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PRELIMINARY REPORT ON THE 2010 EXCAVATION SEASON AT JIYEH (PORPHYREON)

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Abstract: The archaeological fieldwork in 2010 at the site of Jiyeh (ancient Porphyreon), situated on the Mediterranean coast between ancient Berytus and Sidon, focused in on full-scale excavations of the Late Antique streets and residential quarter (4th–7th century AD), uncovering 21 rooms and three alleys. The results contributed to a better understanding of the street network in the quarter and the nature of the architecture. The quarter comprising the 21 newly uncovered rooms taken together with 80 from earlier fieldwork in 2008 and 2009 formed an extensive residential complex, approximately 40 m by 35 m. It is a unique example of private domestic architecture illustrating everyday life in Roman and Byzantine Phoenicia. A bread oven (*tannur*) suggested the presence of a bakery in this part of the settlement.

Keywords: Jiyeh (Porphyreon), domestic architecture, streets, *tannur*, Late Roman–Early Byzantine

The archaeological fieldwork carried out in the 2010 season at the coastal site of Jiyeh (Porphyreon), situated about 35 km to the south of modern Beirut, continued investigations initiated there by a Polish–Lebanese team in 2003. The work aimed

at uncovering streets and dwellings found on the outskirts of the already known Residential Quarter. The objective was to investigate the latest, Late Antique phase of occupation, as well as to learn more about the function of this architecture.

EXCAVATIONS IN THE DWELLING QUARTER (AREA D)

The Residential Quarter (Area D) was discovered largely during excavations carried out by Roger Saidah in 1975 (see Waliszewski *et alii* 2012). The latest phase of occupation dated to Late Antiquity. In 2008 and 2009 explorations

in this area concentrated on clearing previously excavated rooms and digging a few test trenches to determine the earlier history of the site. The current season was devoted to clearing streets and rooms on the outskirts of the excavated sector, partly

covered by archaeological dumps and sand dunes [Fig. 1]. The objective was to learn more about the street network and the architecture in this part of the site.

Work was carried out simultaneously on the north, east, south and west of the quarter, uncovering 21 new rooms and three streets. For the most part these sections of the site had been hidden under secondary accumulation connected with the work of Lebanese archaeologists or some more or less unknown activities on the site after 1975. The archaeological material from these dumps was mostly of a mixed nature and included modern objects. However, it proved possible to identify the limits of the original excavation and to isolate

stratified archaeological material that may date occupational levels and abandonment layers from the last phase of the dwelling quarter. At the same time the results of fieldwork in 2010 contributed to the growing amount of data about this site.

Steps were taken simultaneously to preserve the architecture. Damaged floors and wall plaster in the newly cleared rooms were reinforced with gypsum bands to prevent further deterioration.

NORTHERN SECTOR

Street 100 running next to units 23, 71 and 70 was cleared in this sector of the site [Fig. 2]. Set between the walls of houses, 1.60 m to 2 m wide, it continued for about

Team

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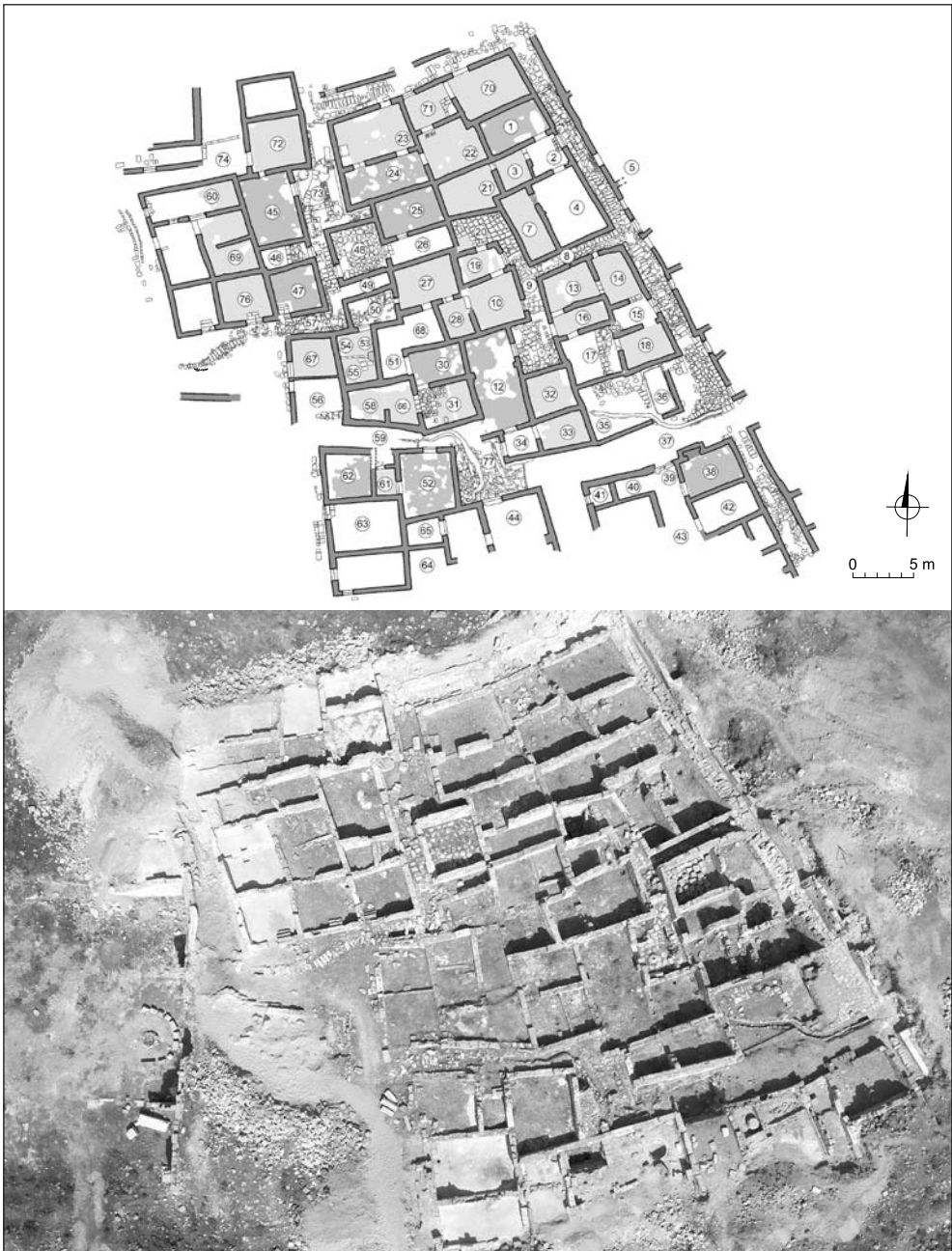


Fig. 1. Plan and kite view of the dwelling quarter (Area D) in Jiyeh (Porphyreon) in 2010 (Drawing M. Puzkarski; kite photo M. Bogacki)

20 m more or less from east to west and turning south at the western end where it joined street 73. At the eastern end it crossed at an approximate right angle a north-south street running in area 8. Down the middle of the street ran a channel covered with irregular, oblong shaped limestone

blocks. It was part of a sewage system for discharging rainwater, in this case beginning next to the entrance to unit 48. Having reached its highest point in this place the channel subsequently bifurcated to the south and north, toward the said street, while dropping continuously. Single



*Fig. 2. Street 100 in the northern sector of the quarter
(Kite photo M. Bogacki)*



*Fig. 3. Units 107, 109, 110 in the northern sector of the quarter
(Kite photo M. Bogacki)*

blocks of local sandstone (locally referred to as *ramleh*) were set up in loose rows on the street pavement and adjacent to the walls in the western section, to the north and south of the channel [Fig. 4]. These blocks may have served as walking stones during the rainy season. Two thresholds in the wall adjoining the street on the south are proof that the houses were entered from the passage. Another threshold lay in the western section of the street on the north side. Gaps in the walls in the central and eastern section of the street suggest further entrances. Rooms north of the street were not explored.



Fig. 4. Street 100, viewed to the east
(Photo M. Gwiazda)

In the northwestern corner of the dwelling quarter investigations focused on clearing units 107, 109 and 110, which had been partly visible as tops of walls before the beginning of explorations (compare kite view of the site from the previous season, Waliszewski *et alii* 2012: Fig. 2). These units did not differ significantly from previously explored areas. The floors were either simple mortar surfaces or mosaic pavements made of white cubes in the *opus tessellatum* technique. Remains of wall plaster were preserved on the walls. Unit 107 had in one of its corners a sunken vessel and a low wall of small stone blocks running down the middle [Fig. 3]. There were two doorways in the walls of this unit, both blocked. Either the room had been sealed off at some point, or access to it had been through the roof or an upper floor. The north walls of the other two units were damaged, presumably by earthworks using heavy equipment in the years preceding the excavation project (a long ditch running through this part of the site is evidence of these operations).

EASTERN SECTOR

Work in the eastern sector concentrated on clearing street 8E to the east of units 14, 15 and 18. This principally north-south street, which runs for 35 m, is the longest explored passage in the quarter. It appears to have continued along the same line to the south, where it crossed perpendicular street 37, and to the north, joining there with street 100. The walls lining this street have been preserved up to 2 m in places, including well preserved doorways and window openings. A rare find is a terracotta drain mortared to the wall opposite the entrance to unit 15 [Fig. 5]. The terracotta drain from the



roof was constructed of cylindrical pipes about 18 cm in diameter, joined with lime mortar. It discharged rainwater from the roof to a sewage channel running under the length of the street. At the junction with the channel the bottom pipe was rendered heavily with mortar containing potsherds as a form of sealing. The course of this channel was uncovered in the cleared part of the street. Some of the stones of the covering were still preserved, as were single rows of flat blocks forming, similarly as in street 100, a kind of raised pavement by

Fig. 5. Newly cleared section of street 8 viewed to the north; a reused reversed-T bore counterweight in the left foreground (eastern sector) (Photo R. Krzywdziński)

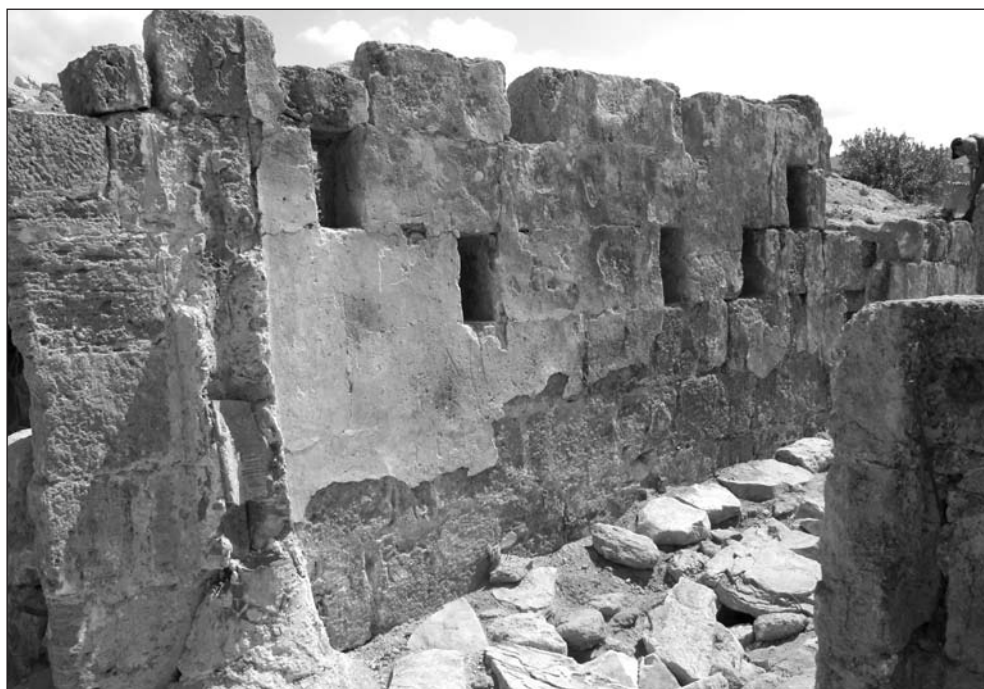


Fig. 6. Terracotta drain mortared to the wall and windows opening onto street 8E in the eastern sector of the quarter (Photo T. Waliszewski)

the side of the house walls on either side of the street. Just south of the drain the wall on the south side of the street retained two rows of seven irregularly shaped rectangular window openings. These openings widened out toward the inside of the unit, indicating that they were meant to light up the interior. On the outside these windows were from 32 to 35 cm high and from 15 to 20 cm wide, on the inside respectively from 35 to 40 cm and 25–30 cm. Three entrances to units east of this street were located in the explored section of the passage (the units that these doorways led to were not explored). Some reused stone elements were noted in the walls, one of these being a reversed-T bore counter weight from an olive press [Fig. 5].

A continuation of Street 8 was also cleared for about 4 m to the south of the

intersection with street 37. This part was less well preserved than the northern section and most of the sewage drain's covering stones were missing. Three different sewers discharging water to the east were joined together at the intersection of streets 8 and 37.

SOUTHERN SECTOR

A few units, which had been observed as the outline of walls under secondary deposits, were cleared in the southern sector. They were not distinguished in any way, being furnished with simple lime mortar floors or white mosaic pavements and plastered walls, as in other parts of the dwelling quarter [Fig. 7]. A significant difference in floor levels, reaching 0.50 m, was recorded between adjacent units. The units had evidently been cleared in 1975



*Fig. 7. Units 40, 41 and 44 in the southern sector of the quarter
(Kite photo M. Bogacki)*

by Roger Saidah's team and there were even traces of test trenches dug under the floors. Current excavation in unit 44, which stood on walls from an earlier settlement phase, cleared the remains of a bread oven (*tannur*) under the level of the missing floor [Fig. 8]. Its diameter reached 1.47 m and the preserved height was 0.48 m. The bottom portion made of

bricks had largely been destroyed in the center by a pit containing a large storage jar [see Fig. 8]. The pithos body measured 1.06 m in diameter; its height could not be estimated owing to the weight of the overlying stones which had crushed the vessel.¹

In units 40 and 41, which are presumed to have formed a large house from the last occupation phase in quarter D, current clearing of secondary, modern deposits revealed the remains of walls. The floors in these two units appear to have been removed by the 1975 excavations. Here, however, the late walls were not aligned with walls from earlier architectural phases. One of the earlier walls was oriented roughly northwest–southeast. At some point two other walls were joined to it at right angle. The walls of units 40 and 41 were built on top of the ruins, but for the most part the foundations of the latter architecture reached below the preserved tops of walls from the earlier phase.

WESTERN SECTOR

Excavations in the western part of the quarter were intended to clarify the relation between the houses and the eastern side of the Byzantine basilica (located in area Q). One of the issues here was the difference between the walking level in the basilica and the average level of floors in the dwelling quarter, which was at least 4–5 m.

The first step was to remove a mound of earth, which stood in back of the east wall of the basilica. It was 26 m long and from 1.50 m to 2.50 m wide. A rail tie that was found in the fill suggested that the mound



Fig. 8. Bread oven (*tannur*) in unit 44, view after completed exploration (top) and the same oven with a storage jar installed in a pit that destroyed the structure (Photo F. Kuczma)

¹ The oven had been covered by sandstone blocks, some of which bore evidence of painted plaster. The previous excavator, Roger Saidah, may have left these blocks intentionally as a way of protecting the undisturbed archaeological deposits underneath the missing floor of the unit. See Waliszewski *et alii* 2012.



Fig. 9. Architectural complex 60, 69, 76, 101, 102 and 108 in the western sector of the quarter; north is at top (Kite photo M. Bogacki)

was actually the embankment of a railway track used by Lebanese archaeologists to remove archaeological fill from the area of the excavations.²

Excavation under the mound revealed a row of four units, evidently forming a single architectural complex with previously explored units 60, 69 and 76 [Fig. 9]. Three of these were interconnected by doorways furnished with stone thresholds; one of these (between 101 and 102) had been blocked.

Undisturbed stratigraphy not excavated in 1975 was noted in a part of unit 101, by the west wall, on top of the mosaic floor. The latest find was a sherd of Cypriot Red Slip Ware from the end of the 6th/7th century AD. Once this fill was cleared down to the original floor, it was observed that unit 101 may have served

a different function than other units in the complex explored in earlier seasons. The unit was divided into two more or less equal parts by a narrow partition wall of limestone blocks. Small rectangular tanks of limestone were located on either side of this wall, both of them sunk into the floor from the same level. One tank was 0.43 m long and 0.32 m wide, the other was 0.46 m long and 0.36 m wide; their depths were respectively 0.32 m and 0.22 m [Fig. 10]. It is not clear what purpose these tanks would have served. A doorway with threshold lay in the west wall of the unit, opening out onto a street that ran between these units and the east wall of the basilica [Fig. 11].



Fig. 10. *Partition wall and tanks in the floor of unit 101 in the western sector of the quarter (Photo M. Gwiazda)*



Fig. 11. *Street to the west of unit 101 (Kite photo M. Bogacki)*

² Note the railway track running north–south in the western part of the dwelling quarter, seen in archival photos from Roger Saidah's excavations (Rey-Coquais 1982: Fig. 3).

The newly discovered street was poorly preserved and was marked primarily by the stone lining of a sewage channel, which ran down its middle and which was a continuation of the sewer under street 57 running from east to west. The street pavement and covering slabs of the sewer had all been removed at an unknown point in the past, but their presence should be assumed considering parallels of other streets in the quarter and the significant difference in levels between the threshold in the doorway to unit 101 and the preserved level of the channel. The channel runs further to the north and disappears under unexcavated sand. Another channel joined it from the west near unit 60. The western side of the channel seems to have

been destroyed by the construction of the east wall of the basilica in the Byzantine period and it is possible that it was no longer operational in this phase. In the light of these discoveries, it is possible to assume that the building of the basilica called for substantial earthworks cutting into the mound on the site of the dwelling quarter and the more or less intentional destruction of structures in this area.

Evidence of earlier occupational phases was also recorded in this part of the site. Below unit 108B (north of 101) remains of a simple lime-mortar floor were discovered. Its continuation was observed to the west of the walls of units 108 and 101, where it had been cut through by the street channel discussed above.

DISCUSSION OF THE RESULTS

A substantial part of the artifacts collected from the excavation this year comes from modern secondary deposits, as indicated by the large number of finds connected with the nearby Christian basilica, such as roof tiles and marble finishing elements. These deposits accumulated in the period after the excavations in 1975 and before the beginning of excavations in 2008, and they are evidence of extensive illicit digging, apparently using heavy equipment, in the form of deep ditches as well as cut walls and floors. In spite of the disturbed archaeological record, the current excavations have produced results that permit some observations concerning the functioning and building structure of the architecture related to the latest phase of occupation recorded on the site.

In some of the units in the dwelling quarter remains of walls from earlier occupational phases were cleared. These had been used as foundations for walls of new complexes raised in the area in the Late Roman period.³ Equally often the earlier urban layout was not followed when building the new settlement once the area had been leveled. Walls were erected in new positions, cutting through earlier structures (as in the case of the rooms of the southern and western sectors discussed above). It would also appear that differences in floor levels between adjoining rooms were also determined by the presence or absence of earlier structures. This is particularly evident in the southwestern part of the site. It would indicate that despite the presence of thick leveling layers attested in trenches

³ On dating, see Waliszewski *et alii* 2012. Early Roman wares found under the floors of the latest architectural phase gives an approximate date for the second founding of the settlement at the beginning of the Late Roman period.

from previous seasons, undoubtedly meant to prepare the ground for new development, the end effect was not meant to be a uniform building level for the entire dwelling quarter. The work seems to have proceeded in stages, presumably for the purposes of individual building projects. The newly discovered and cleared streets and sewers leave little doubt that the street network and sewage system were at least partly planned public works. Street 8, which is relatively long and straight, affords a good example. It runs through the entire quarter, connecting perpendicularly with street 100 in the north and at its southern end with another street turning off to the east. Evidence of a sophisticated drainage system including ceramic pipes mortared to house walls in order to manage rainwater runoff from the roofs of the houses may constitute evidence of an effort to deal with the more intensive rainfall that has been suggested for the region in this period by paleoclimatic research (see, e.g., Schilman *et alii* 2002 for the Palestinian coast and Enzel *et alii* 2003: 265, Fig. 2A for the Dead Sea area). The water-evacuation system corresponds to the street network and is designed to dispose of excess water to the east, north and west, that is, away from the tell. No water-carrying systems of this or any other kind have been observed to date for the earlier architectural phases. One should also note frequent reuse of *spolia*, often with pierced holes sealed with lime mortar, in walls of the late antique houses.

Other evidence of building changes is the practice of blocking doorways between units. The presumed intention was to divide the houses into smaller complexes. A good example can be found in the northeastern part of the excavated quarter.

A house comprising initially at least nine interconnected units (71–22–70–1–2–3–21–4–7) was at some ill-defined point in time divided into two separate complexes by blocking the doorways between units 21 and 22 and 1 and 70. The two houses were subsequently entered through separate street entrances.

The bread oven found in unit 44, and most probably sealed by a Late Roman floor, is unique. To date it is the sole find of its kind from the early Roman period in area D. Earlier excavation in the quarter north of the basilica (area C) had located another oven dated to before the 3rd–4th century AD. Hence, it is possible on these grounds to suggest the existence of a bakery supplying local residents with this staple food (see Wicenciak, El-Tayeb 2006: 67). One can take this reasoning a step further and suggest a far-reaching specialization of the population of Porphyreon in the early Roman phase. It is possible to distinguish for this period at least a few professions attested in the archaeological record: pottery making, lamp-making, olive oil production, perhaps also wine-making, fishing and blacksmithing or at least metal casting.

The 2010 season also supplied the first data for an analysis of the spatial relationship between the basilica and the dwelling quarter. The possibility that the east wall of the basilica cut through a street sewer could suggest that the earlier architecture in this area was destroyed, in part, by the new construction. Thus, it would appear that the building of the Byzantine basilica had necessitated extensive earthworks, which effectively disturbed and mixed the accumulated deposits in the dwelling quarter. The issue of the chronology of these transformations requires further

study before final conclusions can be put forward.

The termination of occupation of the dwelling quarter and presumably of all of Porphyreon in the 7th century has once again been confirmed by the pottery evidence from undisturbed layers discovered on the floor of unit 101. A large quantity of coins from the reign of

Heraclius (AD 610–641), recorded by Roger Saidah's team, coincides with this dating of the latest occupation in the dwelling quarter. Nonetheless, it is still difficult to link in any way the abandonment of the settlement with the evidence of ashes and burning noted by Saidah during his work in 1975 (Saidah 1977: 40, 43).

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