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Title: Preliminary report on the 2012 and 2013 excavation seasons at Jiyeh (Porphyreon): work in sector D (residential quarter).

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Abstract: Archeological work in the 2012 and 2013 seasons in Jiyeh (Porphyreon), which lies on the Phoenician coast north of ancient Sidon, was focused on reconstructing the history of settlement on the site. At least three phases were identified and dated to the Iron Age II, the Persian–Hellenistic–Roman period and late antiquity. The early dating of the functioning of the Christian basilica to the 4th–5th century AD was also confirmed in trial pits. The complex and unusual sewage installation discharging rainwater from the roofs and streets of the 5th-century settlement contributed important data for studies of late antique domestic architecture in the region.

Keywords: Jiyeh (Porphyreon), houses, domestic architecture, Iron Age II, Persian–Hellenistic–Roman, mosaic, village/rural, Phoenicia

التقرير الأولي لعمليات التنقيب في الجيه (بورفيريون) : العمل في قطاع (D) لموسم 2012 و 2013)
الحي السكني) .

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Romaniuk, Rafał Solecki, Agnieszka Szymczak

الملخص: العمل الأثري في موسم 2012 و 2013 في الجيه (بورفيريون) التي تقع على الساحل الفينيقي شمال صيدا القديمة قد ركز على إعادة بناء تاريخ مستوطنة في الموقع . على الأقل ثلاث مراحل حددت و وثقت في العصر الحديدي الثاني في الفترة الفارسية -الهلنستية - الرومانية والعصور القديمة. إن التأريخ المبكر لعمل الكاتدرائية المسيحية يعود إلى القرن الرابع- الخامس الميلادي وهذا ما أكدته الحفر التجريبية. التجميع الفريد والتشكيل لمجاري الصرف الصحي لمياه الأمطار من الأسطح والشوارع لمستوطنة من القرن الخامس ساهمت في البيانات المهمة لدراسة المباني القديمة في المنطقة .

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RESEARCH



ABBREVIATIONS

<i>AA</i>	<i>Archäologischer Anzeiger; Jahrbuch des Deutschen Archäologischen Instituts</i> (Berlin)
<i>ANM</i>	<i>Archéologie du Nil Moyen</i> (Lille)
<i>ASAE</i>	<i>Annales du Service des Antiquités de l'Égypte</i> (Cairo)
<i>AV</i>	<i>Archäologische Veröffentlichungen, Deutsches Archäologisches Institut, Abteilung Kairo</i> (Berlin–Mainz am Rhein)
<i>BAAL</i>	<i>Bulletin d'archéologie et d'architecture libanaises</i> (Beirut)
<i>BAH</i>	<i>Bibliothèque archéologique et historique</i> (Paris)
<i>BAR IS</i>	<i>British Archaeology Reports International Series</i> (Oxford)
<i>BASOR</i>	<i>Bulletin of the American Schools of Oriental Research</i> (Ann Arbor, MI)
<i>BCH</i>	<i>Bulletin de correspondance hellénique</i> (Paris)
<i>BdE</i>	<i>Bibliothèque d'étude</i> (Cairo)
<i>BIFAO</i>	<i>Bulletin de l'Institut français d'archéologie orientale</i> (Cairo)
<i>BSAA</i>	<i>Bulletin de la Société d'archéologie d'Alexandrie</i> (Cairo)
<i>BSFE</i>	<i>Bulletin de la Société française d'égyptologie</i> (Paris)
<i>CCE</i>	<i>Cahiers de la céramique égyptienne</i> (Cairo)
<i>EtTrav</i>	<i>Études et travaux. Travaux du Centre d'archéologie méditerranéenne de l'Académie des sciences polonaise</i> (Warsaw)
<i>FIFAO</i>	<i>Fouilles de l'Institut français d'archéologie orientale</i> (Cairo)
<i>GAMAR</i>	<i>Gdańsk Archaeological Museum African Reports</i> (Gdańsk)
<i>GM</i>	<i>Göttinger Miscellen</i> (Göttingen)
<i>IAMS</i>	<i>Institute of Archaeo-Metallurgical Studies</i> (London)
<i>JARCE</i>	<i>Journal of the American Research Center in Egypt</i> (Boston–Princeton–New York–Cairo)
<i>JEA</i>	<i>Journal of Egyptian Archaeology</i> (London)
<i>JGS</i>	<i>Journal of Glass Studies</i> (Corning, NY)
<i>JJP</i>	<i>Journal of Juristic Papyrology</i> (Warsaw)
<i>JRS</i>	<i>Journal of Roman Studies</i> (London)
<i>MDAIK</i>	<i>Mitteilungen des Deutschen Archäologischen Instituts, Abteilung Kairo</i> (Wiesbaden)
<i>OIP</i>	<i>Oriental Institute Publications</i> (Chicago)
<i>OLA</i>	<i>Orientalia lovaniensia analecta</i> (Louvain)
<i>PAM</i>	<i>Polish Archaeology in the Mediterranean</i> (Warsaw)
<i>PSAS</i>	<i>Proceedings of the Seminar for Arabian Studies</i> (London)
<i>SAAC</i>	<i>Studies in Ancient Art and Civilisation</i> (Kraków)
<i>SAK</i>	<i>Studien zur altägyptischen Kultur</i> (Hamburg)
<i>SAOC</i>	<i>Studies in Ancient Oriental Civilization</i> (Chicago)
<i>WVDOG</i>	<i>Wissenschaftliche Veröffentlichungen der deutschen Orient-Gesellschaft</i> (Berlin–Leipzig)

PRELIMINARY REPORT ON THE 2012 AND 2013 EXCAVATION SEASONS AT JIYEH (PORPHYREON): WORK IN SECTOR D (RESIDENTIAL QUARTER)

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Abstract: Archeological work in the 2012 and 2013 seasons in Jiyeh (Porphyreon), which lies on the Phoenician coast north of ancient Sidon, was focused on reconstructing the history of settlement on the site. At least three phases were identified and dated to the Iron Age II, the Persian–Hellenistic–Roman period and late antiquity. The early dating of the functioning of the Christian basilica to the 4th–5th century AD was also confirmed in trial pits. The complex and unusual sewage installation discharging rainwater from the roofs and streets of the 5th-century settlement contributed important data for studies of late antique domestic architecture in the region.

Keywords: Jiyeh (Porphyreon), houses, domestic architecture, Iron Age II, Persian–Hellenistic–Roman, mosaic, village/rural, Phoenicia

Excavations conducted in the 2012 and 2013 seasons in Jiyeh (ancient Porphyreon), located 15 km to the north of ancient Sidon in Phoenicia, were a continuation of work done on this site in 2008–2010. The main focus was a late antique residential quarter, which is the best preserved relic of domestic architecture on the entire Lebanese coast. Trial pits in the quarter, in the northern, southeastern and western parts of sector D, revealed evidence of earlier settlement dating from the Iron

Age II and the Persian–Hellenistic periods. Exploration in these two seasons was aimed at reconstructing the stratigraphy and chronology of this earlier architecture and establishing the functions of respective complexes and settlement phases. The state of preservation of the late antique rooms, including perfectly preserved floors, persuaded the excavators that undisturbed stratigraphical sequences would be uncovered below them and this indeed proved to be the case.

The present report focuses on the results of fieldwork in Jiyeh, supplemented by a separate study of late antique architecture in sector D (Dzik 2015, in this volume). Sector E to the north of the Christian basilica has been described separately. Salvage excavations in the southern part of the tourist resort of

Jiyeh Marina are reported in this volume (Kowarska and Lenarczyk 2015).

The objective of the present work was to verify stratigraphic information on site history from earlier seasons. Test trenches were located in places promising to provide undisturbed archaeological evidence: at the crossing of communi-

Team

Dates of work: 18 June–27 July 2012; 28 July–12 October 2013

Director: Dr. Tomasz Waliszewski, archaeologist (Institute of Archaeology, University of Warsaw)

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cation routes (trial pits D47 and T1) and in rooms where earlier occupational levels were sealed by late antique floors (D4, T1, D23, D72). In turn, excavations in D20 aimed to finish work in this

deepest of trenches in Jiyeh and to study the earliest phases of occupation in this area. In all instances the excavation results confirmed the validity of the course of action taken.

WORK IN SECTOR D (RESIDENTIAL QUARTER)

TRIAL PIT IN D47

Trench supervisor: Piotr Jaworski

D47 is located in a section of an E-W street running between units D57 and

D116 [Fig. 1], delimited by the walls of residential buildings (rooms D56, D67, D76, D90, D102) and neighboring on the Christian basilica in this part of the ancient

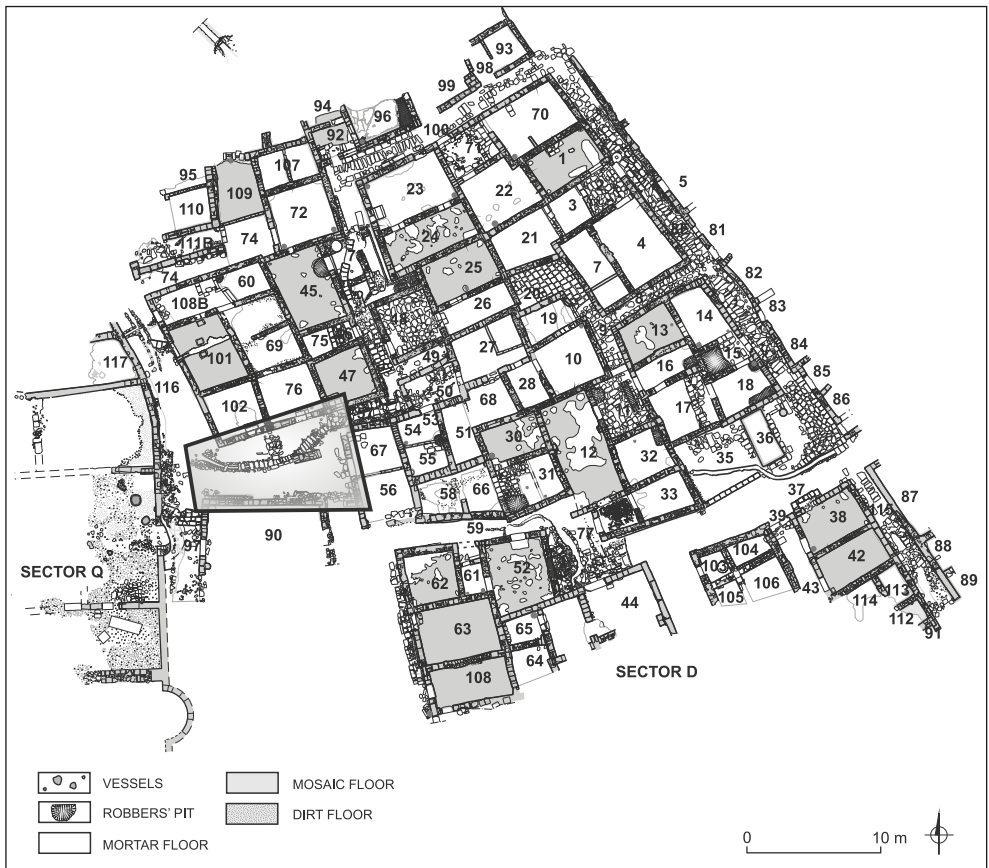


Fig. 1. Plan of sector D with marked location of trenches excavated in 2012 and 2013 (Drawing M. Puzkarski)

town. Continued exploration in this area in 2012 (initially cleared in 2010) aimed at establishing the stratigraphic sequence of layers reflecting the main phases of

street construction and use. A trench was opened encompassing the width of the late antique street, cutting across the partly covered stone drain that ran down the

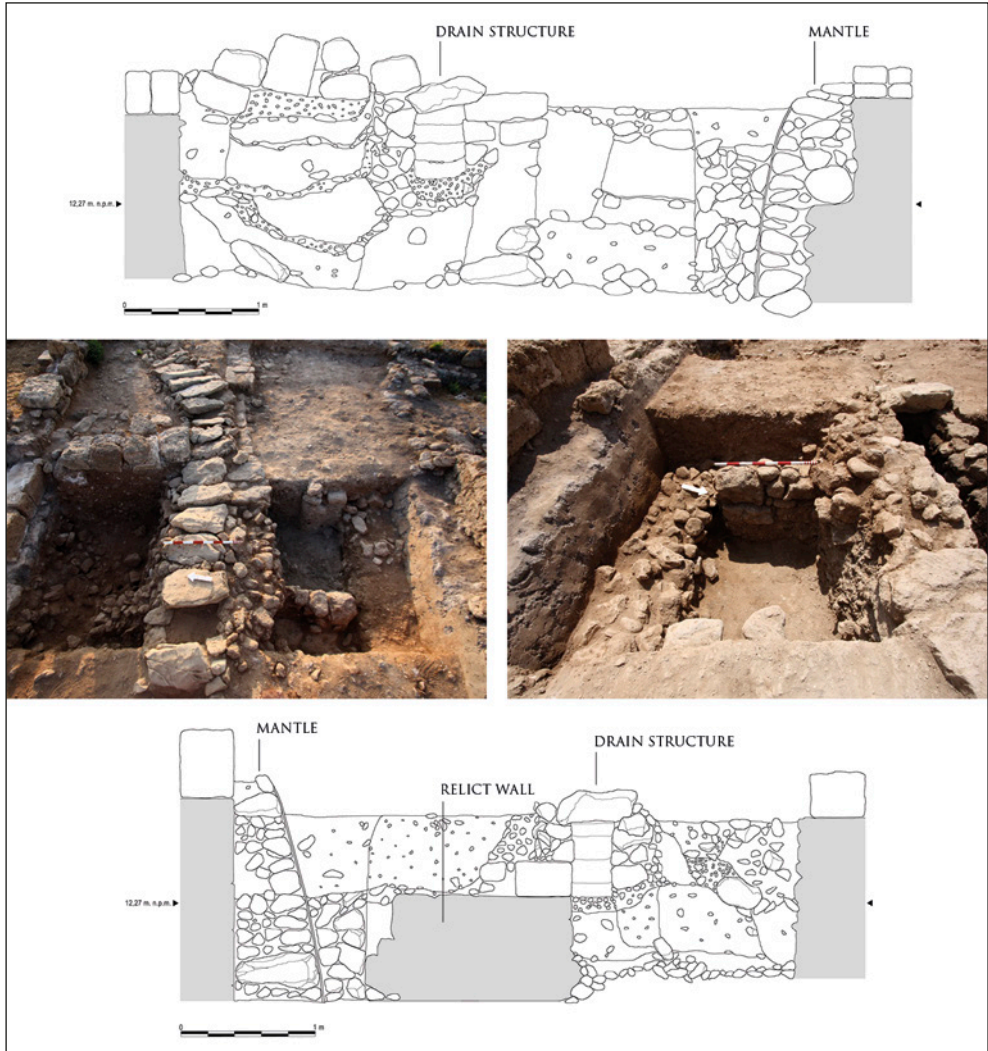


Fig. 2. D47 test trench: top, eastern section; center left, exposed structure of drain still covered with stone slabs in the test pit during excavations, view looking east; center right, features inside the part of the trench to the south of the central drain, view to the west; note the mantle wall against the wall at the left edge of the photo; bottom, western section (Drawing P. Jaworski; photos A. Pawlikowska)

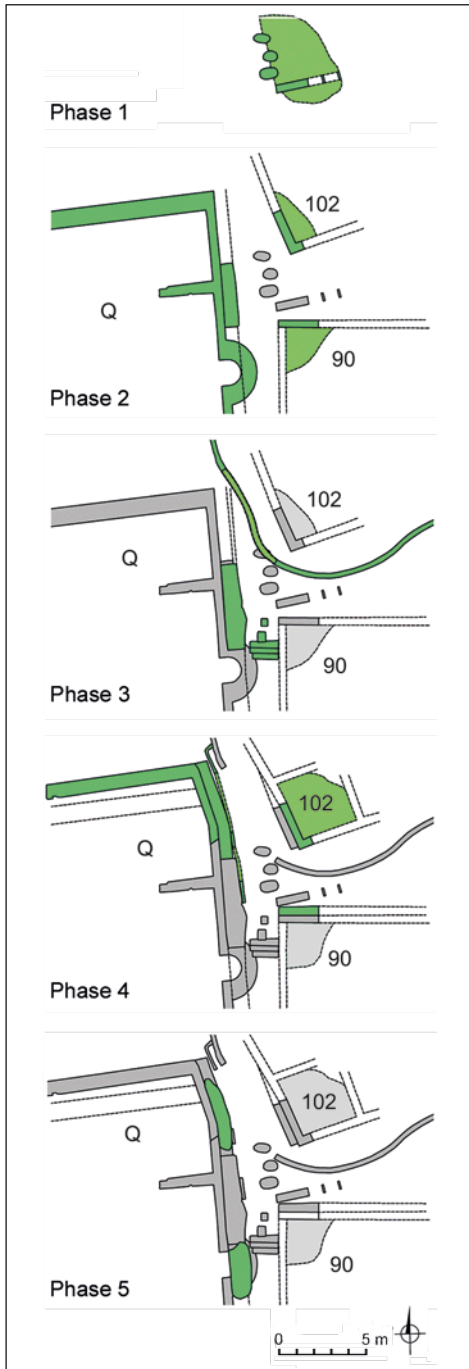
middle of the street. The site for the trench was chosen a couple of meters to the west of a short section of E–W wall. The top of stone blocks making up this wall was discerned just under the late antique street surface, more or less in the center of the tract. The drain hugged this wall, turning off at an angle to the northeast.

The drain proved to be 0.50–0.60 m deep and approximately 0.40 m wide [Fig. 2]. The bottom was of lime mortar on a clay bedding. The structure of the south side made use of large roughly dressed blocks from a relict wall under the street surface, the blocks on the north side were not as carefully arranged. The sides of the drain were reinforced externally by a facing of stones about 10–15 cm in size poured with clay mortar. Earth mixed with small stones comprised the street fill on either side of the installation. The drain contained four distinct accumulation layers characterized by abundant and very fragmented pottery.

The wall of building D102 delimiting the street (and trench) on the north proved to be no more than a single course of regular stone blocks below the entrance to the late antique house leading from this street. At the southern end, a mantle made of large and middle-sized stones bonded in clay and covered with clay plaster was found against the north facade of house D90 [Fig. 3]. On the outside this mantle was plastered with clay. The trench in which this feature was constructed was filled with loose stones. The purpose assumedly was to insulate the north wall of D90 against water accumulating either from excessive precipitation or leaky sewage. The loose stones in the foundation trench would have facilitated free drainage of water to the west, that is, downslope.



Fig. 3. Mantle against the north wall of building D90: top, clay plaster on the surface; center, stone surface under the plaster; bottom, original wall surface (Photos P. Jaworski)



Four major phases were distinguished in the trench. The earliest phase is the wall that preceded the installation of the drain, a short section of which was used as a structural element of the drain. The north wall of D90 belonged to this phase. Pottery dated the structures consistently to the late Hellenistic and early Roman periods, and two bronze coins minted in Sidon in the 1st century AD placed the construction in the early Roman period.

Phase 2 witnessed the introduction of the sewage system. Major building works were involved in the process: removal of accumulated deposits, building of the drain, filling of the gaps on both sides of the drain with earth and small and middle-sized stones, and also probably paving the street surface with stone slabs. The mixed pottery material from the fill was dated to the Hellenistic through Roman periods and included several coins from the second half of the 4th/first half of the 5th century. The worn surface of some of these coins suggested long circulation prior to deposition. Therefore, the sewage was constructed sometime in the end of the 5th or beginning of the 6th century AD; the scale of this project suggests a link with the construction of the basilica in this period just a short distance away to the south. The mantle protecting the wall of D90 was introduced in phase 3, apparently reacting to excess water endangering the wall structure. The pottery and coins indicated the same period as the sewage system, hence it must be assumed that this building event followed within a short period of time after the installation of the street

Fig. 4. General plan of structures in trench T1: from the top, phases 1 to 5 (Drawing R. Solecki)

drain, possibly in the first half of the 6th century AD. The last phase corresponded to street use in the 6th–7th century as confirmed by numismatic finds, as the youngest, and also one of the most valuable, coins found in Jiyeh is a halved *foliis* of Justin II (Jaworski 2013: 213, Fig. 4).

TRENCH T1

Trench supervisor: Rafał Solecki

Trench T1, covering about 26 m² in total, was located in street D116 running along the back wall of the Christian basilica and is contiguous with area D47 reported above [see Fig. 1]. The area had been uncovered by a Lebanese team (Saidah 1977) and then by the present project (Waliszewski and Gwiazda 2013: 328–331). Work was continued in the 2013 season.

Phase 1. The earliest feature in the trench was a wall aligned E–W in the southern part of the trench, its top recorded at 12.05 m a.s.l. [Phase 1 in Fig. 4]. It was made of rough, local sandstone conglomerate blocks, approximately 0.20–0.40 m in size, bonded probably with clay mortar. A wall of sandstone ashlar (0.25 m by 0.45 m by 0.60 m) with similar alignment and elevation was discovered in D42 (approximately 2 m to the east of T1) in 2012. These two walls probably represented two phases of the same structure. A line perpendicular to this wall (azimuth approximately 346 degrees) was marked by three postholes (diameters 0.40–0.60 m) and a fourth that was damaged. They may have been remains of some kind of partition wall that was attached to the northern face of the stone wall [Phase 1 in Fig. 4].

The stratigraphy in the trench indicates that this feature is older than the basilica, possibly early Roman based on the limited pottery finds.

Phase 2. The construction of the basilica (the back wall of which projected into the trench at the south) necessitated changes that were reflected in the second phase distinguished in the trench. Standing structures from phase 1 were leveled. A deep foundation trench with steep sides was dug for the basilica wall, which was roughly 0.50 m thick and built of massive sandstone ashlar approximately 0.40 m by 0.60 m by up to 1.00 m in size (the inside surface of this wall was trimmed smooth and probably finished with marble slabs, Waliszewski and Wicenciak 2007: 422–424). The foundation trench was filled with rough sandstone blocks poured with lime mortar with large amount of ashes and burnt olive seeds to make it stronger and more resistant to water; the overall thickness did not exceed 0.95 m.

A street was introduced back of the basilica, running from the east and turning a corner in a northerly direction where it reached the basilica. The area was leveled and a pavement of rough sandstone and limestone put in place. The width of the street approximated 3.30 m in the northern part of the trench and 3.40 m in the eastern part, whereas a passage leading off to the south, between the basilica wall and D90, was about 1.90–2.20 m wide. The general slope of the street surface is to the south (11.80 m a.s.l. in the north, 11.67 m a.s.l. in the south). The eastern section of the street pavement was dismantled in antiquity.

Remains of D90 and D102 date from this phase, albeit the evidence is much disturbed by later building activities. The wall of D90 is a solid feature made of sandstone ashlar (approximately 0.20 m by 0.35 m by 0.45 m) [see Fig. 3 bottom], but D102 survives only as a rough substructure

made of sandstone and limestone [Phase 2 in *Fig. 4*]. A gutter was built in this phase as well. It was made of a thick layer of lime mortar blended with ashes. The two directions of incline of the drain (which is 3 degrees overall) indicate that water was drained away from the wall of the basilica to the east and then southward generally to be carried away from the street and building.

The church was in use in the 6th century AD (Waliszewski 2006: 27–33; Abou Diwan 2014: 147–160), hence the construction process must predate that period; pottery analysis and a detailed examination of trench stratigraphy suggests a date even in the 4th century AD for the original project.

Phase 3. A drain was built to collect water from the surface of street D116 [Phase 3 in *Fig. 4*]. It had a U-shaped trench approximately 1.60 m wide and 0.60 m deep. Two parallel walls approximately 0.50 m high were formed of rough sandstone blocks; they were wider at the bottom and tapering slightly toward the top. The gap between them formed a channel 0.20–0.35 m wide. The faces were irregular, although the stone surfaces of the inner one were slightly smoother. A few flat stones on the bottom bore traces of lime mortar with sand and ashes, indicating possible primary use as paving slabs. Most of this mortar was probably washed out. Covering slabs of the drain were part of the street pavement made of limestone and sandstone slabs (top at 12.50 m a.s.l. and 12.20 m a.s.l. respectively) [*Fig. 5*].

In the narrow passage going south steps were constructed of sandstone and limestone ashlars, bonded in lime mortar, on a waterproofed bedding of lime mortar with ashes and burnt olive seeds. Six steps

were recorded, the second one from the top being completely destroyed; the elevation of the top step was 12.38 m a.s.l. Steps were bonded with lime mortar. Each step was approximately 0.30 m deep and 0.20 m high; the width was approximately 1.60 m. The level of the lowest step was approximately 11.40 m a.s.l.

A supporting wall of some kind was built along the rear wall of the basilica. It was made of rough sandstone blocks bonded in lime mortar with sand and ashes, the preserved height being 0.40 m. The function of this wall could not be determined.

Pottery from the building trench was assigned to a mixed, late Hellenistic through early Roman horizon with a few sherds being of later, late Roman/Byzantine date. Thus, the *terminus post quem* for the structure was in the 4th–5th century AD.

Phase 4. Alterations to the northeastern part of the basilica caused further changes in the area. A new wall constructed in place of the old corner, probably reusing the same material, was practically the same with regard to structure and make-up, only the orientation changed by five degrees. The changes to the width of the northern aisle



Fig. 5. General view of the preserved fragment of the drain (Photo R. Solecki)

of the basilica are evident, from the original 4.25 m to 5.60 m. The foundation trench connected with the reconstruction of the basilica destroyed part of the drain, which reappeared to the north of the northeastern corner of the basilica [Fig. 6]. This does not necessarily mean that the drain went out of use. It could have continued to operate and collect water from street D116, discharging water through a new section built along the new back wall of the basilica [Fig. 7].

The surrounding buildings, of which rooms D90 and D102 were part, were also

modified. The west wall of room D102 was moved by approximately 0.25 m to the east and built over the leveled remains of the old substructure. The north wall of room D90 was modified. A feature of rough sandstone blocks bonded in lime mortar mixed with ashes was constructed against the wall in a narrow construction trench, approximately 0.80 m wide. It was of triangular section, extending 0.60 m from the face of the wall at the bottom and 0.25 m near the top; the height of this feature amounted to 1.60 m and the outer slope was roughly convex, smooth, made



Fig. 6. Street D116, top view. The line of the drain marked in green; the missing part with a dashed line. Blue traces the original back wall of the basilica, whereas the reconstructed part is in red (Photo M. Bogacki)



Fig. 7. Two troughs of the drain: lower from phase 3, upper from phase 4, running along the back wall of the basilica (Photo R. Solecki)

of lime mortar mixed with ashes, crushed pottery and broken shells. The trench was filled with loose stones and gravel. The addition of ashes, crushed pottery and shells made the mortar covering this feature hydrophobic, thus protecting the wall from water, which also soaked faster through the loose stones in the trench. The protective feature was necessitated by changes made to the draining system (the same feature was observed in the neighboring trench D47, see above, page 457 and *Figs 2, 3*).

Dating finds from the fill of the abandoned trench ranged from the late Hellenistic period through the 6th–7th century AD. It would indicate that the reorganization of street D116 took place probably in the 6th century AD.

Phase 5. New gutters were introduced along the back wall of the basilica, similar to those from phase 2, but with an additional layer of potsherds laid flat, possibly to enhance the hydrophobic characteristic of this installation. Some leveling in street D116 (under the missing pavement) presumably reflected a reorganization of the street surface to set a new incline. The level



*Fig. 8. Western section of the test trench in room D20 (contexts 44–46)
(Photo A. Pawlikowska)*

of the gutter end, 12.50 m a.s.l., corresponded to the pavement surface.

TRENCH IN UNIT D20 (SEASON 2012)

Trench supervisor: Piotr Makowski

Exploration of unit D20, continued over from 2009, tested the stratigraphy of earlier habitation on site. The discovery of an architectural feature in its eastern part reduced the size of the area explored. At least four major phases of settlement were distinguished, the earliest of which was a compact and relatively humid sand layer accumulated directly over the sandstone bedrock. It may have been the ridge of the beach. A flood or short-term rise of the sea level left a thin intercalating layer of sand [*Fig. 8*]. Strata connected with a relict wall yielded Iron Age II material; it was certainly one of the oldest architectural remains in the trench, possibly connected chronologically with structures discovered in test trenches D37 and D44 (Waliszewski, Juchniewicz, and Gwiazda 2012: 431–435). The deposits on the western side of the feature are mainly destruction layers containing a large number of unworked stones. The pottery evidence strongly suggests that the wall had been covered by earth during the Hellenistic period.

EXCAVATIONS IN AREA D23

*Trench supervisors: Jakub Brochocki (2012),
Agnieszka Szymczak (2013)*

Area D23 is located in the northwestern part of the site, between streets D100 on the north and D73 in the west, and units D71 and partly D22 on the east. In the first season, the eastern part of the room was investigated to a depth of 1.50 m; in 2013, the excavation was extended into the remaining part of the room (save for

an approximately 0.80-m-wide stretch along the south wall), the objective being to get a clearer understanding of the character of the occupation layers and to correlate the results of the two seasons. The latter task was hindered by a lack of actual continuity between layers in the two trenches, due to the western border of the 2012 trench accidentally following the line of a wall that had divided the excavated area into two separate rooms. Moreover, excavations in 2013 did not reach the deeper layers, hence phases 1 through 5 (of 11 distinguished after two seasons of work) in the described stratigraphical sequence are described on the grounds of the results from just half the trench and may yet be modified.

The phases distinguished encompass a time from the Persian period (phase 1) until the early Byzantine period (through the 6th–7th century AD in phase 11).

Phase 1. Two walls (043 and 042) built in a “Phoenician” rubble-and-pillar technique with a doorway in the northern of the two were dated to the Persian period based on limited pottery evidence.¹ Neither their foundation levels nor usage levels primarily associated with them have been reached (at 11.70 m a.s.l.).

Phases 2 to 4. The next three phases were assigned to a generally Hellenistic horizon based on the pottery evidence. The architecture was modified to a large extent, with new walls being raised, on the south and west, and old doorways being blocked. The space thus created may have been a courtyard rather than a roofed room, as suggested by the presence of a channel (023). Some more or less putative walking levels were identified (e.g.,

021) with scatters of potsherds, traces of burning and the occasional crude stone pavement(?). By the end of this phase, some of the walls were dismantled. The fill of a ditch from phase 4 (029) contained two large iron tools, identified as pickaxe/mattock heads (S. Modzelewski, personal communication).

Phases 5–6 and 7. Phases 5 and 6 generally reflect a revitalization of the area, which occurred with the advent of early Roman times and which saw a distinct change of spatial layout in the area. A pavement (019a) and associated earth floor were identified, and a cooking pot was found, probably sunk into the floor level (installation?), in the southeastern corner of the trench. A similar “patchwork” floor incorporating cobbles, blocks and tamped earth (096, 097 and 093), as well as a fragment of a stone pavement (095) appeared in phase 6 also in the western part of the trench [Fig. 9]. It may turn out that the two phases in the two parts of the trench were actually one; dated contexts from phase 5 are late Hellenistic, those from phase 6 (including the cooking pot mentioned above) early Roman.

All the architectural elements from the previous phase remained in place in phase 7, which was distinguished based on the presence of usage levels with lenses of ash, traces of burning and reddish, clayish soil thought to be of organic origin (*dakka*). The evidence associated with the use of fire may suggest a change in the function of this room (courtyard?). Pottery from this phase pointed to an early Roman date.

Phases 8 and 9. Substantial rebuilding and changes in layout occurred in phase 8. In the western room, a new floor

¹ Pottery analyses and dates on these grounds provided by Dr. Urszula Wicenciak (coarse ware and amphorae) and Dr. Krzysztof Domżański (fine wares).

was constructed (11.50–11.70 m a.s.l.), its top surface (055) of gravel in lime mortar, resting on tightly set cobbles (066) laid over a layer of clayey floor substrate (063) [Fig. 10]. The north wall (042) was superposed on wall 040, its foundation trench piercing the floor of the previous level. The other walls followed the course of (or were identical with) those from the earlier phase.

The room was equipped with an installation in the form of a ‘cement’ vat, its top flush with the floor surface. Two such installations, marking occupational sub-phases, were found in the southeastern part of the excavated space, both projecting from the south trench section. The older one (077) was badly damaged. Its interior was shaped like a round-bottomed basin (preserved depth 0.15 m, maximum

inner diameter 0.30 m). The younger one (072) was completely preserved (cylindrical interior roughly 0.34–0.38 m in diameter, 0.47 m deep) [Fig. 11]. However, it looks like it did not serve its purpose well enough, because a cut-off(?) bottom half of an amphora (installation 069)² was eventually fitted inside it. The vessel was cracked when found, which might explain why yet another amphora half (061) had been installed Russian doll-fashion inside the first one. In each case, the edges of the vessels were secured with plaster, but the topmost one projected slightly over the locally replastered floor. One more half-amphora (051) was fixed in the floor near the middle of the north wall. Here, the diameter of the hole made in the floor for this purpose was larger than necessary, with no preserved traces of repairs to the



Fig. 9. Late Hellenistic/early Roman occupational level in the western part of D23 (phase 6); view from the east (Photo M. Wyżgół)

² Installations in the form of vessels in the floor are a common feature in Jiyeh (see Gwiazda 2012).

floor. As there is no clue as to the time elapsed between these changes, it is also difficult to correlate them into phases. The subsequent refittings of the installation may be either still part of phase 8 or mark a more extensive change and should be attributed to phase 9.

The structures ascribed provisionally to phase 8 in the eastern room were limited to a tamped-earth occupational level(?) (011+012). The unit was subdivided in phase 9 with a row of boulders appearing just over a meter away from the north wall and parallel to it [Fig. 12]. It may have been a foundation for a wall made of a lighter

material, which might have screened off a doorway in the east wall leading to room D71 (see Dzik 2015, in this volume).

Phases 10 and 11. In the next phase 10, evidence for abandonment and subsequent demolition was noted in both parts of the trench. The wall dividing the excavated area into two rooms was removed and the walls were quarried extensively for stone building material. Big chunks of thick plaster were found in the southwestern corner of the trench. The demolition, which was dated to early Byzantine times, may have served as preparation for building activities in the following phase 11, which were done



Fig. 10. Floor in D23 (phase 8): top, lime-mortar floor, view from the east; bottom, cobbled substrate under the lime-mortar floor, view from the south (Photos M. Wyzgół)



Fig. 11. Installations embedded in lime-mortar floor: vat with vessel inside it (Photo M. Wyzgół)



Fig. 12. Foundation of a partition wall in D23; fill of a quarrying ditch in the foreground (Photo J. Brochocki)

in at least two subphases. A single room was created (for details of the architectural transformations and functioning of room D23 from this phase in a wider context, see Dzik 2015, in this volume). Its south wall, with two entrances leading to room D24, was built later than all the others, but still preceded the building of a floor, which was a very sound structure, its construction typical of late antique architecture in Jiyeh: stone pavement covered with white gravel and plastered with lime to form a smooth walking surface. A pit dug in this layer, about the center of the room, contained two large stones; they may have served as a foundation for a wooden roof support (M. Dzik, personal communication). Another hole, in the northwestern corner, contained an installation in the form of a halved amphora (048). Another one may have been installed in the southwestern corner.

Two doorways leading from the neighboring streets have been preserved: one in the east end of the north wall, the other in the west wall. The latter was a later addition, as evidenced by the three steps (050) leading up to it, built after the west wall had been plastered.

Pottery from the floor substrates dated the beginning of this phase to the 6th–7th century AD. There was nothing to show when the area was abandoned.

AREA D4 AND TRENCH T3

Trench supervisor: Marcin Romaniuk

Area D4 was first explored in 2008–2009, uncovering remains of the late antique residential quarter reaching a depth of 1.60 m (Waliszewski, Juchniewicz, and Gwiazda 2012: 436–437). The present trench, excavated in 2012 and 2013, was situated within this area and exposed probably

the oldest settlement structures, built on native rock, and dated based on pottery evidence to the Iron Age II. These remains [Phase 1 in *Fig. 14*] consisted of thick walls (035) made of irregular blocks of limestone bonded in earth and clay mortar. The structure when it collapsed sealed a deposit (036) of 23 broken cooking pots and tableware from the 8th–7th century BC in the center of the floor (phases 2–3) (Waliszewski and Wicenciak 2015: 161–162, *Fig. 7*) [*Fig. 13*]. Apart from the brief event in the Persian period, more intensive activity in the area started in the late Hellenistic period, involving presumably some kind of metallurgical activity to judge by the remains of slag (024). After a rather short-lived revamp in the Hellenistic period (phase 4), the area was abandoned quickly and a layer of minor building detritus formed on top of the Hellenistic-period walls (phase 5). The latest phases of activity involved leveling of the ground and new architecture built in the late Roman and early Byzantine periods (phases 6–7). The construction technique of the walls did not differ significantly



Fig. 13. Deposit of Phoenician-period vessels from context 036 in area D4 (Photo A. Zawadzińska)

from the late antique building standards recognized in the residential quarter in Jiyeh. There was also abundant evidence of rebuilding and modification of passages between rooms.

In trench T3 (which was an extension of D4 to the east and south), two subsequent levels of late antique lime-mortar floors with substrate (003–007, 041) [Fig. 14] were removed uncovering walls built in the “Phoenician” ashlar-piers-and-rubble technique on which the late antique walls of area D4 had been founded, repeating a situation already noted by the trench supervisor in this sector, for example the north and east walls of area D63 in the southwestern part of the quarter and the east and south walls of area D68 in the central part. The finds shed light on the extent of the earlier settlement on this site

but do not give a precise date since ashlar piers technique was in use in the region for quite a long time: from the Iron Age to the early Hellenistic period (Sharon 1987: 32, Tab. 2).

AREA D72

Trench supervisor: Magdalena Antos

Room D72 in the northwestern part of the residential quarter D measures 5.09 m by 5.30 m (26.26 m²). On its eastern side runs street 073, aligned roughly N–S, which converges at the northwestern corner of the room with street 100 oriented E–W. Room D45 adjoins it from the south, room D74 from the west and room D107 at the northeastern corner [see Fig. 1]. Earlier work in the area consisted of cleaning of the excavated structures in 2008–2009 and a test pit dug in the northwestern

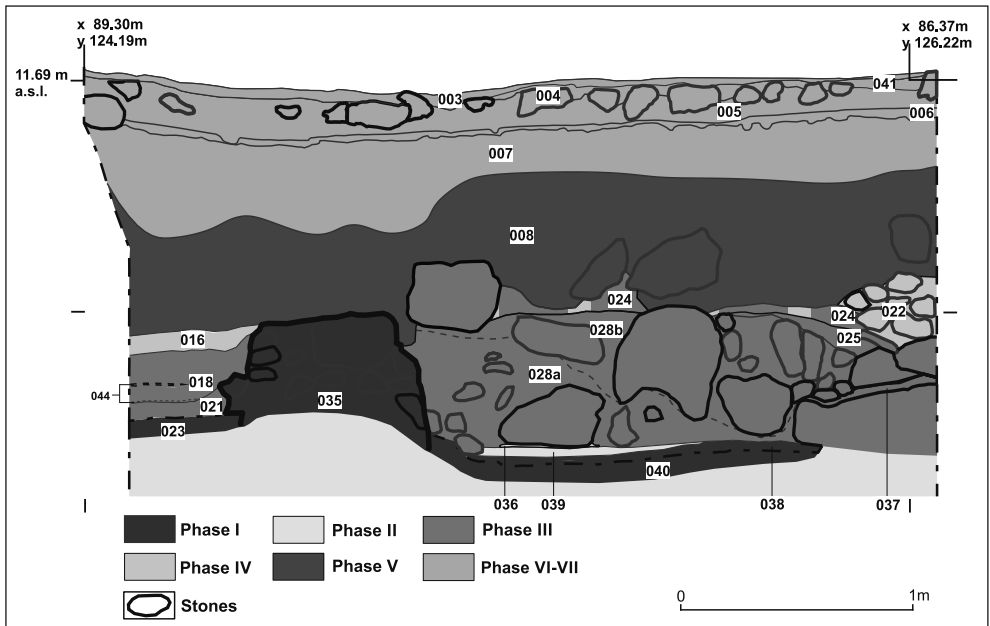


Fig. 14. Section through area D4, looking east (Drawing M. Romaniuk)

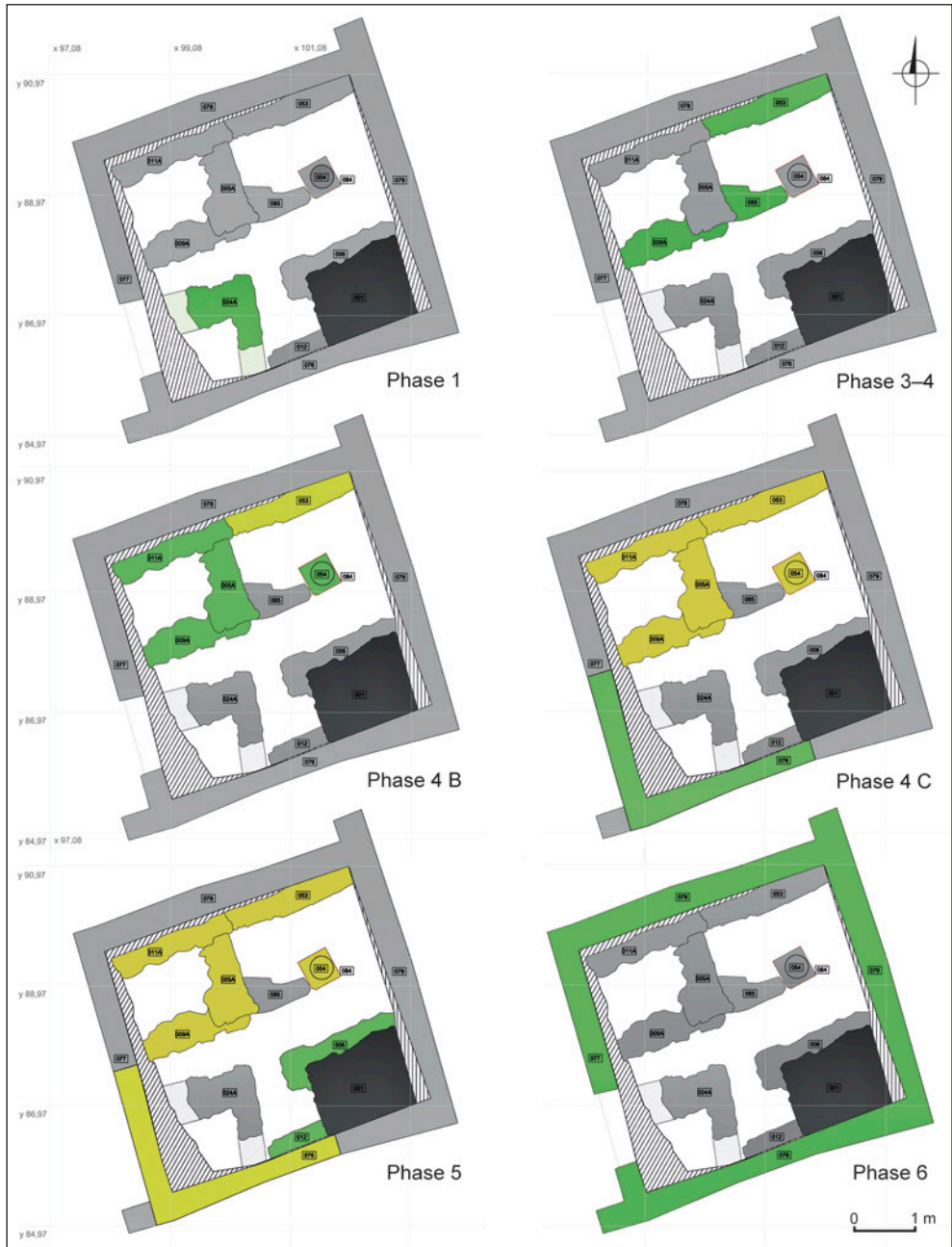


Fig. 15. General plan of structures uncovered in room D72: from top, phases 1 to 6 (Drawing M. Antos)

corner in the 2012 season as well as an extension to the north. The season in 2013 was dedicated to a study of the building stratigraphy and a test in the north-eastern part of room D72 adjoining on the west that from the 2012 season (2.44 m by 2.30 m). Research questions concerning architectural development in this part of the quarter led to a new test, D/T4 (3.66 m by 1.55 m on the N–S axis and 4.15 m by 1.85 m on the E–W axis) being opened outside the east wall, specifically on the intersection of street 100 and street 073 [see *Fig. 1*].

Area D72. The oldest of the registered structures is a corner wall in the southeastern part of the room (discovered in 2009) [Phase 1 in *Fig. 15*], built of dressed *ramleh* in a clay binder (preserved top at 9.82 m a.s.l.). The stratigraphic relations of accompanying contexts and the pottery evidence suggested a date in the Persian period.

After the structure described above went out of use, the ground was leveled but evidence for natural accumulation of humus (phase 2) indicates that the place was not frequented for some time.

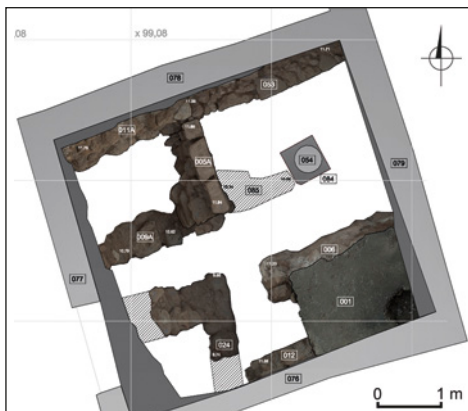


Fig. 16. Orthophotoplan of structures in D72 (Photo and processing M. Antos)

In the Hellenistic period, as indicated by the archaeological evidence, different walls were introduced from an elevation of 10.12–10.10 m a.s.l. [Phases 3 and 4 in *Fig. 15*]. They were built of irregular and dressed blocks of stone, both limestone and local *ramleh*, bonded in clay mortar. The older phase of wall C009 was preserved to a height of about 30 cm and was probably related to other structures from the Hellenistic period which have not survived (two coins dated to this period were found between the stones of the second course). Afterwards, it was reused to build new structures in the northern part of room D72. The contexts which accompany the wall could mark potential levels of use. Just like in phase 2, a layer of humus was found between them which shows that the space went out of use for a period of time.

Three subphases were distinguished in phase 4 [see *Fig. 15*]. The first (A) was a layer of accumulated or leveled deposits and should be probably associated with the degradation or part-demolition of one of the walls (085) and the preparation of this area for the building of new structures. The fill in the uppermost layers consisted predominantly of fine and middle-grained silty sand consisting of fragmented and mixed pottery material dated to the Persian–Hellenistic period. A deposit of partly painted terracotta plaques with busts and numerous large pottery fragments was found in the northwestern part (elevation 10.05 m a.s.l.). In some of the broken vessels there were traces of ashes with burnt animal bones and organic material. The second subphase (B) witnessed transformation and reuse of some of the older structures, forming a kind of platform in the northwestern quarter of the area which was then filled with

consecutive leveling layers. In the center of the area delimited from the west by the platform-like structure and from the north by the wall, a base and shaft of a column made of local *ramleh* were discovered *in situ*. Layers interpreted as successive occupational levels related to this structure were identified along with fragmented and mixed pottery material from the Persian–Hellenistic period. In the last subphase (C) the west and south walls of room D72 were built using dressed *ramleh* blocks bonded in clay mortar with a little lime added to it. The structures formed a kind of corridor which closed off from the west.

Large-scale construction works occurred in phase 5 [see *Fig. 15*]. A wall (C012) reinforcing the south wall of room D72 (from phase 1) was built from this level as well as a wall perpendicular to it (C006) which closed off from the south the area with the column and the platform-like structure on the west side. It was built of large dressed blocks of limestone conglomerate which were bonded with a lime-and-ash mortar with clay fractions, fine sand and small stones added. Traces of a lime render under plasterwork were noted on the face of this wall. Stratigraphic relations and architectural analysis suggest this structure was probably built in the early Roman period and was in use concurrently with the older structures.

In the latest phase [Phase 6 in *Fig. 15*], room D72 was rebuilt in late antique form. Marking this event is a leveling layer, present throughout the quarter, consisting of worked and unworked stone blocks of different size, architectural elements, stones of various sizes, fragments of plaster and floors. Mixed pottery material set the *terminus post quem* to about the 5th century AD. The south, west and north walls

were constructed directly on older structures, while the east one was partly built on the fill. All the wall faces were plastered with a lime-and-ash plaster containing middle- and thick-grained sand. The lime-mortar floor was recorded at elevations of 11.89 to 11.85 m a.s.l. establishing the walking level.

The last two phases will not be discussed here, as they are treated in detail elsewhere (Gwiazda and Waliszewski forthcoming; Dzik 2015, in this volume). As regards the platform-like structure and the area adjoining it from the east (in Phases 3–4), they seem to be uniform, but any correlation of walls and perception of the structure as a whole, not to mention function,



*Fig. 17. Column shaft
(Photo M. Antos)*

are limited by the extensive rebuilding and superposition of late antique structures. Data for the Hellenistic period when the platform-like structure was added to an earlier wall and the column put in place are modest to say the least. The column suggests the existence of a vault and the wall on the south may have been a carrying wall (it is 0.60 m thick). The render on this and other wall faces indicates that the room may have been plastered.

The partly painted terracotta plaques bearing relief busts, for example, the face of a woman with paint-enhanced eyes and hair and body decorated with geometrical motifs, are undoubtedly of greatest interest. They were part of a deposit dated to the Persian–Hellenistic period by the utility plain wares found in this layer. A characteristic group was formed of numerous architectural elements, includ-

ing the column base and shaft, made of porous *ramleh*, found in place in the north-eastern part of the room. The shaft was 0.33 m in diameter, 1.20 m preserved height; the base 0.54 m and 0.30 m respectively diameter and height, of rectangular shape with an irregular torus [Fig. 17]. An intact oil lamp dated to the Hellenistic period was found in late antique fill. The almost complete lack of glass and metal finds, including coins, is the most striking.

Test D/T4. Phase 1 identified in the trench was connected with rebuilding in late antiquity. The east wall of room D72 was reinforced with a structure from 0.60 m to 0.80 m high, 0.24 m thick in its northern part, built of dressed *ramleh* blocks [Fig. 18]. Its smooth, slightly bulging face was covered with hard lime plaster with middle-grained gravel and quartz mixed in and trace quantities of



Fig. 18. Structure reinforcing the east wall of room D72 in trench D/T4, general view from the west (Photo M. Antos)

charcoal and plant remains, ensuring hydrophobic properties.

Large limestone slabs of roughly rectangular shape formed a pavement more or less level with the foundations of the reinforcing structure described above and the limestone floor inside room D72. They could represent the first level of occupation after the rebuilding of the area. Partly on top of them was a layer of *ramleh* and limestone blocks of different sizes which may have been the next occupational level or a leveling layer. A foundation trench was dug from this level for the drain running along street 100 [Fig. 19].

A drain was also built in street 073 (phase 3). It consisted of two parallel walls of stone slabs four courses high (both rough and dressed blocks of different size and a few blocks of limestone were used),

forming a channel from 0.40 m to 0.60 m wide, covered with rectangular limestone slabs [Fig. 20]. Traces of plastering, probably washed away by water, were noted on the walls, as were numerous sediments on and between blocks and in the fill of the drain. The pottery material found in the fill of the pit and in the drain is not homogenous, ranging in date from the Hellenistic to the early Byzantine periods. However, most of the finds are of a later date, which sets a *terminus post quem* in the 5th century AD, already after room D72 was built. The ceramic assemblage is fragmented and mixed, typical of leveling layers and dated to the 4th–5th century AD. Layers interpreted as occupational levels yielded mostly utility wares and a few fragments of glass, animal bone and shells.

CONCLUSIONS

The results of testing in areas D47, T1, D4, D23 and D72 of the residential quarter in Jiyeh (Porphyreon) have confirmed and expanded observations regarding site development in this part of the site. The stratigraphic sequence demonstrates explicitly three main phases of domestic archi-

tecture: 8th–7th century BC, 5th century BC through the 1st–2nd century AD and 4th–5th century AD. The earliest are stubs of walls that were assigned to Phoenician settlement from the Iron Age II. It is not clear what happened to this settlement, but a new village following a different



Fig. 19. General view of D/T4 in phase 1 from the top of the east wall (Photo M. Antos)



Fig. 20. Drain in street 073 in the northern part of the area (Photo M. Antos)

layout was established in the Persian period, most likely in the 5th century BC. Presently available data indicates that this phase continued uninterrupted for the whole of the Hellenistic and early Roman periods until the 1st–2nd century AD. Whatever the reason was for its abandonment after this date, when the last phase of habitation in Jiyeh (Porphyreon) began in late antiquity (4th–5th century AD) the urban layout was changed in its entirety; this is the phase uncovered in 1975 by the DGA mission directed by Roger Saidah.

The exploration also confirmed the early dating of the Christian basilica (area Q), which was undoubtedly in use in the 5th century, but could have been built in the 4th century AD.

An interesting question raised by the new archaeological work is the existence

of a sewage system, traces of which were noted in several sections of the streets of the late antique settlement. The collected evidence indicates that it was a comprehensive building project sometime in the 5th century AD and that protection against damp was the immediate cause. It may or may not have been related to increased rainfall confirmed for the Levant from the end of the 5th century AD (Izdebski et al. 2016).

The rich and well-documented stratigraphic sequence explored in the residential quarter puts Jiyeh (Porphyreon) among the sites of the Levantine coast which are of exceptional significance for the study of settlement history, transformation of domestic architecture and the role played by seaside settlements in the local economy.

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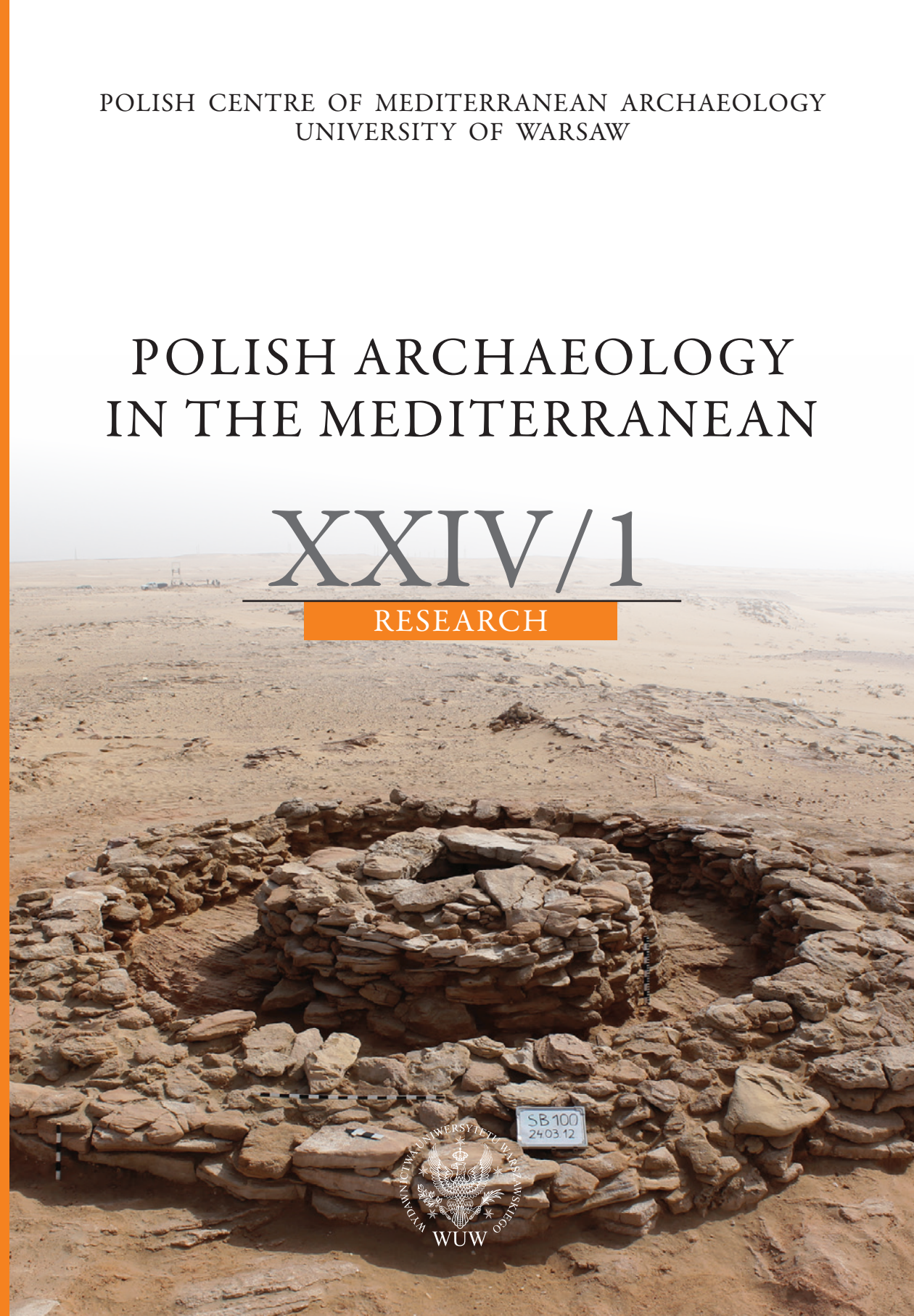
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