

Mosaics from Jiyeh/Porphyreon in Lebanon: the universality of mosaic art in late antiquity



Abstract: In the Byzantine period mosaic floors became an essential element of interior decoration, in domestic as well as sacral spaces. Mosaic patterns spread all over the Mediterranean basin, even to the less significant settlements. Ancient Porphyreon (modern Jiyeh in Lebanon), a Levantine coastal village on the ancient *Via Maris* was no exception. Recent excavations by a Polish–Lebanese archaeological project confirmed the presence of mosaic floors, mainly in the Domestic Quarter. Technological analyses coupled with a study of the decoration and iconographical motifs have shed light on mosaic craftsmanship in Jiyeh. The mosaics from the Domestic Quarter in Jiyeh are discussed in comparison with well-known examples from nearby sites.

Keywords: mosaics, *opus tessellatum*, late antiquity, Levant, Lebanon, pavements

The archaeological record from many sites, not only in the Levant, demonstrates the huge popularity of tessellated pavements among homeowners in late antiquity. An overall economic prosperity may stand behind this spreading fashion, as much as the growing importance of cities like Antioch, Madaba, Apamea and Gerasa, which would have set trends for other regions (Dauphin 1980).

**Aleksandra
Pawlikowska-Gwiazda**

Institute of Archaeology,
University of Warsaw

Modern Jiyeh is a small seaside town, approximately 20 km south of Beirut. It is the site of ancient Porphyreon, a village situated on the *Via Maris*, one of the most important roads along the Levantine coast. The name of the village was derived from the Greek word *πορφύρα* for a hugely expensive reddish-purple natural dye extracted from *Murex* sea snails that was characteristic of the region. Ancient sources repeatedly mention a place called Porphyreon¹ without giving a date for its foundation. Recent archaeological discoveries have dated the beginnings of the

settlement to the Bronze Age, long before the Ptolemies (Wicenciak 2012: 447). The travelogue of an anonymous pilgrim from Burdigala (modern Bordeaux), traveling in AD 333, refers to Porphyreon as a *mutatio* 20 Roman miles from Berytos and eight miles from Sidon, modern Berytos and Saïda respectively (*Itin. Burd.* 18, 21). The location roughly corresponds to present-day Jiyeh. The ancient site, which was abandoned over time, gained a new lease on life with modern housing districts and tourist hotel facilities developed in the 20th century.

ARCHAEOLOGICAL CONTEXT

Archaeological excavations in Jiyeh have been carried out in five different sectors, covering roughly 5700 m² [*Fig. 1*]:

- Sector Q: approximately 1300 m², Christian basilica located lower than the rest of the village, close to the sea (Waliszewski et al. 2008: 27–34);
- Sector D: about 2180 m², domestic quarter east of the basilica, its northern part destroyed in modern times (Dzik 2015; Gwiazda and Waliszewski 2016);
- Sector E: approximately 120 m², probably also a domestic quarter, but very poorly preserved (Gwiazda and Waliszewski 2016: 43–45);
- Sector B: pottery workshop, located further to the north (Wicenciak 2016: 27–31) (not illustrated in *Fig. 1*);
- Sector A: necropolis, on the northern fringes of the site, obliterated by a hotel complex (Gwiazda 2014b) (not illustrated in *Fig. 1*).

The most spectacular examples of mosaic art were discovered in a Christian basilica in Sector Q prior to the onset of the Polish project; they are now in the Beiteddine Palace museum. However, the residential quarter in sectors D and E, excavated and investigated by Polish archaeologists, has yielded several mosaic floors and fragments thereof, all coming from secular spaces. These finds from the recent excavations have been examined for the purposes of this paper.

The residential quarter dated to the Byzantine period did not follow a regular street grid [see *Fig. 1*], allowing the houses to have a less than strict architectural structure. This is quite common in the smaller villages of the late antique Near East. The residential quarters clearly extended beyond the area investigated archaeologically in sectors D and E, both to the north and south where modern village architecture encroaches (on the extent of

¹ For instance, Polybius (V, 68–69) describing the battle between Ptolemy IV Philopator and Antioch III in 218 BC. On the history of the settlement, see Waliszewski and Gwiazda 2015.



Fig. 1. Plan of Jiyeh/Porphyreon (PCMA UW Jiyeh Project | drawing M. PuszkarSKI)

the ancient settlement, see Gwiazda 2014a: 33, 34, note 9). So far, close to 100 units have been explored, 21 of them with mosaic floors (two decorated and 20 monochromatic). From two to four rooms had such floors within a single house (considering the ground floor alone). One unit with a stone slab pavement led into the street; it would have served as a vestibule (Gwiazda and Waliszewski 2016: 49, 50). The floors in the other chambers were either of mortar or made in the *opus tessellatum* technique. In the latter case they comprised big white limestone tesserae laid diagonally in the center, surrounded by a wide or narrow border. The layout of individual dwellings is not always clear due to poor preservation of the walls and various architectural refurbishments, making it often impossible to trace the original household boundaries. It is plausible that every house had a tessellated pavement

on the ground floor, but this assumption cannot be proved beyond doubt.

A cluster of mosaic pavements is observed in rooms D 52, D 62, D 63, D 108 in the southwestern part of the district. These rooms share walls (at least one), but do not have common entrances. Room D 62 is the only one with a decorated mosaic (scale pattern with colourful florets). Was the more elaborate decoration an indicator of the owner's higher social and material status?

Surprisingly, there are very few decorated mosaics on the ground floors. The only example from Jiyeh of such an ornate floor on the ground floor in a secular context is the so-called "Nilotic mosaic" found in the zone between sector D and A/B, supposedly a continuation of the residential quarter in D. It was probably part of a larger and more prominent building (Ortali-Tarazi and Waliszewski 2000).

MOSAIC-MAKING IN JIYEH

Few sources actually describe or depict the process of making mosaic floors. The most famous representation of mosaicists at work is on a funerary stele from Ostia from the beginning of the 4th century AD (Dunbabin 1999: 281). This image, along with the guidelines set down by Vitruvius in his work as well as a body of archaeological data, permits a step-by-step reconstruction of how mosaic floors were made.

After obtaining limestone (or other rock)² from the quarries, it was cut into blocks and the blocks then into slabs about 1–2 cm thick. Workers on the Ostia stele are depicted transporting stone slabs on their backs, while two men, *tessellarii* (Greek *ψηφοθέτης*), are cutting tesserae. Professional nippers are used for the purpose in modern mosaic workshops, but in antiquity the preferred tools were a hammer and chisel.³ Many loose roughly cut

2 Pending the publication of the results of petrographic analysis; for an archaeometric study of tessera surfaces, see Tomkowska, Chmielewski, et al. 2017).

3 When speaking of the ancient mosaic craft, one should not mistake the term "workshop" for a regular atelier. It is usually meant in the sense of a "team", "group" or "school". For more on ancient mosaic workshops, see Levi 1947; Dauphin 1976; Balty 1995; Becker and Kondoleon 2005; Donderer 2008; Hachlili 2009; Zohar 2012.

cubes were spotted in the structural layers under the pavements in Jiyeh [Fig. 2], which means that tesserae were cut on site. According to Vitruvius (7,1), three different layers—*statumen*, *rudus* and *nucleus*—should be laid under the *tesselatum* (layer of tesserae). Dunbabin mentions a fourth, a very thin layer of setting bed (Dunbabin 1999: 282). This was not always practiced due to varied geological conditions and natural substrates in different parts of the Near East. The thickness of particular lay-

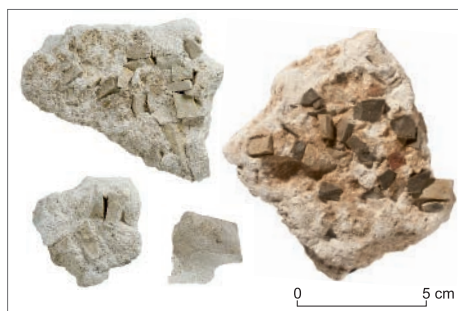


Fig. 2. Production waste (PCMA UW Jiyeh Project | photos A. Pawlikowska-Gwiazda)

ers could depart substantially from Vitruvius' recommendations. In Jiyeh, Vitruvian rules were applied only to floor surfaces on the ground floor, whereas on the upper floors the *rudus* was excluded [Fig. 3]. This is justified by the structural need to make the upper floor less heavy. Post-production waste in the form of tesserae or even bigger pieces of uncut tiles was generally discarded between the *rudus* and the *nucleus*.

Laying the *tesselatum* was the final and the most laborious stage of the process. Sketches of the more complex designs would be made on the *nucleus* layer by professional painters (Greek ζωγράφος; for this and other Greek and Latin terms concerning mosaicists, see Donderer 1989), but so far no such instance has been noted at Jiyeh. Even so, the actual process of laying a *tesselatum* floor can be traced starting with a border along the walls. This created a frame for the central panel. The more complicated iconographic representations, e.g., zoomorphic (see examples below) and

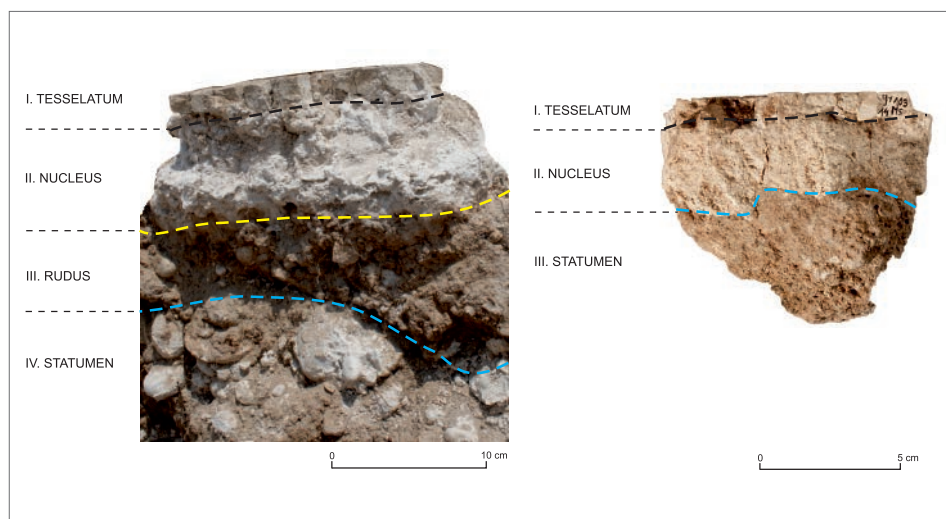


Fig. 3. Structural layers underneath the *tesselatum*: left, on the ground floor and, right, on the upper floors (PCMA UW Jiyeh Project | photo and processing A. Pawlikowska-Gwiazda)

anthropomorphic figures, were laid first and the background was filled in afterwards (see Zohar 2012: 181–191).

The making of the central panels in Jiyeh was simple (apart from the D 62 mosaic with scale pattern and florets): cubes were laid on a diagonal with regard to the border. The rows did not always follow the same direction, although the same orientation was observed to be quite common in ancient Porphyreon (see also Gwiazda and Waliszewski 2016: 46, Fig. 13) [Fig. 4]. Two explanations may be put forward and

both appear equally plausible. First, two (or more) mosaicists could have been working simultaneously, starting from opposite sides, and second, a single mosaicist at work, but over several days in a row, could have been less successful at maintaining continuity (Dunbabin 1999: 288).

Tesserae were of different size. Cubes came in three size groups: small – less than 1 x 1 cm, medium – 1–2 x 1–2 cm, and large – 2 x 2 cm and more (S, M and L in Table 1). Simple monochromatic mosaics were generally made with middle-sized



Fig. 4. Tessera-laying directions on a specific floor from Jiyeh (PCMA UW Jiyeh Project | photo R. Solecki, drawing A. Pawlikowska-Gwiazda)

and large cubes, hence the average number of tesserae per 1 dm² is about 30. A significant difference in density was observed in room D 62 (scales and florets, density up to 36 T/1 dm²) and, naturally, in an upper floor panel depicting a lion (41–56 T/1 dm²). It is logical to assume that smaller tesserae were used for the more complicated iconographic repertoire (which is

why *opus vermiculatum* was so expensive). The tesserae were generally cubical and regular in shape. However, deliberate irregularities were in use, especially in the floral, geometric and zoomorphic motifs. When curves, wavy lines or other uneven shapes had to be made, the need for shapes other than the regular cube was obvious (see Zohar 2012: 182).

MONOCHROMATIC MOSAICS FROM JIYEH

Nineteen monochromatic mosaics were found *in situ* in the residential sector D [Table 1, Fig. 5]. All of them have two features in common: a wide or narrow border and a diagonally filled, carpet-like central panel. Lacking specific furnishings or other characteristic features one cannot easily interpret the function of rooms with tessellated pavements. Nonetheless, the role of mosaic floors as indicators of room function is disputable. Thirteen rooms had a distinctive feature, that is, a kind of hydraulic installation in the form of a small basin sunk into the floor, below the level of the pavement. Their contemporaneity with the floors is undoubted, because there is no interruption in the *tesselatum* around the pits, thus excluding any later modifications. These installations were often placed by the walls and usually close to the entrance (Waliszewski, Juchniewicz, and Gwiazda 2012: 439–440; Gwiazda and Waliszewski 2016: 43–45). Two types of basin were distinguished [Fig. 6]: Type A – reused ceramic vessel (whole or fragmentary, such as a pithos neck or an amphora body and base); and Type B – shallow rectangular stone basin, lined with mortar or plaster.

Installations of this kind are well known from the ancient Near East. Tessellated basins are very typical of wine presses and as such were also present in Jiyeh.⁴ They are recognised in residential contexts as well. Ceramic vessels were installed in the floors of two rooms (IV and VI) of a 5th–6th century monastic complex at Khirbet Jemameh, 18 km from Gaza (Gophna and Feig 1993). Both rooms had mosaic floors decorated with geometric and floral motifs. Another example of a room with a mosaic floor and a similar installation comes from the presumed industrial area of the ancient village at Khirbet Sabiya (Ayalon 1979). The floor was laid of big white limestone cubes (2.3 cm by 2.3 cm), on a diagonal with regard to the walls, and the installation was a rectangular basin with plastered sides and the bottom laid with white tesserae. In another Byzantine village located in modern Khirbet Sumaqa, a room in the ruins of a domestic quarter had a simple monochromatic mosaic with a small basin (Dar 1985: 191–192). Interestingly enough, the examples from Jiyeh and from Palestine shared one feature, that

4 Accidental discovery at the building site of the Marina Resort hotel parking lot, close to the northern boundary of ancient Porphyreon (see Kowarska and Lenarczyk 2015).

Table 1. Rooms with mosaic floors preserved *in situ*

Sector/ Room (trench)	Pit with:		Mosaic measurement (m)				Tessera size	Tessera/ dm ²
	ceramic vessel	stone basin	North	South	East	West		
D/1		None	5.00	5.00	2.84	3.03	L	20
D/12	•		3.60	3.72	8.00	8.00	L	24
D/13	•		3.94	4.33	3.07	2.83	L	23
D/24		None	6.38	6.78	2.63	2.79	M	30
D/25	•		5.08	5.33	3.16	3.16	M	29
D/30	•		4.27	4.15	2.65	2.65	L	23
D/38	•		4.43	4.78	3.13	3.00	M/L	27
D/42		•	4.79	5.00	2.62	2.80	L	30
D/45		None	4.07	3.72	5.72	5.67	M/L	26
D/47		None	3.65	3.65	3.70	3.34	M	30
D/52		None	4.23	4.23	4.63	5.33	M/L	26
D/62		None	3.72	3.48	3.55	3.70	S/M/L	29–36
D/63	•		5.63	5.63	3.98	3.98	M/L	29
D/90 (T6)		None	3.76	4.07	4.35	3.77	M/L	27–31
D/92		•	2.67	2.78	1.50	1.29	M	34
D/94		None	n/p	<2.65	<0.60	n/p	M/L	27
D/99 (T2)	•		2.95	3.20	3.65	3.50	L	25
D/101 A		•	3.80	3.96	1.89	2.05	M/L	30
D/101 B		•	3.80	3.76	3.10	2.75	M/L	30
D/108	•		5.70	5.75	2.60	2.90	M/L	27
D/109	•		2.68	2.90	4.55	4.55	M/L	30
E/10 (T1)		None	<0.80	<0.60	n/p	1.18	S/M	41–56

Key

n/p = not preserved; < = not less than ...; ⊥ = perpendicularly laid, parallel rows not traceable; ? = unknown; LL = local limestone, C = ceramic tesserae, O = other rock, not identified; A1, J3, F16 = see *Table 2*

Table 1. (continued)

Deco- ration	Mate- rial	Border								Central panel		Preserved mosaic surface (%)		
		Number of rows				Width (cm)				Decoration	Material			
		N	S	E	W	N	S	E	W					
none	local limestone	2				5				Laid on the diagonal		83		
		3				7						63		
		20				43						86		
		5				10						69		
		24				45						84		
		35				84						39		
		3				7.5						95		
		3				7						94		
		3				6.5						83		
		30				56						92		
		33		3		64		3				69		
		13		18		13		15		22 36 23 28		J3 + F16	67	
		3				6.5				Laid on a diagonal		98		
		4		3		3		4		8 5.5 7 9		93		
		3				6						90		
		?		4		3		?		? 10 8 ?		Less than 30		
		3 ± 3				38-42		27-30		50 30-60		96		
		5				10						93		
		2/3 ± 3										97		
		3				6-7						99		
3				6						95				
A1	LL, C	5		?		5		6		?	6	Lion	LL, C, 0	Lion preserved in 97



Fig. 5. Examples of monochromatic *opus tessellatum* floors: left, with a rectangular basin in Room 101 A/B; right, with a circular ceramic basin in Room 109 (PCMA UW Jiyeh Project | photo R. Solecki)

is, a floor surface descending toward the basin. This kind of installation is often referred to in the literature as a “rubbish basin”⁵

Although the specific function of particular areas in the residential quarter remains unclear, it is evident that the

ground-floor rooms with monochromatic *tesselatum* floors, stone slab pavements, and mortar surfaces were less representative than the rooms on the upper floors. The distinction between the two is evident upon analysis of the finds from the upper floors (see below).

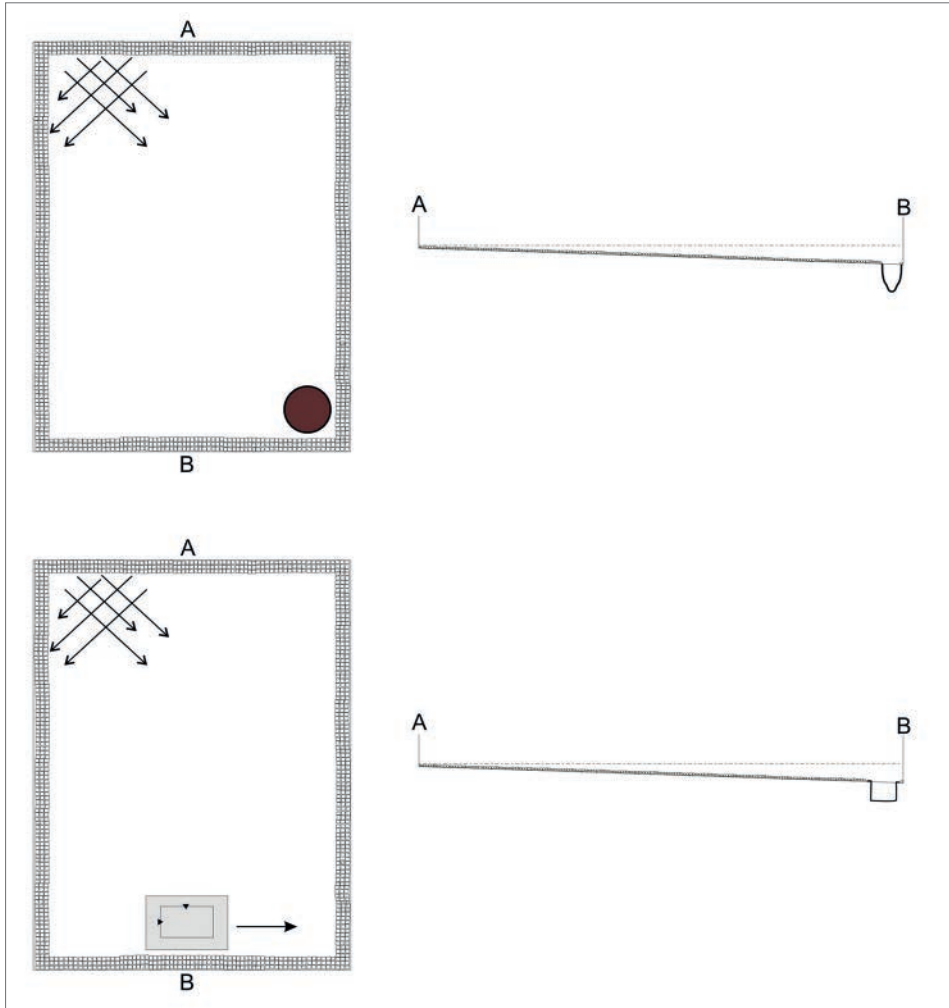


Fig. 6. Schematic plans and sections of mosaic floors with pits (PCMA UW Jiyeh Project | drawing A. Pawlikowska-Gwiazda)

5 Precise measurements and calculations of the basins in Jiyeh are to be found in an unpublished report by Rafal Solecki in the PCMA UW Mission archives.

POLYCHROMATIC MOSAICS IN JIYEH

The only intact polychromatic mosaic from a residential context in Jiyeh is the “Nilotic mosaic” that was mentioned above, discovered during rescue excavations north of Sector D (see Ortali-Tarazi and Waliszewski 2000). The humbler mosaics from the residential quarter are hardly comparable to the complex iconographic repertoire of this floor.

Another polychromatic mosaic floor from a residential context (Sector E) is the so-called Lion Mosaic. The context (much destroyed by bulldozing and building activity) clearly indicated an upper-floor room (Gwiazda and Wali-szewski 2016: 44). The zoomorphic representation is that of a lion with a thick mane, depicted on a white background within a thin border composed of two rows of ceramic tesserae [Fig. 7]. The floor itself was not

very wide (about 1.80 m), limited on one side by a well-cut stone block, probably from a wall, and on the other side by modest remains of another wall. The preserved length is about 0.60 m, breaking off just below the animal's paws. The narrowness of this space suggests some kind of corridor adjoining the living chambers. Another probable interpretation is that it was an individual mosaic panel marking the entrance to a room. An example of such a small mosaic carpet-like panel near a doorway comes from a byzantine villa in Caesarea Maritima (Siegelmann 1974). Lions are widely known from individual images (beside standard hunting scenes and heraldic representations; see Hachlili 2009: 155–170 for a variety of scenes with wild animals). One of the closest iconographic parallels (5th–6th



Fig. 7. The Lion Mosaic from a residential context in Sector E (PCMA UW Jiyeh Project | photo R. Solecki)

century AD) comes from Beirut, where the shopping area under a portico was excavated, bringing to light a mosaic with a simple image of a lion on a white background and a double-strand guilloche enclosing the animal figure (Sheehan 1998). Two lions similar in appearance are known from church contexts: one is from the basilica in Jiyeh (Atalla and Joumbat 2002: 21) and the other from Khan Khalde (Donceel-Voûte 1988: 373, Fig. 355). Nonetheless, other examples of zoomorphic compositions have to be taken into consideration, especially because a greater part of the mosaic

floor is now lost. If we assume that this was a long narrow passage, then more horizontal panels with other animal representations could be expected. The overall composition must remain open to discussion.

The only polychromatic mosaic from a ground-floor context from Sector D is the floor from Room D 62. Enclosed within a wide border of white cubes is a panel filled with a scale pattern and small tricolored florets [Fig. 8].⁶

Countless polychromatic mosaic fragments along with pieces of plaster were found also in the rubble overly-



Fig. 8. An *opus tessellatum* floor with scale pattern and florets preserved *in situ* in Room D 62 (PCMA UW Jiyeh Project | photo R. Solecki)

6 Similar mosaics of Byzantine date (4th–7th century AD) were found in Beirut, in the so-called “Zone des Églises” (rooms 125 and 126) (Saghieh 1996) and under the Ottoman “Small caravanserai” (rooms 36 and 60) (Aubert 1996: 73–79).

ing intact monochromatic *opus tessellatum* floors inside rooms D 99 and D 90, providing a second instance of an upper-floor mosaic from Jiyeh. A similar case was observed in Shiqmona, where mosaic fragments and carbonized wooden beams were found in debris from the upper floor filling the lower rooms (Hirschfeld 2006). Stairs recognized in the architectural remains of the residential houses at Jiyeh lead to the assumption that roofs and/or upper storeys were accessible (see Dzik 2015: 486–488; Gwiazda and Waliszewski 2016: 48). Domestic architecture of this type in late antiquity has been recorded from neighboring regions. Similarly, in the so-called “Zone des Églises” in Beirut, the lower pavements were buried under a layer of collapsed mosaic floor fragments from the upper storey (Saghieh 1996). The same situation was noted in Khirbet Handoma

(Palestine), where traces of mosaics were found both on the lower and upper level of a Byzantine two-storey dwelling (Sion 1997: 149–158). Moreover, the mosaics on the ground floors were plain and white, whereas those from upstairs more refined and colorful (blue, red and black tesserae). An almost identical case was encountered in Mahoza D-Yamnin, where mosaic floors inside a Byzantine dwelling were again covered with loose tesserae and mosaic fragments with decorative patterns (Vitto 1998). In a Byzantine agricultural complex outside Cesarea Maritima, the pavements on the ground floor were made in *opus tessellatum* and were buried under a layer of mosaic fragments collapsed from the upper rooms (Siegelmann 1974). Parallels come also from non-domestic spaces, like the monastic complex of Deir Ghazali in Palestine (Avner 2000) or Shelomi in Phoenicia (Dauphin 1977).

Table 2. Geometric and floral motifs on mosaic remains from Jiyeh

Geometric and floral motifs		
Identification	Find spot	Material
Stripe/double stripe (A1)	Sector E, room 10, upper floor (Lion mosaic)	Local limestone Terracotta/ceramic
Denticula (A3)	Western Dump	Terracotta/ceramic
A15	Western Dump	Terracotta/ceramic
Meander/swastika (A19)	Sector D, room 99 (upper floor)	Terracotta/ceramic
Double-strand guilloche (B2)	Sector D, room 99 and 90 (upper floors); Western Dump	Local limestone Terracotta/ceramic Unidentified grey rock
Waves (B7-8)	Western Dump	Local limestone Terracotta/ceramic
Cross-in-circle (C2)	Sector D; Western Dump	Local limestone
Diamonds (D4)	Western Dump	Unidentified grey rock
Florets (F2-14, F16)	Sector D, room 99 (upper floor), room 62 (<i>in situ</i>); Western Dump	Local limestone Terracotta/ceramic Unidentified grey rock
Scales (J3)	Sector D, room 62 (<i>in situ</i>); Sector E	Local limestone

The upper-floor mosaics from Jiyeh are poorly preserved on the whole, as the above presentation has demonstrated, but even so the following motifs were identified on fragments of mosaic floors coming from undisturbed archaeological contexts:

- meander ($\Delta 19$),⁷ double-strand guilloche (B2),⁸ florets (F) — Room D 99;
- double-strand guilloche (B2), waves (B7–8) — Room D 90.

The meander, guilloche, florets and waves were very popular motifs in late antiquity, hence it is possible to propose



Fig. 9. Reconstructions and examples of geometric motifs (PCMA UW Jiyeh Project | photo A. Oleksiak, A. Pawlikowska-Gwiazda, drawing A. Pawlikowska-Gwiazda)

- 7 For universal codes of mosaic ornaments, see Ovadiah 1980; Balmelle et al. 1985; Ovadiah and Ovadiah 1987; Balmelle et al. 1992.
- 8 One fragment with this motif was given a *terminus post quem* date by a Byzantine coin preserved between the *tesselatum* and *nucleus*.

Table 3. Zoomorphic motifs on mosaic fragments from the Western Dump in Jiyeh

Zoomorphic motifs		
Identification	Body parts	Material
Bovidae (antelope, gazelle/oryx) or cervidae (deer)	Three two-toed hooves	Unidentified black rock
Bovidae (antelope, gazelle/oryx) or cervidae (deer)	Horns	Unidentified black rock
Felidae (tiger)	Part of neck and head with one ear	Local limestone Terracotta/ceramic Unidentified black rock
Felidae (tiger?)	Part of neck or back	Terracotta/ceramic Unidentified black rock
Felidae or ursidae (some kind of a wild cat or a bear?)	Part of neck with one eye and one ear	Local limestone, Terracotta/ceramic Unidentified black rock
Equidae (horse, donkey, mule, zebra?)	Part of head with one eye, mandible, throat	Local limestone Unidentified grey rock
Felidae?	Upper part of shoulder and leg	Local limestone Unidentified black rock
Fish	Part of dorsal fin	Local limestone Unidentified grey rock

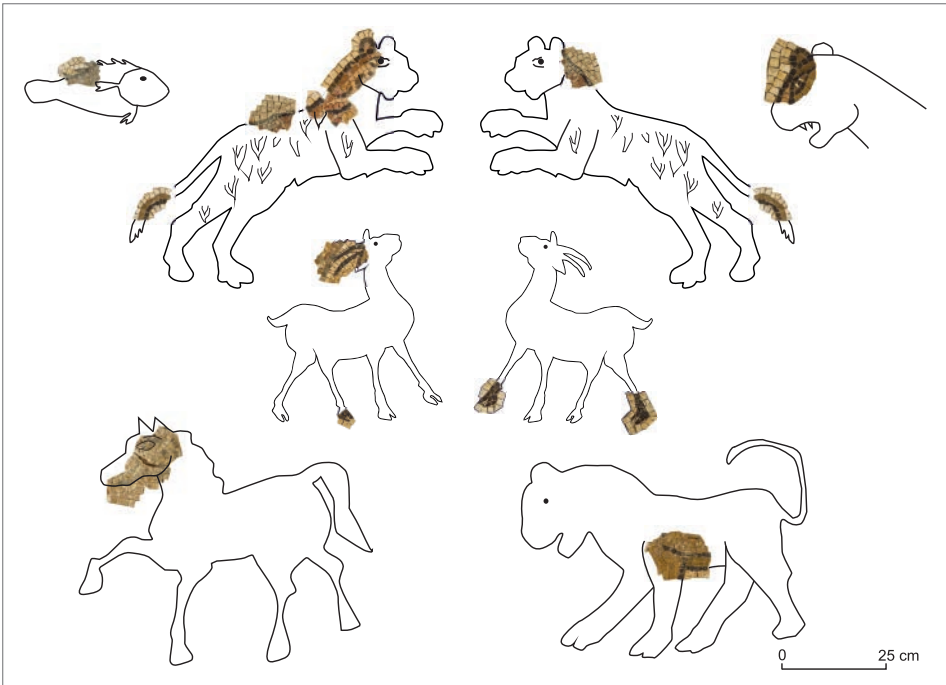


Fig. 10. Hypothetical reconstructions: top row, from left, a fish, a tiger and head of a wild cat; center, a gazelle; bottom, a horse/donkey and another wild cat (PCMA UW Jiyeh Project | drawing A. Pawlikowska-Gwiazda)

plausible reconstructions [Fig. 9].⁹ Other finds came from the so-called Western Dump, an archaeological dump left by the Lebanese team of Roger Saidah (Saidah 1977; Waliszewski and Gwiazda 2013: 328–330). The mosaic remains found there between 2008 and 2010 cannot be associated unmistakably with the residential part of the site, but had they come from the private houses examined by Saidah, they would have rather been part of the floor decoration from the upper storeys. Beside the typical geometric ornaments, like denticules, meanders, rows of squares

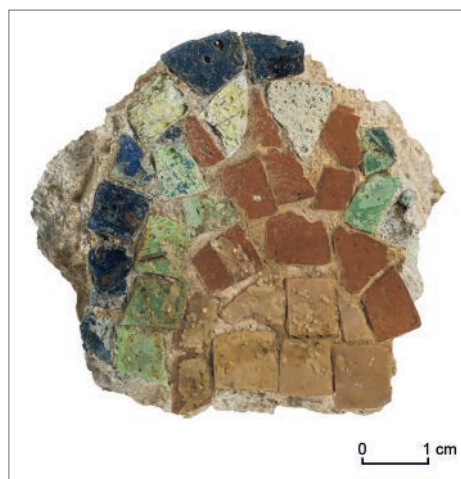


Fig. 11. Image of a pomegranate made of greenish and bluish glass tesserae (PCMA UW Jiyeh Project | photo A. Oleksiak)

between parallel lines, guilloches, waves, cross-in-circles, diamonds, florets, and scales¹⁰ [see Fig. 9, Table 2], the set of fragments revealed also fragmentary animal figures [Table 3], contributing further examples to the assemblage of zoomorphic motifs from Jiyeh. Enough survived for a probable identification in the case of ten fragments: a gazelle/antelope/deer and a horse/donkey; a tiger and an unspecified wild cat; and a fish [Fig. 10]. Despite their small size (for instance, 2 cm by 3 cm), some finds could be grouped together or even assigned to a single figure based on identical color, size and material of the cubes. Shades of brown with a black outline suggested zoomorphic rather than geometric or floral motifs. Black outlines were a typical way of bringing out animal (or human) images from the background.

Fragments of mosaics with glass tesserae are also known from Jiyeh; 17 examples were found in the so-called Western Dump (studied by Marcin Wagner, University of Warsaw). Glass tesserae were widely used for the more elaborate *opus vermiculatum* panels, wall mosaics and some colorful details where more vivid colors (blues, greens, yellows etc.) were essential. Fragments from Jiyeh could not have come from the walls, because the technique of making a mosaic on a verti-

- 9 Finds from Byzantine sites (4th–7th century AD) in Beirut (Aubert 1996: 73–79; Sheehan 1998; Mongne, Stephan, and Zarazir 2005); Palestine: Caesarea Maritima (Peleg and Reich 1992), Beit She’an (Avshalom-Gorny 2004), Mahoza D’Yamin (Vitto 1998), Kibbutz Erez (Rahmani 1975), Ramla (Rosen-Ayalon 1976), Shelomi (Dauphin 1977).
- 10 Some other examples of denticules: Beirut (Mongne, Stephan, and Zarazir 2005), Beit She’arim (Vitto 1996) and Mahoza D’Yamin (Vitto 1998) in Palestine; row of squares between parallel lines: Caesarea Maritima in Palestine (Peleg and Reich 1992); diamonds: Shiqmona in Palestine (Hirschfeld 2006). Geometric motifs were known also from earlier phases (for example, in the Second Temple Period in Israel, see Hachlili 2009: 8–11, Fig. I-5).

cal surface was different. The glass tesserae were often next to limestone cubes, hence it is more than probable that these were parts of floor mosaics. However, it is impossible to be sure which part of the site they had come from (glass tesserae are known from the Christian basilica in

Jiyeh). A single fragment could be identified as a pomegranate [Fig. 11]. The bluish and greenish colours suggests a tree. Pomegranates were usually depicted as individual fruit (for instance, as an element of a wide border) or, as in this case in all likelihood, on a tree.¹¹

CONCLUSIONS

The discovery of mosaic floors, complete and fragmentary, in the residential quarter of ancient Porphyreion was to be expected, especially as numerous parallels from the 4th to 7th centuries AD indicate that mosaic decoration could be found in almost any kind of context: sacral, secular, domestic, industrial, rural and urban. The universality of mosaic art was a general trend affecting architecture and interior decoration and it seems to have been connected somehow with the social position of the owners: lower classes imitated trends that were typical of elite residences. Technology and quality of craftsmanship matched the material status of the owners. *Opus tessellatum* floors, made out of bigger limestone tesserae without any ornaments, were undoubtedly less expensive than the complicated and colorful designs.

The presence of monochromatic mosaics downstairs and polychromatic ones upstairs is widely acknowledged, especially on the Levantine coast. This division may be regarded as a way of emphasizing the different functions of given parts of a house (for example, triclinia were

often identified by the mosaic design). Rooms on the ground floor were rather less representative and they could have been used as workshops, shops, storerooms or a space inside the house more accessible to outsiders. The upper storey served as a private area, more intimate and familiar. In all of the cases where tessellated pavements were found on both the upper and lower floors, the technology was slightly different: tesserae from the upper storey mosaics were smaller and the structural layers thinner, this to diminish the total load of the pavement.

The iconographic repertoire recognized in Jiyeh is widely paralleled by finds from neighboring sites dated to the Byzantine period. Floral, geometric and zoomorphic motifs were typical, repetitive and apparently fashionable.

In conclusion, the universality of mosaic art in the late antique Near East can be understood twofold: first, in terms of usage and location within an architectural context (both secular and sacral) and second, as an increasing popularity of decorative patterns, which were in almost uninterrupted use for centuries.

11 For parallels from Jordan, see Piccirillo 1993: 126, Figs 137:183, 256:198, 302:209, 335; for other examples, see Hachlili 2009: 11, Fig. I-6.

Aleksandra Pawlikowska-Gwiazda<https://orcid.org/0000-0003-4957-5860>

Institute of Archaeology, University of Warsaw

00-927 Warszawa, Poland,

ul. Krakowskie Przedmieście 26/28

az.pawlikowska@gmail.com

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