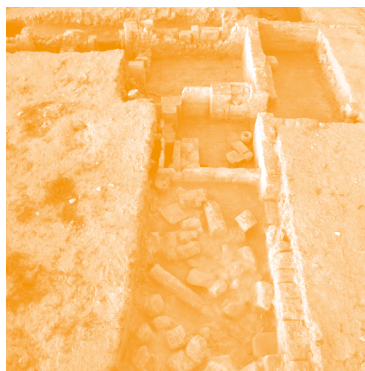


# From Roman industrial center to early Islamic town: archaeological excavations at 'Marea'/Philoxenite in the 2020–2021 field seasons



**Abstract:** Being one of the biggest and best preserved archaeological sites in the western hinterland of Alexandria, 'Marea'/Philoxenite is, therefore, one of the most important points of reference for studies of the Mareotis region. Despite the fact that the site has been investigated for many years, by various excavation teams, the nature and chronology of the different phases of settlement remain unclear. Since 2018, systematic stratigraphic excavations have been carried out at the site with the aim of investigating insufficiently studied parts of the settlement. In 2020 and 2021, this goal was achieved by opening and surveying 11 trenches in the southwestern part of the site. This led to the identification of hitherto unknown structures: two churches, two tombs, an irrigation system and numerous rubbish dumps associated with the Roman, Byzantine and early Islamic phases. The study also determined the extent and functional changes of various parts of this settlement, in different historical periods.

**Keywords:** Egypt, Roman period, Byzantine period, churches, town, graves

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The archaeology of the Mareotis region, which forms part of the immediate hinterland of ancient Alexandria, is compromised by the scarcity of stratigraphic studies that would allow settlement changes to be analyzed over longer periods of time. Although extensive surface surveys (Empereur and Picon 1992; Blue and Khalil 2011) and architectural studies (e.g., Grossmann 2019) have been carried out in the Mareotis, detailed information based on stratigraphic excavations is still scarce.

Remedying this problem to some extent are the results of extensive research at the 'Marea' site (identified with Byzantine Philoxenite<sup>1</sup>), which started in 2018. This settlement is located on the

southern shore of the western arm of Lake Mareotis [Fig. 1]. Previous excavations have identified five main phases of settlement at this site, spanning a period of nearly one millennium (Gwiazda and Wielgosz-Rondolino 2019): The oldest remains are associated with the Hellenistic period and the newest with the beginning of Arab rule in Egypt.

Having concentrated in previous years on the northern and eastern parts of the 'Marea'/Philoxenite site, in the 2020 and 2021 seasons the Polish expedition from the University of Warsaw moved to the urban area to the southwest [Fig. 2]. The goal was to identify with greater precision the boundaries of the settlement in different historical periods. Also of in-

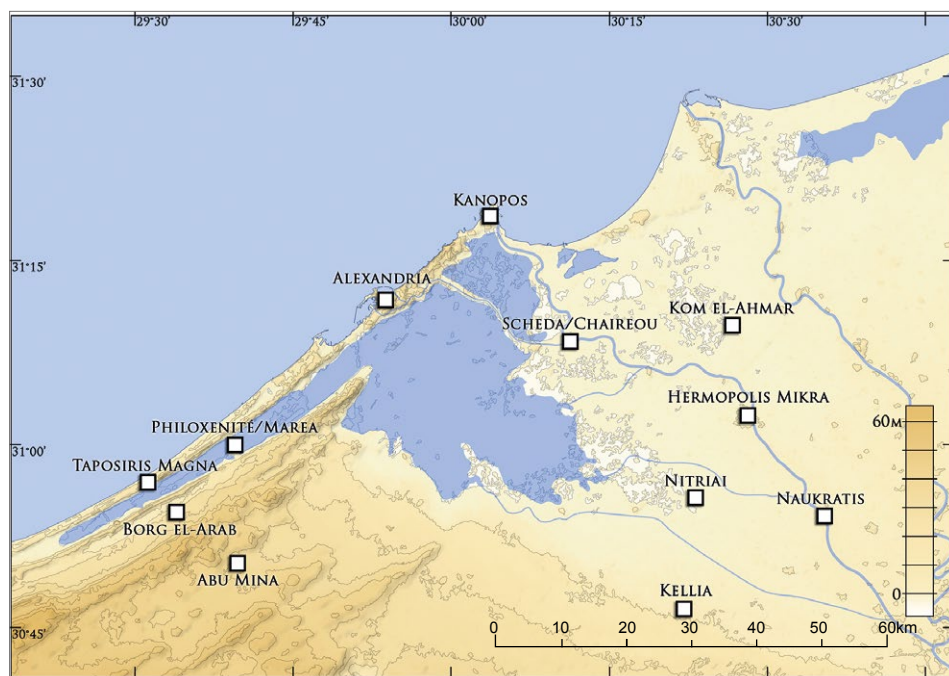


Fig. 1. Map of the Mareotis region indicating the most important archaeological sites; extent of the lake as in late antiquity (University of Warsaw Marea Archaeological Project | drawing J. Kaniszewski)

1 On the identification of the ancient name of the site see Derda 2020: 61–63, with further references.

terest was a functional differentiation of specific areas within the settlement. And so, one trench was dug in the area of the Great Basilica at the northernmost end of the site by the lake (A2-1), another trench explored a structure and two tombs in the southeastern part of the urban area

(CH2 and FR3, G1&G2), two trenches were placed on the waterfront at the base of Pier 2 (WF17-1 and P2), four trenches in the southwestern urban agglomeration (F2, MT1, N1 and B1) and, finally, two trenches in the southwestern hinterland (V3 and V5).

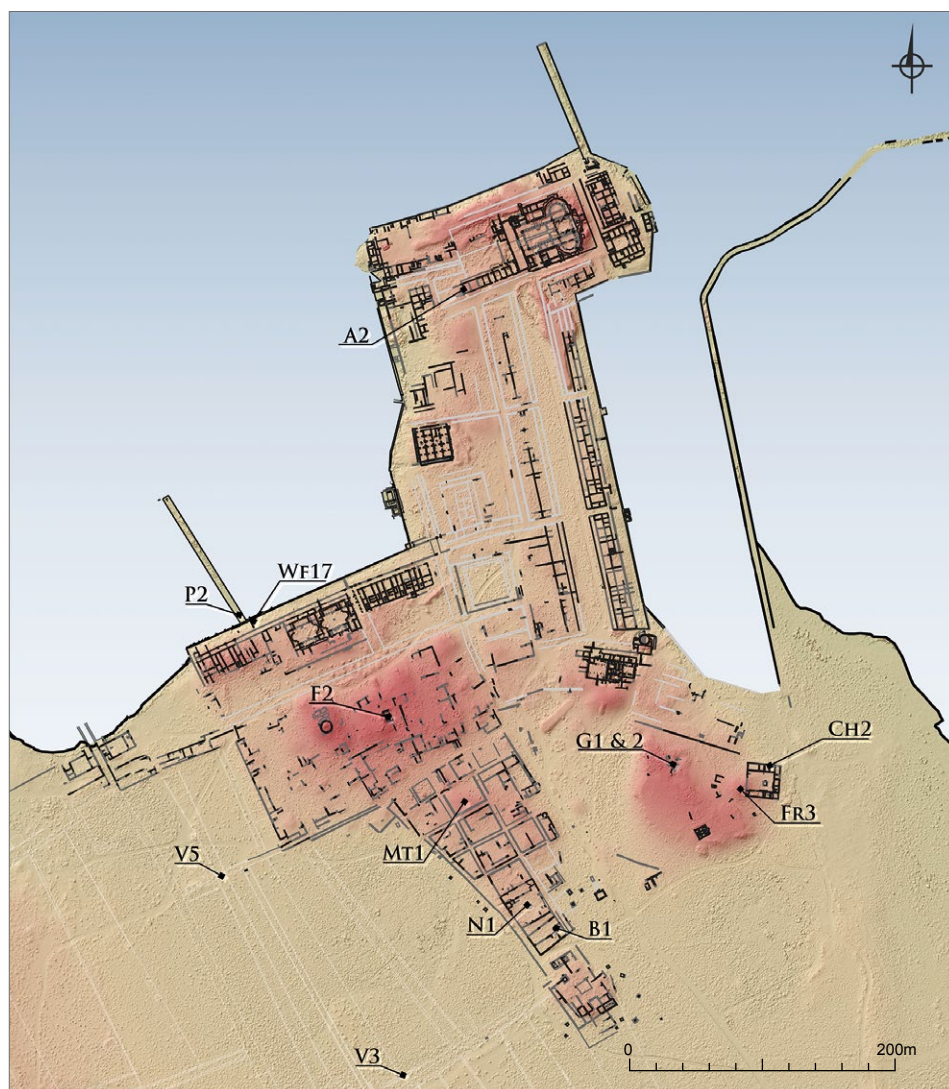


Fig. 2. Plan of 'Marea'/Philoxenite, marking trenches excavated in 2020 (A2-1, CH2, FR3, V3 and V5) and 2021 (P2, WF17-1, F2, MT1, G1&G2, N1 and B1) (University of Warsaw Marea Archaeological Project | drawing M. Gwiazda, M. Łuba, and A.B. Kutiak)

## BASILICA AREA

### TRENCH A2-1

Trench A2-1 was opened at the highest point of a longitudinal elevation coinciding with a row of rooms that extended the southern part of the atrium of the Great Basilica [Figs 2, 3]. It measured 6.30 m on a line crosswise to the buildings' axis, and was 2.90 m wide. A high water table did not allow the excavation to get down to bedrock, but all of the occupation levels previously attested in this part of the site were recognized, including the oldest contexts reached in two narrow probes in the eastern part of the trench.

The oldest deposit was a layer of greyish-yellow silt, that is, loess, rising to the south [Fig. 4]. Distinct cracks were observed on the top of this layer [Fig. 5], suggesting a sediment that was wet and dried in the sun. The deposit contained crushed shells alongside a small number of potsherds and baked bricks, indicating that it was a man-made feature.

Immediately above this layer were large quantities of ash and charcoal mixed with lumps of clay, Roman Egyptian



Fig. 3. Trench A2-1: view of the eastern section of the trench looking northeast, with the atrium of the great basilica in the background (University of Warsaw Marea Archaeological Project | photo M. Gwiazda)

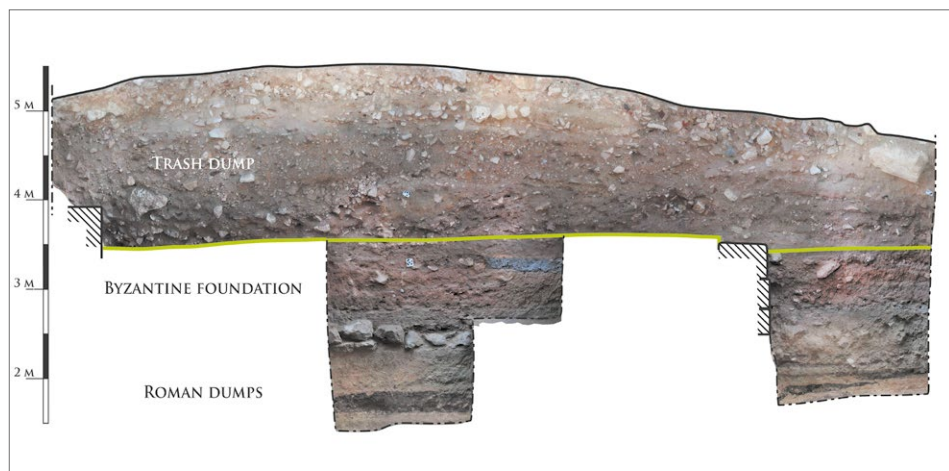


Fig. 4. Trench A2-1: eastern section (University of Warsaw Marea Archaeological Project | orthophotographs & processing M. Gwiazda)



Amphorae (AE=Amphores égyptiens) 3 and the separators used in their manufacture. The Roman attribution of this deposit was confirmed also by a coin of Domitian (81–96) [see below, *Fig. 8:1*]. This layer was 0.25 m at the thickest, the thickness diminishing toward the southern side of the trench. The layer was covered by a deposit similar to the previous one, namely greyish-yellow silt with a sizable addition of cockle shells [see below, *Fig. 8:12*]. These layers being so similar, there is reason to think that they were formed more or less at the same time despite being separated by a charcoal and ash deposit.

The next occupation phase dates to no earlier than the second half of the 6th century CE, and it was dated based on fragments of Late Roman Amphorae (LRA) 1, 4.4 and, more importantly, Late Roman D (LRD) 9B red-slipped bowls. This phase was associated with the construction of the western row of rooms in the southern atrium of the Great Basilica. They were



*Fig. 5.* Trench A2-1: cracking observed on the top of a layer of silt (University of Warsaw Marea Archaeological Project | photo E. Chołodowska-Kamińska)

built on top of a levelling layer of crushed limestone mixed with soil. A lens of silt yielding secondarily deposited pieces of broken Roman AE 3 and AE 4 vessels was intercalated among these deposits.

Once the building site had been prepared, three walls were erected in this location in an orthogonal arrangement. Two walls, oriented roughly east–west, marked the northern and southern boundaries of a structure, while the third, a partition wall running perpendicular to them, separated two adjacent spaces [*Fig. 6*]. Like most Byzantine walls, in this part of the site, they were built of limestone pseudo-ashlars.<sup>2</sup> The spaces between the stones were filled with large amounts of mortar, and their faces were covered with thick layers of white plaster. The floor of the western room was completely destroyed, even as heavily damaged remains of limestone slabs could be seen in the unit to the east. No evidence of the original function of these two units was found within the trench.

The 6th-century-CE levelling layer also served as a bedding for a street running on the south side of the building. Its surface was made of tamped earth covered with a thin layer of crushed lime or gypsum [see *Fig. 6*]. The street appears to have been deliberately profiled, dropping ever so slightly toward the north.

The floor of the western of the two rooms was removed in the next phase and a furnace, 2.90 m in diameter, was installed there. Its walls were built of baked bricks in a header course. The bottom of the installation was lined with bricks cov-

2 That is, stones cut into cuboidal blocks, a definition coined by German architects working in nearby Abu Mina. Most of them do not have clearly pronounced edges and corners, which is due to the inherent fragility of local limestone.



Fig. 6. Trench A2-1: two units of a building divided by a partition wall, located north of a street, seen at bottom (University of Warsaw Marea Archaeological Project | photo M. Gwiazda)



Fig. 7. Fragment of a baked brick furnace in trench A2-1, looking westward (University of Warsaw Marea Archaeological Project | photo M. Gwiazda)

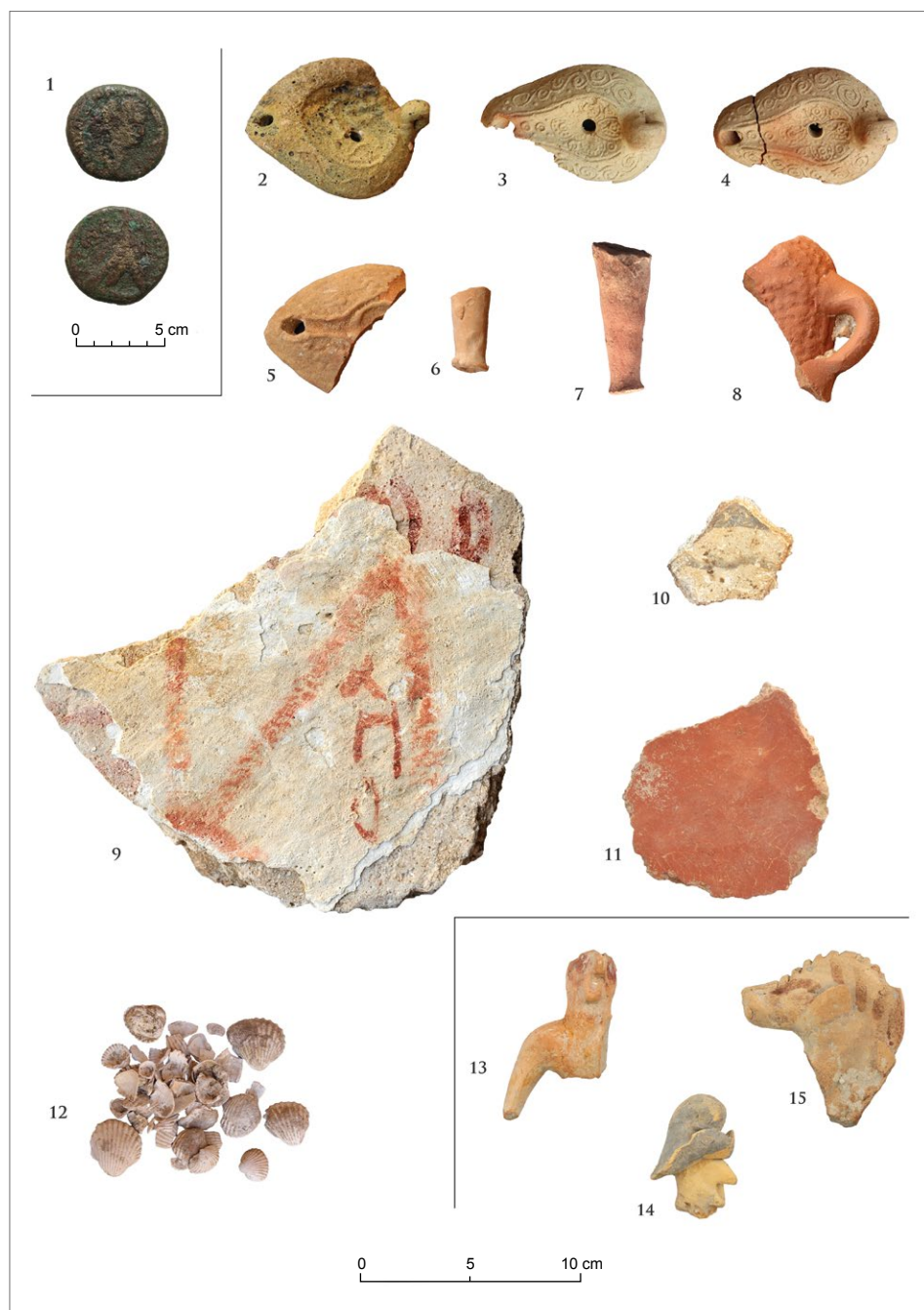


Fig. 8. Selection of objects from trenches A2-1 (1-12) and WF17-1 (13-15): 1 – coin of Diocletian; 2-5 – Byzantine and early Islamic oil lamps; 6-8 – terracotta figurine fragments; 9-11 – plaster with painting; 12 – shells; 13-15 – terracotta figurines (University of Warsaw Marea Archaeological Project | photos T. Derda, J. Burdajewicz, K. Żochowski)



ered with an isolating layer of clay [Fig. 7]. Nothing to identify the purpose of this furnace was found, possibly because the upper part of this structure was demolished in a subsequent phase.

The room lay unused for an undetermined period of time before being

converted into a lime/gypsum storage area (the substance identified chemically, J. Burdajewicz, personal communication). A clean layer of this material was deposited against the east and north walls of the room, its volume decreasing to the west.

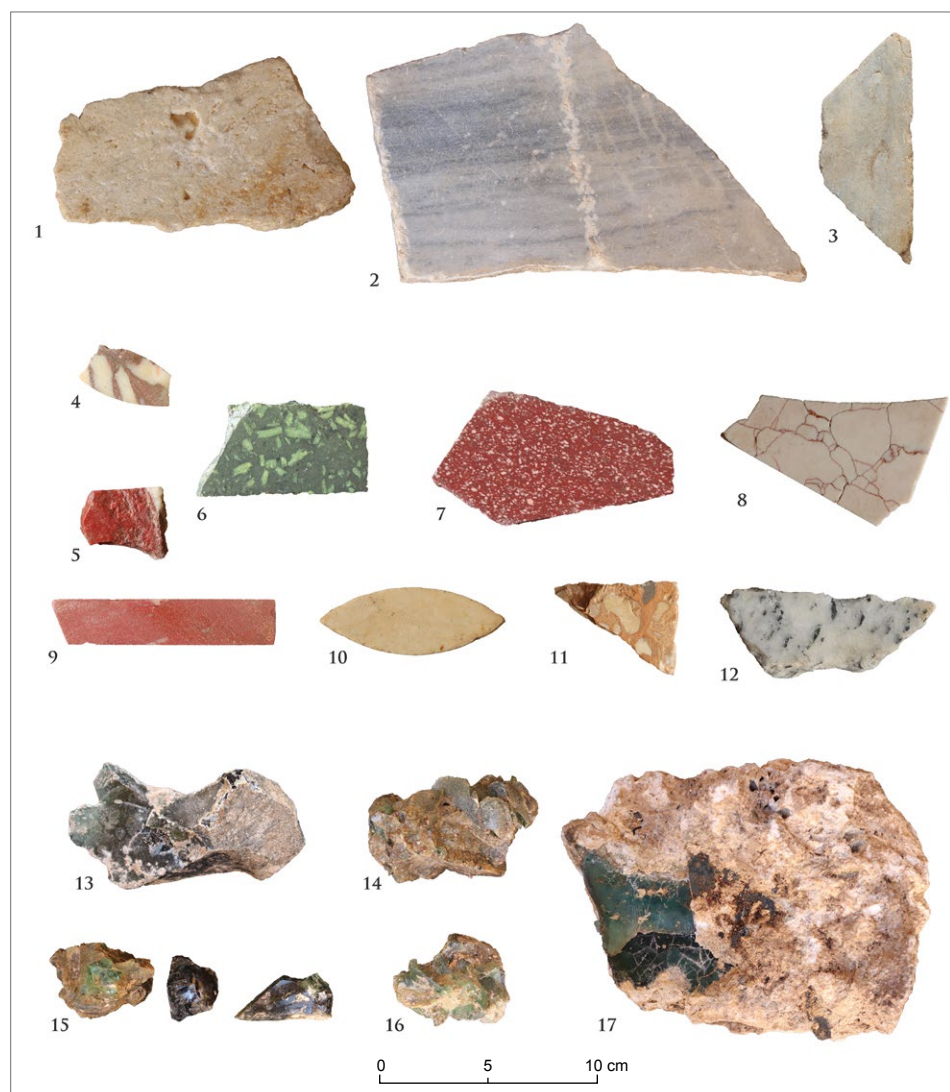


Fig. 9. Selected finds from the rubbish dump in trench A2-1: 1–12 – selection of limestone and marble tiles; 13–17 – waste associated with glass production (University of Warsaw Marea Archaeological Project | photos T. Derda)

Sometime later the function of this part of the site changed diametrically: once the upper parts of the walls were demolished, the rooms were turned into a rubbish dump. The rubbish included building materials (pseudo-ashlars, stone rubble,

lumps of mortar, painted plaster, fragments of marble tiles and columns), as well as ceramic and glass vessels, animal bones and waste associated with glass production [Figs 8:2–11, 9]. The pottery from these deposits is dated to the 7th–8th centuries CE.

## SOUTHEASTERN OUTSKIRTS

An area on the southeastern outskirts of the town, identified in the past as a necropolis (Babraj and Szymańska 2008a: 177–186; 2008b: 15, Note 49, Fig. 1.15),<sup>3</sup> was tested in 2020 with two trenches: CH2 and FR3. In the next season, two rockcut tombs were investigated (G1&G2) (for the location of the trenches see Fig. 2).

### TRENCH CH2

The remains of a regular building on a natural mound on the southeastern outskirts of the town attracted the attention of the field team. A deep probe dug inside the remains showed that the building had very shallow foundations of broken limestone without any bonding mortar [Fig. 10]. The



Fig. 10. Trench CH2: stratigraphic probe under the building foundations (University of Warsaw Marea Archaeological Project | photo T. Barański)

3 On the geology of the site see Mycielska-Dowgiałło and Woronko 2008: 19, 21.

stones rested directly on a sterile layer of silt within which were natural concentrations of limestone rock chips.

The lower parts of the building walls were constructed almost exclusively of crushed limestone. Limestone pseudo-ashlars were used only in a few cases, in particular to reinforce the corners. The state of preservation of the walls was poor, especially in the eastern and

northern parts. The eastern and southern wings of this building were cleared in the course of the excavation.

The structure was square in plan with sides about 24 m long [Fig. 11]. It consisted of a central courtyard paved with stone slabbing, surrounded by rooms. Sherds of AE 5/6 containers found in the wall structure point to a construction date no earlier than the second half of the 6th century CE.



Fig. 11. Overview of trench CH2 with small trench FR3 on the left. Black dashed lines mark the limits of excavation trenches (University of Warsaw Marea Archaeological Project | orthophoto & processing M. Gwiazda)





Fig. 12. Apse with two layers of floors preserving the impressions of altar supports (trench CH2) (University of Warsaw Marea Archaeological Project | photo T. Barański)



Fig. 13. Selected marble objects: 1 – fragment of a chancel post from trench CH2; 2 – fragment of a chancel screen from N1-5; 3 – fragments of a tabletop from N1 (University of Warsaw Marea Archaeological Project | photo T. Derda and K. Żochowski)



The building was originally residential in function. This is indicated by, among others, latrines located in the southwestern corner, a water tank in the southeastern corner and a recreational pool in the central part of the courtyard. Subsequently, the southern wing of the building, which included part of the latrine, was converted into a single-aisle church. It had an apse with two layers of lime-mortar floors, the surfaces of both preserving impressions of four altar sup-

ports [Fig. 12]. A fragment of a marble chancel post was discovered in the church [Fig. 13:1]. The apse and other parts of the church were decorated with paintings [Fig. 14], and the floor of the nave was paved with limestone slabs, partly preserved in the western part of the room.

A baptistery was located east of the apse. Its baptismal font was dug into sterile silt and encased in limestone. It had staircases on the eastern and western sides, leading to a circular pool, the walls

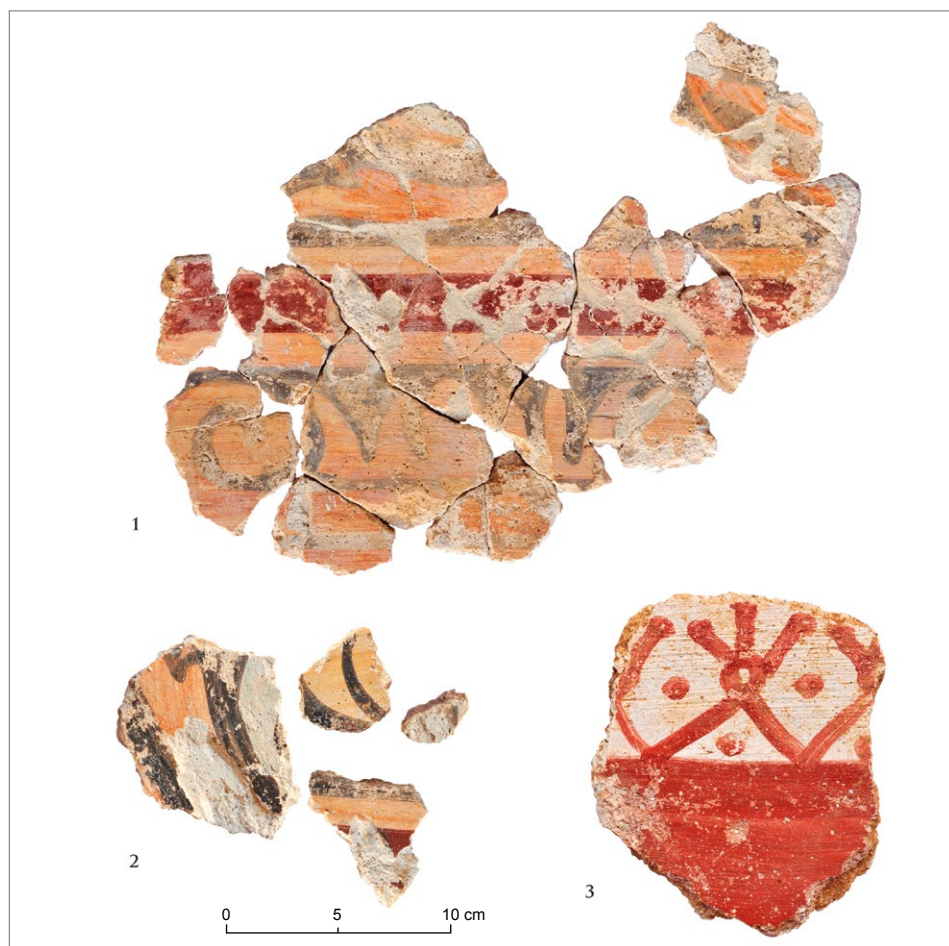


Fig. 14. Painted plaster fragments from trench CH2 (University of Warsaw Marea Archaeological Project | photo J. Burdajewicz)



Fig. 15. Stepped structure in trench FR3; robber trench visible in the northwestern corner of the trench (University of Warsaw Marea Archaeological Project | photo T. Barański)



Fig. 16. Waste produced during the burning of lime/gypsum (University of Warsaw Marea Archaeological Project | photo T. Barański)

of which were originally faced with marble revetment. The floor of the baptistery was made of limestone slabs in similarity to the church.

The last phase before abandonment involved the dismantling of a large part of the limestone slab floor, the liturgical furnishings from the chancel and the marble wall revetment from the baptistery. Rubbish in the form of fragments of broken table tops and Greek ostraca was also deposited in the baptistery.

### TRENCH FR3

The trench was located on the spot of a magnetic anomaly corresponding to a concentration of ash, lime/gypsum and scattered baked bricks on the surface atop the highest ground in this part of the site (Derda et al. 2021: 133).

The lowest identified layer was light silt corresponding to the sterile layer discovered beneath building CH2. Standing on it was a four-stepped structure [Fig. 15], 1.25 m high and 1.15 m wide. Earth with limestone rubble filled its core, while the outer part was built of limestone ashlars. The corner perforation on one of the top stones could have been used for tethering purposes. Nevertheless, the function of this structure is unknown.

The site was later covered with waste from the production of lime or gypsum. This waste included crushed limestone with signs of burning, baked bricks, some of which were vitrified, and black slag-like lumps [Fig. 16]. In addition, numerous fragments of nummulitic limestone and marble objects were encountered in the deposit. Among these were fragments of wall revetment, capitals, columns, some of which bore traces of burning and soot-

ing. The deposit also contained fragments of pottery vessels, predominantly AE 5/6.

The stratification sequence described above, together with the stepped structure, was disrupted at an unspecified time. This is evidenced by the presence of a pit in the northwestern part of the trench. The fill of the pit contained mixed waste associated with lime/gypsum production and soil. This probably took place in remote times as indicated by the absence of modern intrusions.

### TRENCH G1 & G2

In 2021, two tombs cut in the limestone rock were examined, even as engineering works introduced additional supports to hold up the rock ceilings. The hypogea were located 56 m northwest of the building in trench CH2 [see Fig. 2].

A rock-cut staircase oriented east–west, partly built of limestone slabs, led down into the burial chambers [Figs 17 left, 18]. Inside one of the tombs (G1), ashlars were arranged into a rectangular structure, on a layer of light sterile silt inside a natural rock cavity [see Fig. 17 left]. Only the lowest course of stones was preserved, hence the possibility of there being niches for the deposition of bodies cannot be verified.

The other tomb (G2), located northwest of the first one, was rock-cut in its entirety, roughly rectangular in plan with walls leaning in toward the ceiling [Fig. 17 right]. Two large fragments of an LRA 4.4 amphora found by the walls must have been deposited there intentionally.

Numerous human bones found inside the two chambers will be subjected to bioarchaeological analysis. However, it seems obvious that these tombs were intended for family or communal burials.



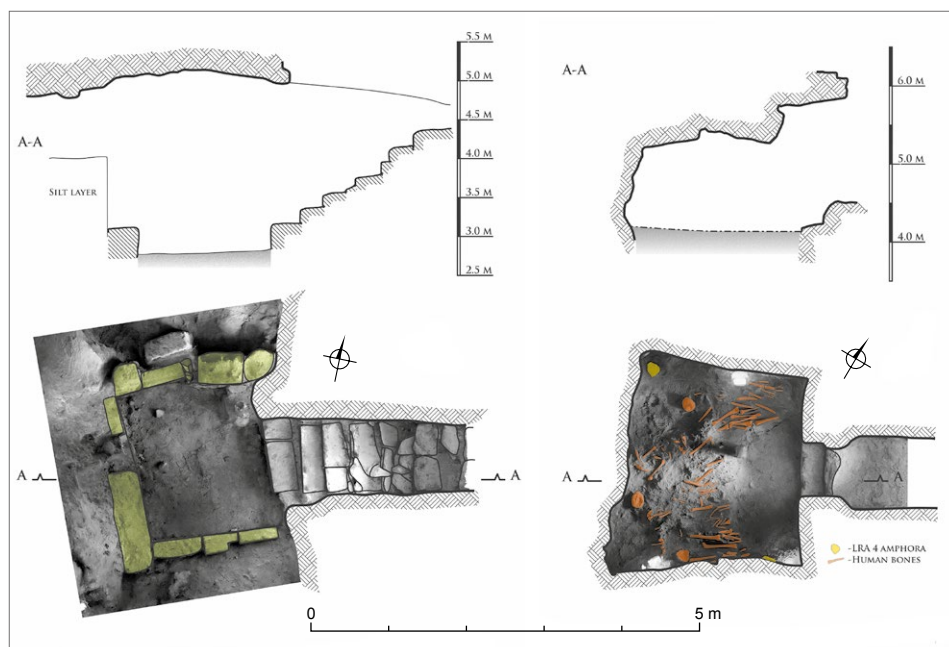


Fig. 17. Tombs G1 and G2: long-axis sections and orthophotoplan of the interiors (University of Warsaw Marea Archaeological Project | drawing and photo M. Gwiazda)



Fig. 18. Staircase leading to the interior of tomb G1 (University of Warsaw Marea Archaeological Project | photo E. Sobczyńska)



The fragmentary nature of the preserved bones and their disarticulated arrangement indicate that both tombs had been robbed in the past. Amphora sherds

(LRA 1, LRA 4, AE 5/6, AE 7) encountered in large numbers in both structures date the burial activities in this necropolis to the late 6th–7th centuries CE.

## WATERFRONT AND PIER

In the western part of the town, the area at the base of Pier 2 was explored in two trenches: P2 on the pier itself and WF17-1 on the waterfront nearby [see Fig. 2].

### TRENCH P2

The objective of work on the pier was to document the interface of the pier cap

with the waterfront wall. The cap was cleared and a trench was opened in this location [Fig. 19]. The exploration was limited to the removal of some crushed limestone filling the space between walls of limestone pseudo-ashlars on the east and west. Under the rubble, the upper part of the foundation of the eastern one



Fig. 19. Pier 2: view from the south; in the center, trench P2 in the pier cap (University of Warsaw Marea Archaeological Project | photo M. Gwiazda)



Fig. 20. Trench P2: ashlar foundations of the eastern pier boundary wall seen from the west (University of Warsaw Marea Archaeological Project | photo K. Żochowski)

of the walls was identified, made also of large sized limestone pseudo-ashlars [Fig. 20].

An added structure was found on the eastern side of the trench. It consisted of three cut limestone pseudo-ashlars and one block made of black stone (dimensions  $0.86 \times 0.61 \times 0.50$  m), bonded with hydraulic mortar [Fig. 21]. From a functional point of view, it probably reinforced the junction of the pier and waterfront. Of greater, and possibly symbolic importance is the use of black stone as building material, which has not been attested at 'Marea'/Philoxenite so far. Moreover, this kind of stone does not occur naturally in northern Egypt. The block in the structure had five smooth surfaces and one that was irregularly chipped, suggesting reuse. However, given the uniqueness of this material and its position at the base of the pier, it is possible that it



Fig. 21. Black ashlar used in the construction of Pier 2 (University of Warsaw Marea Archaeological Project | photo K. Żochowski)



may have had a symbolic or magical significance linked to the foundation phase of the structure.

#### TRENCH WF17-1

Trench WF17-1 explored a section of a street on the western waterfront within a few meters of the base of Pier 2 [see Fig. 2].

The oldest structures revealed were the wall of the waterfront itself and the perpendicular wall connected to it. Both were constructed of pseudo-ashlars set in rows, bonded with mortar. Smaller unworked limestones were also inserted into the gaps between the larger stones [Fig. 22]. The faces of these walls were neither smoothed nor plastered in any way, save for the face of the waterfront on the lake side, where the stones were evenly cut and covered with mortar. The fill between these walls consisted of light

brown soil with no admixtures, intercalated with soil of dark grey color due to a visible addition of charcoal. Finds from this layer included pottery vessels and terracotta figurines produced at nearby Abu Mina [see Fig. 8:13–15], as well as a limestone column fragment.

The *terminus post quem* for the construction of the waterfront is set by sherds of LRD 9 vessels, broadly confirmed by 28 Byzantine coins, which are too corroded however to narrow down the dating. Thus, the waterfront was built no earlier than in the mid-6th century CE.

The deposit was further sealed with an intercalation of lime/gypsum mixed with sand and silt mixed with sand. The fill leveled the ground to provide a bedding for the limestone paving of the original walking level of the road running along the waterfront.



Fig. 22. Trench WF17-1: wall at the western end of the trench, looking west, perpendicular to the waterfront wall visible at right; at left, intercalated layers of silt filling the space (University of Warsaw Marea Archaeological Project | photo M. Gwiazda)

## SOUTHWESTERN URBAN DISTRICT

The four trenches in the southwestern quarter of the town explored selected architectural features. Trench F2 constituted a reexcavation of a structure towering over the site in this area, investigated perfunctorily in 1979. Another trench was opened on a mound strewn with pottery sherds 80 m to the southeast of this one

(MT1). Further south in this area was the complex of trenches N1 (altogether eight) located on the spot of a rounded outline of tumbled building walls. Last but not least, a trench (B1) explored a structure of baked bricks and crushed limestone located south of the building recorded in trench N1.



Fig. 23. Trench F2: orthophotoplan of the three reexcavated rooms (University of Warsaw Marea Archaeological Project | orthophotoplan M. Gwiazda)



**TRENCH F2**

The isolated trench dug in 1979 in a spot on the highest elevation in this part of the site uncovered three rooms that were never properly published (Schwartz 2019). In 2021, these remains were cleared and documented, and an additional examination of the area was carried out.

The lowest recorded layer was composed of sterile, heavily compacted silt. Directly on top of this were the walls and floors of the uncovered building. The wall foundations, made of limestone pseudo-ashlars, were very shallow: 0.32 m in depth. They were 0.66 m thick to the wall's thickness of 0.34 m. The same building material was used for the walls. The layout was rhomboidal instead of orthogonal [Fig. 23]. The badly deteriorated mortar floors survived in fragments only in the northern and southern of the three rooms. These two rooms were entered from the east, while the middle room

could be accessed through a passage in the south wall of the northern room.

The building had at least two phases, the later one attested best in the northern chamber by a higher floor level preserved in the eastern part, made of bricks and pseudo-ashlars. A trough, also of limestone pseudo-ashlars, was built against the north wall of the chamber (and preserved also only at the eastern end) [Fig. 24]. The mortar-lined pool inside the trough was raised 0.80 m above the original floor.

The chronology of the construction and conversion of this building is not determined for lack of undisturbed deposits with dating material. Pottery from the secondary assemblages ranged in date from the 6th century CE to the early 8th. However, given the construction techniques in evidence and the history of the site, the building was most likely founded in the 6th century CE.



Fig. 24. Trench F2: preserved eastern end of a stone-built trough from the second phase of occupation in the northern room (University of Warsaw Marea Archaeological Project | photo M. Żmuda)

**TRENCH MT1**

The trench was opened on an artificial mound distinguished by a high concentration of pottery sherds. The excavation reached a depth of 2.65 m [Fig. 25]. Only two layers were identified. Both were associated with a large trash dump located in this part of the town. Mixed in with silt and fine sand was refuse: animal bones,

shells, iron nails, baked bricks, chunks of mortar, painted plaster, marble *crustae*, table top fragments, coins, glass objects, clay oil lamps, amphorae (AE 5/6, AE 7, AE 8, LRA 1, LRA 4.4, LRA 5, LRA 8), kitchen and tableware, such as African Red Slip Ware (ARSW) Hayes form 89B, LRD 9C, Egyptian Red Slip A (ERSA). The variety as well as quantity of the ma-



Fig. 25. Trench MT1 (University of Warsaw Marea Archaeological Project | photo M. Żmuda)



terial point to the site being a communal garbage dump, which can be dated by the pottery finds to the 7th century CE.

### TRENCH N1

Excavation of this circular depression in the ground, surrounded by a ring of collapsed walls, was carried out in eight trenches [Fig. 26]. The first of these (N1-1) was opened in the northwestern part of this space, exposing the southern half of a room with a regular limestone

pavement and walls made of limestone pseudo-ashlars. A wide entrance to the room was located just east of a bench set against the wall on the southern side. The passageway was furnished with octagonal marble bases under the original lintel supports.

The rubble filling the room consisted of limestone pseudo-ashlars including elements of arches [Fig. 27]. The fill also yielded fragments of wall painting with figural and geometric motifs [Fig. 28],

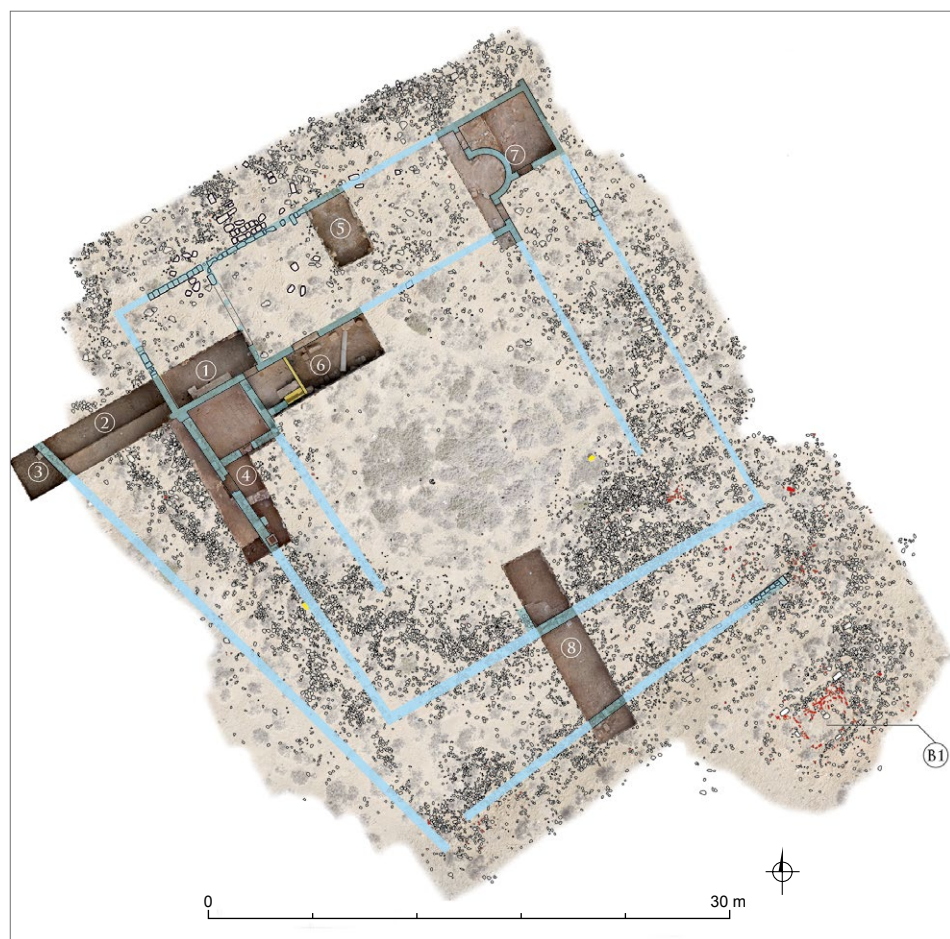


Fig. 26. Trenches N1 marked in blue and B1 in orange at bottom right (University of Warsaw Marea Archaeological Project | orthophotoplan M. Gwiazda)

mosaic fragments with glass and marble tesserae, mosaic glass and marble tiles [Fig. 30:N1-1] originally decorating the walls of the building. A single ceramic wick holder was also discovered; it was most likely associated with a *polycande-*

*lon* with glass lamps. Potsherds no earlier than the 6th century CE, were discovered stuck in the mortar of the walls [Fig. 29]

A pavement of regular limestone slabs was discovered in trench N1-5 located northeast of N1-1 [Fig. 31]. No other in-



Fig. 27. Debris in trench N1-1, looking east (University of Warsaw Marea Archaeological Project | photo T. Barański)

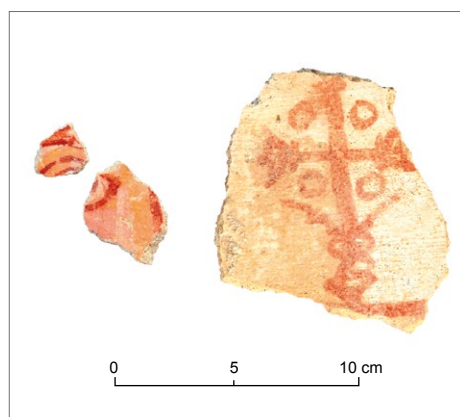


Fig. 28. Fragments of painted plaster from trench N1-1 (University of Warsaw Marea Archaeological Project | photo J. Burdajewicz)



Fig. 29. Potsherds in a mortar wall coat in trench N1-1 (University of Warsaw Marea Archaeological Project | photo T. Barański)



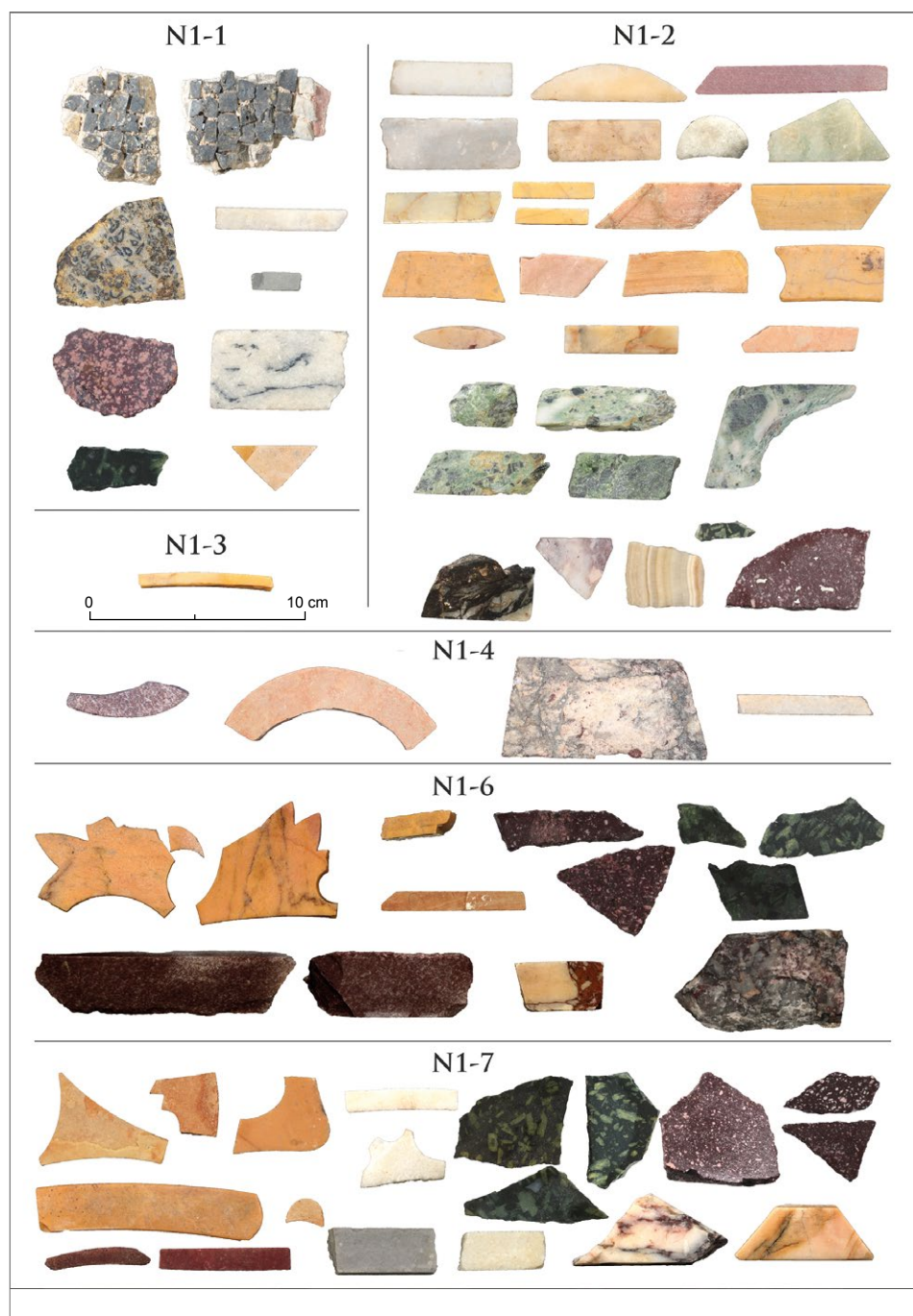


Fig. 30. Selection of wall decoration: marble *crustae*, mosaic fragments, revetment and others from the building explored in trenches N1 (University of Warsaw Marea Archaeological Project | photos K. Żochowski and M. Gwiazda)



Fig. 31. Pavement in trench N1-5, looking south (University of Warsaw Marea Archaeological Project | photo M. Gwiazda)

stallations or features associated with this occupation level were identified. On the northern side of the trench, however, a wall built of pseudo-ashlars was uncovered. The rubble covering the floor included a set of architectural elements: stones with holes for wooden ceiling beams, doorjambs, elements of arches and niches. A fragment of the framing of a marble chancel screen was also found [see Fig. 13:2].

Exploration of trench N1-7 in the northeastern corner was crucial for the identification of this structure as a church. The tops of the walls of an apse were cleared [Fig. 32]. The number of marble tiles in the rubble suggests that the inner walls of the apse were revetted in marble [see Fig. 31:N1-7]. The scope of the excavation was limited due to time constraints and no attempt was made to expose the floor of the presbytery this season. Nevertheless, it was established that there



Fig. 32. Trench N1-7: apse of the church (University of Warsaw Marea Archaeological Project | photo M. Gwiazda)



were two passages on either side of the apse. One of these led to a side room, which had an *opus sectile* floor to judge by singular white-gray marble tiles and impressions of tiles in the mortar bedding of the floor [Fig. 33].

The other passage, the one on the southern side, led toward another as yet unexplored room. All of the masonry identified so far in this part of the building is of pseudo-ashlars and was associated with the original construction phase. Some of



Fig. 33. Trench N1-7: *opus sectile* floor (University of Warsaw Marea Archaeological Project | photo M. Gwiazda)



Fig. 34. Trench N1-7: view of the western baulk (University of Warsaw Marea Archaeological Project | photo M. Gwiazda)





Fig. 35. Trench N1-4: rooms on the south side of the church (University of Warsaw Marea Archaeological Project | photo M. Gwiazda)



Fig. 36. Trench N1-4: stone basin and pilaster (University of Warsaw Marea Archaeological Project | photo M. Gwiazda)

these walls were dismantled along with the marble floor. Consequently, only small amounts of stone rubble were found in the abandonment fill [Fig. 34].

On the south side of the building, in trench N1-4, at least two interconnected rooms were discovered. The northern one was paved with limestone slabs, while the southern one had a tamped earth floor. The west wall of this complex merits attention. It was built of limestone pseudo-ashlars—primarily in the western face of the wall—and of crushed limestone predominantly on the eastern side [Fig. 35]. The northern end of this wall abuts the corner of the building exposed in Trench N1-1, and a doorway in it leads outside. At the southern end, a monolithic rectangular limestone basin stood against the wall, discharging liquids through an opening in the bottom and into a channel that emptied outside the

building [Fig. 36]. Attached to the wall next to this basin was a pillar, 0.50 m wide, built of limestone pseudo-ashlars. It can be assumed that it was the base of an arch supporting the ceiling of the room.

The stone rubble filling this area yielded several exceptional finds, including a marble tile with the inscription [M]HNA (Menas?), a medium-sized capital [Fig. 41], a large number of glass vessels (bowls, plates, bottles, and lamps) and windowpanes. In addition, there were plaster window grilles in the shape of semicircles [Fig. 37:1], several of them attached to stones that were part of arches. The excavation also revealed numerous fragments of mortar with impressions of wooden beams and reeds used for ceiling construction [Fig. 37:2,3].

A room situated further east, in trench N1-6, featured a limestone pavement and a passageway. This could have

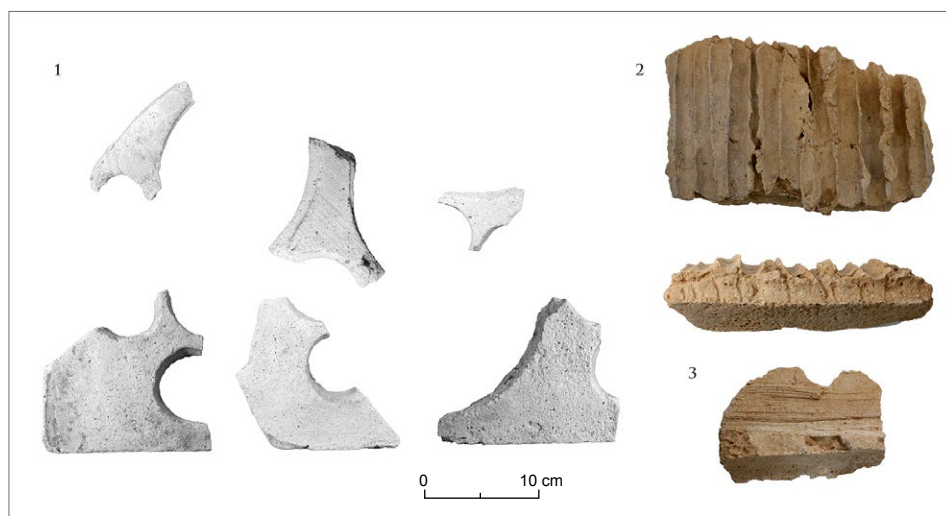


Fig. 37. Architectural remains: 1 – arched window grille fragments with openings for windowpanes (Trench N1-4); 2, 3 – broken lime mortar ceiling with imprinted reed mats; bottom right, imprint of a wooden beam in lime mortar (University of Warsaw Marea Archaeological Project | photos M. Gwiazda)





Fig. 38. Trench N1-6: marble column and stylobate in the portico in front of the southern church façade (University of Warsaw Marea Archaeological Project | photo T. Barański)



Fig. 39. Trench N1-6: stone rubble filling the space; note position of column illustrated in *Fig. 38* (University of Warsaw Marea Archaeological Project | photo M. Gwiazda)



initially been an arcade, part of a columnar portico surrounding the central courtyard. A stone plinth found and fragments of limestone columns lying next to it supports this interpretation. Moreover, the plinth was located at the extension of the stylobate, next to which an overturned marble column, 2.35 m high, was found [Fig. 38]. This stylobate must have marked the course of the next portico, running along the southern façade of the church.

Subsequently, the western part of the portico was fenced off with makeshift walls. A fragmentary limestone sculpture was discovered reused as building material in one of these walls. It depicts a lion in profile with raised tail [Fig. 40]. The walls were raised only after the entire stone slabbing stretching alongside the church facade had been dismantled, leaving a tamped-earth surface. The pseudo-ashlars from the walls collapsed with such impetus that they were driven up to 10 cm into this surface. The marble

column described above also rested directly on this level [Figs 38, 39]. The rubble included fragments of stone arches and decorated limestone cornices. A broken and incomplete tabletop was also found in this context [Fig. 13:3].

The southern end of the building was traced in Trench N1-8 [see Fig. 26]. A limestone slab floor in the corner of

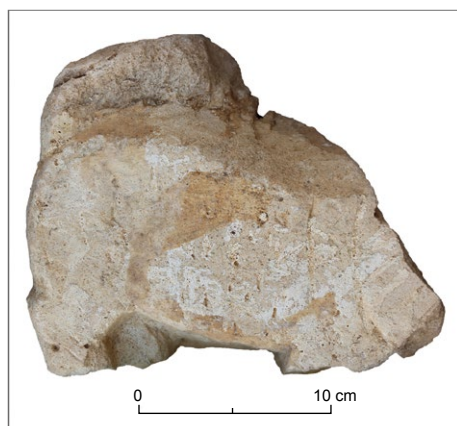


Fig. 40. Bas-relief depicting a lion with a raised tail (M210186) (University of Warsaw Marea Archaeological Project | photo T. Derda)



Fig. 41. Marble capital found in trench N1-4 (University of Warsaw Marea Archaeological Project | photo T. Derda)

two walls meeting at right angles represented the first phase of occupation in this part of the building [Fig. 42]. One of these walls and a large part of the floor were dismantled almost in their entirety during the last phase of use. An episode of stone rubble and silt deposition followed.

Another wall, with a northeast–southwest orientation, uncovered in the southern part of the trench, appears to have been the southern boundary wall of a passage, a street that became narrower toward the east [see Fig. 26]. In the latest phase, a rubbish dump, consisting mainly of broken pottery, occupied the space.

Trench N1-2 was opened on the west side of the church building. The earliest walking level attested in this excavation – a thin layer of crushed lime/gypsum – covered a thin layer leveling the sterile ground composed of heavily compacted silt [Fig. 43]. This area was part of a triangular plaza, located at the edge of

the town [see Fig. 2]. Like the street in Trench N1-8, this plaza was later transformed into a rubbish dump. Mainly broken pottery vessels and numerous fragments of different-colored stone tiles [Fig. 30:N1-2], bricks, glass, animal bones and also fragments of mortar, plaster and floor slabs were deposited here. Concentrations of ash with charcoal were also encountered within this deposit. The dating of this dump based on the pottery places it in the early Islamic period (second half of the 7th–first half of the 8th century CE).

The exploration of Trench N1-3, which was opened further west of Trench N1-2, reached the sterile compact silt layer underlying the plaza in the adjacent trench. Standing directly on this stratum was a wall marking the boundary of the town. It was 0.50 m wide and made of crushed limestone and pseudo-ashlars, in a coursing resembling *opus africanum* [Fig. 44]. The structure



Fig. 42. Trench N1-8: corner of a room (University of Warsaw Marea Archaeological Project | photo M. Gwiazda)





Fig. 43. Trench N1-2: triangular plaza (University of Warsaw Marea Archaeological Project | photo T. Barański)



was buttressed from the west. The fill of this trench consisted of windblown sand and silt with infrequent broken pottery. However, animal bones were overrepresented, including remains

of pigs, sheep, cattle, and Nile catfish (archaeozoologist Marta Osypińska, personal communication) [Fig. 45]. These were large fragments, most likely related to initial carcass division.



Fig. 44. Trench N1-3: retaining wall marking the boundary between the town and cultivated fields (University of Warsaw Marea Archaeological Project | photo T. Barański)



Fig. 45. Animal bones found in a garbage dump near the retaining wall in Trench N1-3 (University of Warsaw Marea Archaeological Project | photo T. Barański)

### TRENCH B1

Structure B1, built of crushed limestone and baked bricks, was identified south of the building in Trench N1 [see *Fig. 26*]. Its outer dimensions were 4.20 m by 3.20 m; inside, it measured 3 m by 2 m. Bricks, covered with waterproof plaster, formed the inner face of the structure, suggest-

ing a water-related function [*Fig. 46*]. The structure could have been a water pool. Its interior was filled with a layer of silt containing fragments of mortar, plaster, bricks, and a few fragments of pottery vessels from the late Byzantine and early Islamic periods.

## TOWN HINTERLAND

### TRENCHES V3 and V5

As part of the reconnaissance of the immediate hinterland of the town, two trenches (V3 and V5) were opened in the southwestern parts of the site, an open plain markedly lower in level relative to the built-up part of the site [see *Fig. 2*]. Channels for agricultural field irrigation were

identified in the two trenches. The two channels in Trench V5 were parallel and had a northwest–southeast orientation. The foundations were of irregular limestone with a superstructure of limestone slabs bonded in hydraulic mortar [*Fig. 47*]. A section of this installation was made of baked bricks.



Fig. 46. Trench B1: water basin on the south side of the building explored in Trench N1 (University of Warsaw Marea Archaeological Project | photo T. Barański)





Fig. 47. Trench V5: irrigation channels on the southwestern outskirts of the town (University of Warsaw Marea Archaeological Project | orthophoto plan M. Gwiazda)

Trench V3, located south of the previous one, contained an analogous structure with a northwest–southwest orientation. In this case, crushed limestone was used as a foundation, while the superstructure was made of limestone ashlars. The structure also had at least one branch draining off in a northwest direction [Fig. 48].

An examination of the potsherds collected from the surface around these channels leads to the conclusion that the site was developed at the same time as most of the Byzantine buildings in ‘Marea’/Philoxenite. This is evidenced by the presence of fragments of LRA 1, 2, 4, AE 5/6 and LRD form 9 plates.

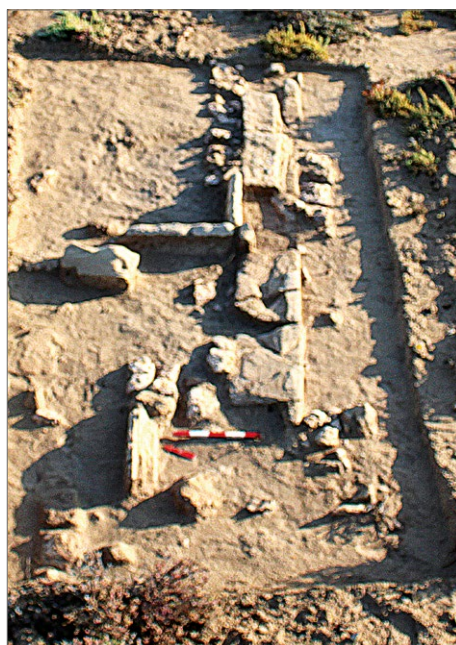


Fig. 48. Northeastern view of the irrigation channel in Trench V3 (University of Warsaw Marea Archaeological Project | photo M. Gwiazda)



## DISCUSSION

The work in the 2020–2021 seasons at the ‘Marea’/Philoxenite site yielded results that have advanced an interpretation of both the chronology and topography of the location.

### ROMAN-PERIOD SITE

Trench A2-1 captured some of the westernmost traces of Roman settlement at the site and was the only trench where in these two seasons similar evidence was encountered. It is now clear that the Roman-period settlement was concentrated only at the very northern end of the site, stretching over an area at least 130 m long from east to west. Earlier work in the area had led to the discovery of Roman pottery kilns,

piles of manufacturing waste, rows of locally produced AE 3 and a deposit of silt mixed with shells (Szymańska and Babraj 2012: 65, Fig. 7; Gwiazda and Wielgosz-Rondolino 2019: 261–263; Derda, Gwiazda, and Pawlikowska-Gwiazda 2020: 536–541, 543; Derda et al. 2020: 554–557).

The concentration of cockle shells discovered in Trench A2-1 is analogous to that identified in 2019 in Trench A1-1 located 35 m further north (Derda et al. 2020: 556, Fig. 5). Unusual at first glance, these discoveries find some good parallels, helping to explain their presence right next to an amphora workshop. Similar concentrations come from a site 6 km to the southwest and discov-



Fig. 49. Mounds covered with shells in the foreground; a mound of pottery at center back, at the site of amphora production on Mareotis Island (University of Warsaw Marea Archaeological Project | photo M. Gwiazda)

ered during Lucy Blue's surface survey of the so-called Mareotis Island (Blue and Khalil 2011: 238–240, Site No. 124). A Roman workshop producing amphorae was located on that site. In its vicinity, mounds of pottery sherds mixed with cockle shells, as well as heaps containing only cockle shells, were noted [Fig. 49]. The mollusks must have been extracted together with the clay used to make pottery vessels. Refining the raw material to get rid of unwanted additions before embarking on the vessel-forming process had the side effect of shell heaps forming around the pottery workshops.

The absence of any other traces of settlement from this period in Trench A2-1 indicates that the area had an exclusively industrial character in the Roman period. The everyday life of the inhabitants of this settlement was concentrated probably on the neighboring island, located 360 m further northeast. Numerous remains related to the Roman period were excavated there (Pichot 2010: 58–66).

### BYZANTINE PERIOD

Earlier studies identified a settlement hiatus at the site after the Roman period. Traces of later activity are associated with the construction of a church and structures of unidentified function (Gwiazda and Wielgosz-Rondolino 2019: 263–264; Derda, Gwiazda, and Pawlikowska-Gwiazda 2020: 534–537; Babraj, Drzymuchowska, and Tarara 2020). The foundation of these buildings cannot be ascertained precisely for now, but they were certainly in use in

the first half of the 6th century CE. The fact that Trench A2-1 yielded absolutely no remains that could be linked to this phase indicates that buildings associated with the oldest 'Marea'/Philoxenite church (on the site of the Great Basilica) occupied a smaller space than the Roman settlement.

Excavations in Trench WF17-1 confirmed that the next extensive phase of settlement expansion occurred in the mid-6th century CE or slightly later. The new buildings, as shown by the investigations in trenches CH2, FR3, F2 and N1, were founded for the most part on land which had not been occupied in earlier centuries. The district in the northeastern part of the site appears to be an exception because the new buildings there replaced the first Byzantine church and other structures (Gwiazda and Wielgosz-Rondolino 2019: 263–264; Babraj, Drzymuchowska, and Tarara 2020).<sup>4</sup>

Harbor infrastructure (P2), waterfronts with a cornice (WF17), churches (CH2 and N1) and communal tombs (G1 and G2) were part of this mid-6th century urban development phase. An irrigation system (V3 and V5), separated from the settlement by a thin wall, was, most likely, also built at this time. This construction project also included public latrines and houses unearthed in earlier years (Gwiazda and Wielgosz-Rondolino 2019: 264–267; Derda, Gwiazda, and Pawlikowska-Gwiazda 2020: 541–542; Derda et al. 2020: 561–572).

4 The dating of the construction of the first church at 'Marea'/Philoxenite initially to the 4th century CE does not agree with current findings. At present, it seems more likely that this building was constructed in the late 5th or early 6th century CE.

## FINAL DEVELOPMENT PHASE

Current findings have led to the distinguishing of yet another phase at the site. It is best characterized by widespread restoration of buildings from the earlier phase, as noted in structures excavated in Trenches F2, CH2 and N1, as well as A2-1. Major modifications were introduced in order to adapt buildings to the changing needs of their users. Some areas of the settlement also changed their function, that is, certain areas like the west side of the Great Basilica atrium and the triangular plaza next to the N1 building were transformed into rubbish dumps. Some of the Byzantine structures were demolished at

this time and building materials were re-processed. The best example of this is the rubbish dump associated with lime/gypsum production located in Trench FR3.

This final settlement phase occurred in the 7th century CE or the first half of the 8th and coincides in part with the early Islamic period. The 'Marea'/Philoxenite settlement at this time still included the entire urban area built up in the mid-6th century CE. However, the presence of numerous rubbish dumps in the urban space suggests either a decrease in settlement density or major changes of occupation in different parts of the town.

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