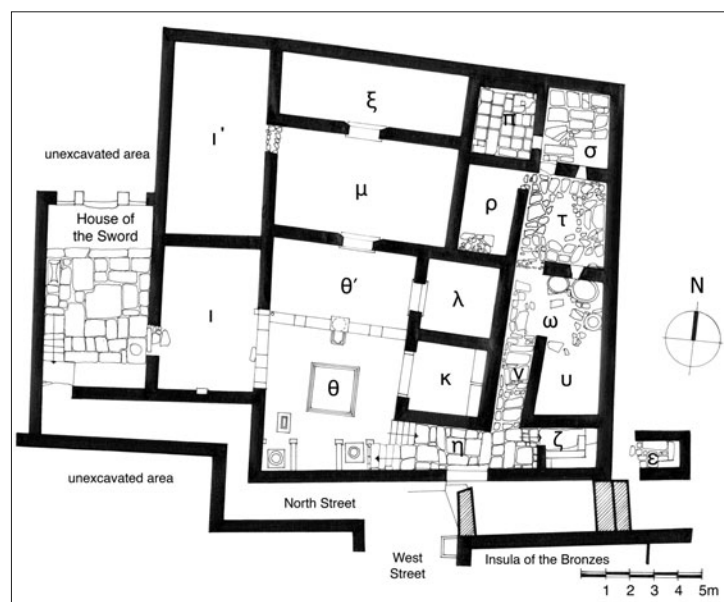
The study of domestic settings by Mantha Zarmakoupi (Institute of Historical Research of the National Hellenic Research Foundation/Birmingham) has focused on the Stadion District (Zarmakoupi 2013a). Her comprehensive architectural analysis of the houses of Delos has shown that a large number of adaptable spaces were gradually created to accommodate shops, workshops, spaces for storage and, quite possibly, rooms to be rented out. For example, the ground floor of the House of the Seals ('Maison des Sceaux', GD 59D; **Fig. 124**) in the Lake District, which was originally organized according to the traditional scheme of *oecus maior* and *oecus minor* (for these terms, see Chamonard 1922: 168–76; Trümper 1998: 17–18; Zarmakoupi 2013b), was subsequently enlarged and remodelled to accommodate a shop and a workshop at its eastern side (**Fig. 129**). In addition, the western part of the house, which provided access to the upper floor, underwent some reorganization to create groups of rooms that could have been rented out in order to run a separate business. Based on the architectural analysis of the House of the Seals, it has proved possible to identify houses that present analogous reorganizations of their ground floors: for example House ID in the Stadion District (GD 79; **Figs 124, 130**). In other cases, the original architectural



127. Delos: plan of the Theatre District (after Bruneau and Ducat 2005: foldout 7). The numbers on this plan indicate the numbering of the monuments in the *Guide de Délos* (Bruneau and Ducat 2005; 2010), designated as GD plus number throughout this article. In addition, the rooms and streets mentioned in the text are indicated on the plan. © EFA.



128. Delos: reconstruction of the threshold of room 4, Shop β, second phase (Karvonis and Malmarmy 2009: fig. 29). © Pavlos Karvonis and Jean-Jacques Malmarmy.



129. Delos: House of the Seals in the Lake District (also called the North District), second phase (Zarmakoupi 2013b: fig. 1). © Mantha Zarmakoupi.



130. Delos: Houses IC and ID in the Stadion District – first phase on the left, second phase on the right (Zarmakoupi 2013b: figs 2, 3). © Mantha Zarmakoupi.

131. Delos: view of the submerged kyklos towards the north-west. The traces of two concentric circles are visible under the low waters. In the background, Little Rheumatiari, Rheneia and Tenos can be seen at the left. © Mantha Zarmakoupi.



organization of the houses was kept and the house was extended in order to add a group of rooms that could accommodate commercial and storage activities: for example House H in Insula VI of the Theatre District, the House of the Tritons ('Maison des Tritons') and the House of the Actors ('Maison des Comédiens', GD 59 B; **Figs 122, 124**) in the Lake District (Zarmakoupi 2013b).

An architectural analysis of the houses points to a combination of commerce and luxury. Thus we might find a luxurious residence above a ground floor that accommodated economic activities: for example the House of the Seals in the Lake District and House ID in the Stadion District. The houses in which this combination was noted belonged to Italian merchants. This combination of commerce with luxury is a well-known Roman architectural strategy, attested in houses and villas in Italy, where luxurious spaces were combined with agricultural activities. In this way, the houses of Italian merchants at Delos provide an early example of the combination of elegance and economic activities with which we are familiar from slightly later examples in Italy (Zarmakoupi forthcoming a; forthcoming b).

To this end, the study of domestic settings has shown that owners adapted and transformed the organization of houses in order to create new spatial arrangements that could generate profit in the dynamic urban economy of the island in this period. While the main harbour area accommodated the operation of the *entrepôt* of Delos, a network of economic activities, such as local manufacturers producing small-scale goods that could complement the main shiploads, was integrated within the residential neighbourhoods. The studies of Monika Trümper and Karvonis have suggested that the architecture of commercial buildings on Delos corresponds to developments taking place in Republican Italy (Trümper 2005; Karvonis 2008; see discussion in Mayer 2012: 34–41). For example, shops and workshops were walled off from private houses and their upper floors were accessible through separate entrances from the street and could be let separately. The analysis of the houses examined in the ANR programme shows that analogous developments can be noted in private architecture. The development of Delian domestic architecture provides a parallel for the systematic integration of shops and workshops within domestic settings attested in examples from Pompeii and Herculaneum (Zarmakoupi forthcoming b).

Agora of Theophrastos (EfA)

The study of the Agora of Theophrastos (GD 49; **Figs 124, 125**) by Jean-Charles Moretti and Myriam Fincker (EfA/Institut de recherche sur l'architecture antique, Centre national de la recherche scientifique) has focused on a circular structure at the western edge of the agora (**ID1369**) which is now submerged in the sea (**Figs 124, 131**). The agora was in fact named after the *epimeletes* Theophrastos, who oversaw the completion of the construction works of the landfill just before 126/5 BC (**ID1645**). The circular structure was the place where slaves, together with other commodities, were sold. The inscription at the entrance to this structure informs us that Sokrates, an *agoranomos* active around 100 BC, installed this circular structure, a *kyklos* (κύκλος; **ID1835**; Moretti *et al.* 2012: 230–34). The inscription was written on two blocks, placed to the left and right of the entrance to the structure. The right block (no. 2) was first published by Pierre Roussel (1908: 420, no. 13bis), who also published the entire inscription in 1916 (Roussel 1916 [1987]: 184). According to later sources, this building was used for auctions of slaves, as well as of other commodities (Chankowski in Moretti *et al.* 2012: 237–41). Merchandise was placed in the centre of this circular structure and interested individuals could place a bid. Thus slaves as well as other merchandise could be brought ashore in small groups, sold in the *kyklos* and then put back on board a ship. This area must have been the location of the Athenian *Agoranomia*, the office regulating the transactions of the agora, as numerous inscriptions of *agoranomoi*, dating from 156 BC down to 90 BC, have been found in this area (Moretti *et al.* 2012: 241–45).

The *kyklos* of Sokrates offers an alternative place for the slave market on Delos; a lot of ink has been spilled on the alleged use of the Agora of the Italians (GD 52; **Fig. 124**) as a slave market (Cocco 1970; Coarelli 1982; 2005; *contra* Bruneau 1975; 1985; 1987: 331–39; Rauh 1992; 1993: 81–83, 289–338, who argue that it was an arena for sporting events; for recent reviews of all the arguments, see Mastino 2008; Trümper 2008: 93–98; 2009). Trümper has recently (2008: 3–9, 93–98; 2009: 34–49) argued convincingly that the Agora of the Italians was not a slave market, but rather a luxurious, park-like building, with a

propylon, garden, double-storeyed porticoes, statue niches and a lavish bath suite (on its honorific statues, see Trümper 2014; as well as the forthcoming study by Frédéric Herbin in the context of the ANR/Deutsche Forschungsgemeinschaft programme EIKON: http://www.eikon-anrdfg.eu/?page_id=273).

Further work is currently being conducted in the area of the Agora of Theophrastos, focusing on the base of Menodoros that stood in its northeastern corner. Menodoros was a renowned wrestler and pancratiast towards the end of the second century BC. Nathan Badoud (EfA/Fribourg), Jean-Charles Moretti and Myriam Fincker have undertaken an analysis of the inscriptions on the base of Menodoros and of the position of the monument in the agora (*BCH* 135 [2011] 588).

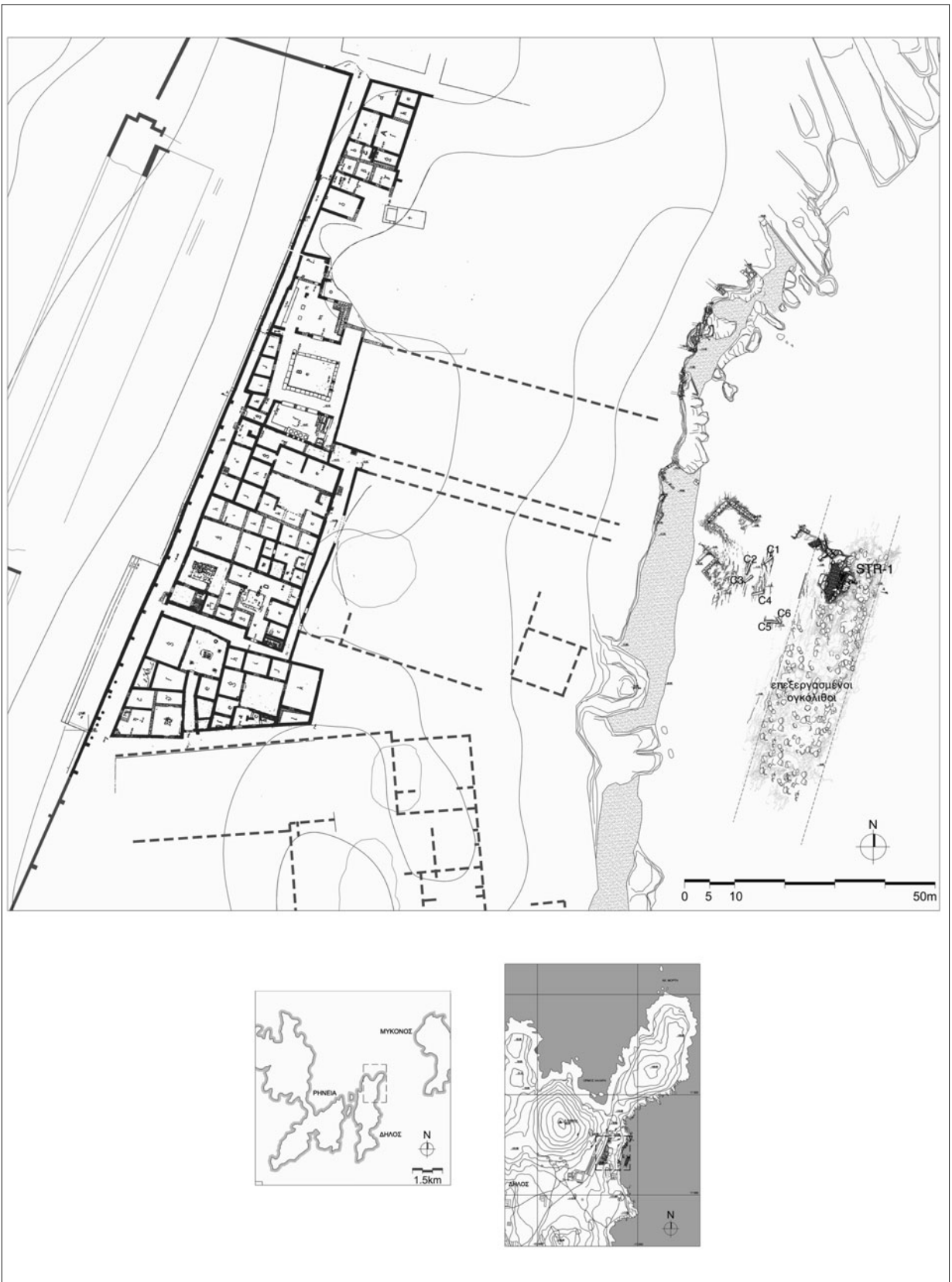
Underwater survey (EMA/Institute of Historical Research of the National Hellenic Research Foundation)
The first underwater survey around the island was conducted in 2014 and 2015 by Mantha Zarmakoupi (Institute of Historical Research of the National Hellenic Research Foundation/Birmingham) and Magdalini Athanasoula (EMA) under the direction of Ageliki Simosi (EMA) (**Fig. 132**). The underwater survey was initiated as part of the study by Mantha Zarmakoupi of the urban development of the Late Hellenistic city of Delos (<http://urbanetworks.wordpress.com>), funded by the Marie Curie Intra-European Fellowship scheme (FP7-PEOPLE-2012-IEF, no. PIEF-GA-2012-331969) and hosted by the Institute of Historical Research of the National Hellenic Research Foundation. The project is a *synergasia* between the Institute of Historical Research of the National Hellenic Research Foundation and the EMA.

The underwater survey focused on one of the neighbourhoods and port installations that were created in the northeastern part of the island, the Stadion District (GD 79; **Fig. 124**), at the height of Delos' period of urbanization. The survey covered the submerged areas of the neighbourhood that stretches from the Synagogue (GD 80; **Fig. 124**) to just north of Agia Kyriaki.

The Cyclades have seen a sea-level rise of about 2m over the last 2,000 years, engulfing many areas of the heavily urbanized island of Delos. The Stadion District was chosen for the project because it is one of the few areas that has not been disturbed by recent developments, unlike much of the western side of the island and the central harbour. The submerged structures of the central harbour of Delos have suffered irreversible changes, as the 19th- and 20th-century excavators deposited their archaeological rubble on the sea floor and new port installations were constructed over it. The Stadion District is one of the few areas where we can study the seafront of the city in order to understand the integration of Delian trading activities with the urban fabric.

The survey located the remains of a building with at least five rooms, located along the shoreline and enclosed between two streets. The building starts at the shore and extends 30m inland, at a depth of about 1.5–2m. In the past, these remains have been identified as port facilities (Papageorgiou-Venetas 1981: 106), but the survey clarified that they are in fact the submerged remains of the Stadion District, forming its eastward limit towards the sea. The building is roughly 30m × 30m, which is similar to the size of the shops on the seafront on the western side of the island, which have average dimensions of 37m × 57m. In two of the spaces of the building, clusters of amphorae were found embedded within beachrock formations. One space has 18 pots at a depth of 1.5–2m (**Fig. 132**, STR-1) and the second has 15 pots at a depth of 0.7m, demonstrating that these spaces were used for storage. Parts of plain column shafts were also found (**Fig. 132**, C1–C6), which were probably part of the colonnade of the building. In addition, the remains of large stone plinths that formed the eastern breakwater of the Stadion District were located just to the south of the eastern end of the building. The building must therefore have been located at the eastern edge of the Stadion District along the ancient coastline, which was artificially formed (Zarmakoupi and Athanasoula forthcoming).

The identification of a building associated with commercial activities so close to the ancient shoreline is an important discovery that assists our understanding of the Delian *emporion*. Studies have focused so far on the area of the main harbour. The Stadion District was hitherto considered a kind of suburb, since it seems now to be cut off from the western side of the island. The discoveries made during the underwater investigation of the Stadion District prove that this area was very similar in character to the main harbour area and was an integral part of the Delian *emporion*. It appears that a second commercial harbour operated in this area and complemented the activities of the central harbour of Delos in the western part of the island. It is possible



132. Delos: plan of the Stadion District with submerged structures found during the first underwater fieldwork season in 2014 (Zarmakoupi and Athanasoula forthcoming: fig. 1). © Mantha Zarmakoupi and Magdalini Athanasoula.

that the small bay to the north of the neighbourhood of Ghourna served as an anchorage during the Late Hellenistic period, also in order to complement the activities of the main port (see Zarmakoupi 2014). It should be noted that a marble quarry is located to the southeast of Kynthos and north of Kato Vardhia hill, in direct contact with the sea, where marble blocks could be put directly on board ships (Fraisie and Kozelj 1991: 289–92; Hadjdakis *et al.* 2009: 277, 280). The harbour of the Stadion District could therefore accommodate the victualling of ships on this side of the island, before or after the loading of their cargo at the marble quarry.

To date, researchers have focused on the central harbour of Delos, envisaging the main harbour area of Delos as the place where the Delian *emporion* operated. The underwater survey suggests, however, that we need to consider and research beyond the central harbour area, in the eastern portion of the island as well as in adjacent Rheneia, whose cemetery extends from just opposite the main harbour area from Cape Ghlaropounda to the bay of Kato Generale (**Map 9**). In conclusion, the operation of the port-city of Delos is still not entirely understood, but the underwater investigation on the northeastern side of Delos is beginning to provide a new picture of the ways in which the Delian *emporion* and its harbours operated.

The city of Delos in the Hellenistic and Roman periods

Beyond the operation of the Delian *emporion*, recent investigations have also shed light on the architecture, infrastructure and growth of the city of Delos, as well as on the development of its sanctuaries in the Hellenistic and Roman periods. In addition, the recent publication of a new atlas of Delos (**ID704**, **ID705**, **ID728**, **ID846**) has provided an indispensable research tool.

Sanctuaries in the Hellenistic and Roman periods

The development of the several sanctuaries in the Hellenistic and Roman periods has been the subject of numerous field projects in recent years. These include an examination of the Sanctuary of Apollo (**ID700**, **ID701**, **ID726**, **ID842**, **ID1366**) and the Artemision (GD 46; **Figs 124**, **125**), the excavation of the Aphrodision of Stesileos (**Fig. 124**; **ID654**, **ID703**, **ID844**, **ID1953**, **ID3404**) and the excavation of Serapieion A (GD 91; **Fig. 124**) and Serapieion B (GD 96; **Fig. 124**; **ID4768**).

The study of the Sanctuary of Apollo (**Fig. 125**) directed by Roland Étienne (EfA/Paris 1) (**ID700**, **ID701**, **ID726**, **ID842**, **ID1366**) will result in a forthcoming publication in the Exploration Archéologique de Délos series, including an examination of the sanctuary in the Late Hellenistic, Roman and Early Christian periods by Enora Le Quéré, as well as an investigation of the votive monuments within the sanctuary in the Hellenistic and Roman periods by Frédéric Herbin (Herbin 2010). The bases of votive statues along the dromos leading to the Propylaia (GD 5; **Fig. 125**) of the Sanctuary of Apollo have also been the subject of recent analyses that address the political, social and spatial dynamics of honorific practices in the Hellenistic and Roman periods (Dillon and Palmer Baltes 2013; Griesbach 2013; Krumeich 2015). Furthermore, a study of the architectural development of the Artemision (GD 46; **Figs 124**, **125**) by Jean-Charles Moretti (EfA/Institut de recherche sur l'architecture antique, Centre national de la recherche scientifique) has analysed the ways in which the Archaic temple was incorporated within the Hellenistic temple (Moretti 2012: 427–37).

Serapieia A and B (GD 91, 96; **Fig. 124**) are currently being re-examined by Hélène Brun (EfA/Paris Sorbonne) in order to clarify their phases of construction from the Hellenistic to the Imperial period (**ID4768**). In addition, study of the Aphrodision of Stesileos (GD 88; **Fig. 124**) by Cécile Durvy (EfA/Aix-en-Provence) has included excavation to clarify the chronology of the sanctuary and its eastern extension, as well as the changes that it underwent from the period of independence to the Imperial age, when the aqueduct was constructed (**ID654**, **ID703**, **ID844**, **ID1953**, **ID3404**).

Activities at the sanctuaries of Delos in the Hellenistic and Roman periods have informed recent studies of religious syncretism on the island (see Barrett 2011), as well as of the religious networks in which Delos was embedded (see Collar 2013). Study of their development will illuminate the ways in which these sanctuaries were adapted to meet the needs of Delian society and the kinds of connections that religious authorities developed beyond Delos. Recent studies of the religious associations on Delos have shown the ways in which they were employed by the inhabitants of the island in the construction of their identity (Trümper 2006; 2011a; forthcoming).

Urbanism and domestic architecture of Hellenistic and Roman Delos

Several projects have focused on the urban fabric of Hellenistic and Roman Delos, exploring its water and sanitation infrastructure, the arrangements of its houses, the modalities of its urban growth and its social organization. Specific topics addressed include the water distribution of the city, the latrines on the island (**ID4770**), the House of Fourni (GD 124; **Map 9**, **Fig. 124**; **ID1367**, **ID1954**, **ID3405**, **ID4769**), the Wall of Triarius (GD 69; **Figs 122, 124, 127**; **ID1955**, **ID2641**, **ID4771**) and the development of the city over time.

Study of the water distribution of Delos by Jean-Charles Moretti and Myriam Fincker (AfA/Institut de recherche sur l'architecture antique, Centre national de la recherche scientifique) has focused on the barrage of the Inopos river (GD 97; **Fig. 124**) and the aqueducts of Delos. The Inopos, which is the main river of Delos, springs to the southwest of Kynthos. It first flows north and then turns west towards the Agora of the Competaliasts (GD 2; **Fig. 124**). A dam connected with a huge retaining basin was constructed in the Classical period, at the point where it changes direction. The monument was studied in the context of a project directed by Michèle Brunet on water facilities on Delos (on the programme, see *BCH* 125 [2001] 620–27; 126 [2002] 546; 127 [2003]: 516–24). During investigation of the monument in 2003, an inscribed stele was found, reused in the staircase leading into the basin (Siard 2006), and this prompted the re-examination of the dating of the monument. The study showed that the dam and its basin were refurbished at the beginning of the period of Delian independence and that it was connected to an aqueduct in the Imperial period (Fincker and Moretti 2007).

The study of water systems on Delos has revealed that, while the vast majority of water projects on the island aimed to preserve and grant access to the groundwater and rainwater stored in cisterns, as well as to the dam on the Inopos river (GD 97), piped water systems were also developed. Two water networks with basins were developed in the periphery of the Sanctuary of Apollo in the Hellenistic period, while an aqueduct, with associated water towers used for storage and distribution, was built on the island in the third century AD (Moretti and Fincker 2011). The construction of an aqueduct in the Roman period, when the population of the island is supposed to have been very small, prompts a reconsideration of activities on the island at that time.

A study of the latrines of Delos is currently being conducted by Alain Bouet (EfA/Toulouse 2). The study focuses on 94 structures on the island and involves a photogrammetric survey of them, a palaeoparasitological analysis and pollen analysis, as well as analysis of marine microbiology. Among the aims of the project is the intention to comprehend the factors underpinning the spread of parasitic diseases on Delos (**ID4770**). The project will complement the earlier analysis of the layout and socio-cultural significance of latrines on Delos by Monika Trümper (2011b), who has investigated the public function of latrines within domestic settings.

The excavation of the House of Fourni (GD 124; **Fig. 124**, *cf.* **Map 9**; **ID1367**, **ID1954**, **ID3405**, **ID4769**), under the direction of Hélène Wurmser (EfA/Lyon 2), has included an investigation of its mosaics and overall internal organization, as well as close study of the southern zone of the house, which was used for agricultural activities and operated independently from the main house area. This combination, yet separation, of a luxurious house and areas dedicated to agricultural activities is reminiscent of similar arrangements in the villas of Early Republican and Imperial Italy. It is possible that the House of Fourni presents an early example of a villa in Greece. The combination of profit with luxury is a well-known Roman architectural strategy and has also been attested, albeit in a different form, in other houses on Delos (see above, *ANR research programme on storage spaces*; Zarmakoupi forthcoming a; forthcoming b).

A study of the fortification built by the legate Gaius Valerius Triarius in AD 69 to protect the city of Delos from the pirate Athenodoros (GD 69; **Figs 122, 124, 127**) is being conducted by Stephanie Maillot (EfA/Clermont-Ferrand) and Myriam Fincker (EfA/Institut de recherche sur l'architecture antique, Centre national de la recherche scientifique) in preparation for its publication (**ID1955**, **ID2641**, **ID4771**). The general layout of the fortification is approximately known and four sections have been recognized with certainty. The first is 13.2m long and extends from the western wall of the Granite Palaestra (GD 66) in

a northwesterly direction (69.1 in **Fig. 124**, **Fig. 125**). A second segment extends from the southern wall of the Granite Palaestra to the building located behind the Altar of Dionysos (69.2 in **Fig. 124**, **Fig. 125**). This incorporated the walls of existing buildings (the Palaestra of the Lake [GD 70], the so-called Temple of Anios [GD 68] and the Temple ‘du bastion’) and was originally 215m long (35m are preserved) (**Fig. 125**). This part of the fortification served to protect the city from attackers who might land in the exposed harbour of the Stadion District. A third, 36m-long segment is preserved southwest of the city and south of the Agora of the Competaliasts, extending towards the sea (69.3 in **Fig. 124**, **Fig. 127**). A fourth segment of 45m (69.4 in **Fig. 124**), running east–west, has been identified on the hill of the theatre and is related to two quadrangular bastions. An architectural study was made of the first three segments (**ID1955**, **ID2641**) and two sections were opened at the northern and southern ends of the fourth, to obtain a clearer understanding of the way in which the fortification was constructed (**ID4771**). The southern segment of the wall imposes itself on the Delian landscape. Its construction was evidently strategic. It could block invasions from the southwest, it overlooked the Inopos valley to the east and, more importantly, enabled the monitoring of maritime activities from Naxos to the south, Mykonos to the east and Tenos to the north. Furthermore, the construction of the wall and its two bastions on the hill of the theatre was meant to create an imposing view when seen from afar, so as to deter possible attacks.

The definitive research tool for the study of Delos, *L’Atlas de Délos* (**Fig. 124**), was published in 2015 in the Exploration archéologique de Délos monograph series of the EfA (volume 43; Moretti *et al.* 2015) and in a collaboration between the EfA and the Institut de recherche sur l’architecture antique of the Centre national de la recherche scientifique. The new atlas is the result of a thorough survey of the island, and of all the ancient buildings that have been discovered, conducted between 2004 and 2011 by Jean-Charles Moretti, Lionel Fadin, Myriam Fincker and Véronique Picard (**ID704**, **ID705**, **ID728**, **ID846**). The publication presents a plan of the island at a scale of 1:5,000, general plans of the city at scales of 1:2,000 and 1:1,000, and plans of all the monumental complexes at a scale of 1:200. The atlas will shortly be available in a GIS form, enabling the results of new excavations to be incorporated into it (Briquet 2012).

Finally, a study of the urban development of Delos, entitled *UrbaNetworks* (<https://urbanetworks.wordpress.com/>), is currently being undertaken by Mantha Zarmakoupi (Institute of Historical Research of the National Hellenic Research Foundation/Birmingham). *UrbaNetworks* was originally funded by the Marie Curie Intra-European Fellowship scheme (FP7-PEOPLE-2012-IEF, no. PIEF-GA-2012-331969) and hosted by the Institute of Historical Research of the National Hellenic Research Foundation (April 2013 to March 2015), and is now funded by the University of Birmingham. Focusing on the four main residential neighbourhoods of the Late Hellenistic city of Delos, it examines urban development in relation to economic change. By analysing the transformation of the residential neighbourhoods of Delos in relation to manufacturing activities, shopping and storage facilities, as well as the construction of public buildings, the project examines the neighbourhoods as microcosms of the broader changes which Delos underwent during the Late Hellenistic period.

Conclusion

The study of Hellenistic and Roman Delos and its *emporion* has profited from two recent developments in the disciplines of the archaeology and ancient history of Greece. On the one hand, the burgeoning study of ancient economies has led to a re-examination of the modalities of economic activities, in search of a more sophisticated model for understanding the operation of Delian commerce (see Duchêne 1993) beyond the typological models of substantivism versus modernism. On the other hand, an increasing interest in Roman Greece, expressed in seminars (such as the Roman Seminar in Athens), conferences and accompanying publications (for example Rizakis and Touratsoglou 2013), and research projects on the history, archaeology and epigraphy of the period (for example by the Section of Greek and Roman Antiquity [formerly KERA] of the Institute of Historical Research of the National Hellenic Research Foundation: <http://www.eie.gr/nhrf/institutes/igra/southerngreeceprog-en.html>), has laid the intellectual foundations for contextualizing Hellenistic and Roman Delos, and its *emporion*, within a canvas of broader historical developments.

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