

West Meets East: Roman Mosaics of Ionia

Batı Doğu ile Buluşuyor: İonia'nın Roma Mozaikleri

Werner JOBST*

(Received 15 February 2017, accepted after revision 03 March 2017)

Abstract

Tradition and innovation were for centuries characteristic elements of the cultural development of Ionia, that landscape of western Anatolia, whose intellectual achievements became groundbreaking for the European continent and beyond. Whereas there are dominant the contacts with Egypt, Mesopotamia and Persia in Greek times, with the taking over of the Pergamenian Kingdom by Rome and with the establishment of the proconsular province of Asia (129-126 v. Chr.) new trends were initiated from Italy which are reflected in workmanship and art. Taking charge of pavement-types in the facilities of public and private buildings is one of the phenomena that document the cultural exchange between West and East. New results of archaeological and historical research in recent decades in the urban centers of Ionia provide insight into the sociological related interlacing of Hellenistic and Italo-Roman shapes of technological and decorative design on floor coverings.

In this paper will be discussed in the light of selected examples discovered in different ancient centers of western Anatolia the way of Greek pebble- and tessellated-mosaic to the Italo-Roman floor spaces.

Keywords: Roman Mosaics, Ionia, West Anatolia, opus tessellatum.

Öz

Gelenek ve yenilik, yüzyıllar boyunca İonia'da kültürel gelişimin karakteristik unsurları olmuştur. Anadolu'nun batısında yer alan bu bölgedeki entellektüel başarılar, Avrupa kıtasında ve ötesinde çığır açan bir manzara oluşturmuştur. Yunan çağlarında Mısır, Mezopotamya ve Pers kültürleri ile olan temaslar, Bergama Krallığı'nın Roma egemenliğine geçmesi ve Asya prokonsül bölgesinin kurulmasıyla (İÖ 129-126) işçilik ve sanat alanında kendini gösteren İtalya kökenli yeni eğilimler etkili olmaya başlamıştır. Kamusal ve özel binaların farklı mekanlarındaki döşeme tipleri, Batı ile Doğu arasındaki kültürel değişimi belgeleyen fenomenlerden biridir. İonia kent merkezlerinde son yıllarda gerçekleştirilen arkeolojik ve tarihsel araştırmaların yeni sonuçları, zemin döşemelerinde görülen teknolojik ve dekoratif tasarımlardaki Hellenistik ve İtalik-Roma biçimlerinin sosyolojik olarak birbiri içinde kaynaşması hakkında fikir vermektedir. Bu makalede, Batı Anadolu'nun değişik antik merkezlerinde keşfedilen seçilmiş örnekler ışığında, Yunan opus barbaricum ve opus tessellatum mozaiklerin İtalik-Roma tarzındaki taban döşemelerine kadar giden değişimi tartışılmaktadır.

Anahtar Kelimeler: Roma mozaikleri, İonia, Batı Anadolu, opus tessellatum.

In his book on Ionia published in 2011, Wolfram Hoepfner (2011) described the cultural landscape along the Aegean coast of Anatolia as the “bridge to the Orient”. This bridging function manifests itself in its oriental feel as much as in its cultural exchange with Italy, begun, at the latest, in the second century BC. The meeting of diverse peoples and cultures has always yielded technical innovation and intellectual progress for the region without endangering the heritage of its own Hellenic tradition. In terms of architecture and the fine arts, the Greek cities of Ionia in archaic times absorbed ideas that developed into previously unknown types of temple building. The copious columns in the major shrines of Ephesus, Didyma and Samos have their roots in monumental temples constructed by Egyptian builders, same as the large Greek sculptures in the 6th century BC drew on the colossal standing and seated

* Werner Jobst, Österreichische Akademie der Wissenschaften, Hollandstraße 11-13, A - 1020 Wien-Austria. E-mail: Werner.Jobst@oeaw.ac.at

sculptures of Egypt. Archaic architectural ornaments in Ionia were influenced by Mesopotamia's art. "The Ionians, a nimble, open-minded, clever people of seafarers, were to develop the greatest technical inventions; scientific mathematics and philosophy similarly originated in Ionia. But this is just one side of the Ionian nature. The second one, imagination, resulted from the fertile encounter of these restless seafarers with the ancient and sagacious civilisations of the East, Mesopotamia and Egypt." Since decorative floors are part and parcel of the art of architecture, I will start with the development of these furnishing elements in Ionia and the subsequent province of Asia Proconsularis in the context of its cultural exchange with Italy. Examples taken from various urban centres at the western coast of Anatolia will illustrate how Italian pavement techniques were absorbed.

Ionian mosaic production in pre-Roman times

Ph. Bruneau defined two key criteria for Greek-inspired decorative pavements: "*conservatisme et innovations*" – Hellenic tradition and Italian influences. Let's deal with the conservative aspect first.

Compared with all other Mediterranean countries, mosaic techniques in Anatolia reach back in an unbroken line across many centuries. Indeed, given current archaeological sources Anatolia could be seen as the homeland of mosaic art. The western Mediterranean countries and central Europe do not share this tradition. The only comparable place is Carthage, where the first *signinum* floors appear to have been laid in the 5th century BC. But in what is now Turkey, decorative pavements made of pebbles are known to have been placed already in the 8th century BC. The technique continued unabated throughout the next centuries in places like the palace of Gordion. Such a continuity of pebble mosaics is known to us only from Anatolia, but not from Greece, where (apart from the floor excavated in Tiryns which features stripes of pebbles dating from the 14th century BC - SH III A1) the oldest pebble floors of Olynth, according to research on Greek cities by W. Hoepfner and E.-L. Schwandner (1994), date back to the second quarter of the 4th century rather than the late 5th century BC. This was followed by a continuous development of the pebble technique in other Greek cities such as Athens, Corinth, Sikyon or Eretria, until it reached its apex in the Macedonian capital of Pella.

Throughout the entire Greek koine, a joint feature of patterned pavements was their emblematic composition – a central image, typically made up of figures, is surrounded by a multitude of framing borders and friezes made up of geometrical or floral motifs. For E. Kitzinger this type of a centralised architectural composition was a "pseudoemblema", as opposed to a genuine emblema. This decorative image is characterised by a concentric structure with a distinctive central zone – a pattern that was influenced by classical architectural ornaments, especially by elements of the ceiling architecture.

The oldest decorative pavings in Ionia were produced soon after Olynth and Pella, around 300 BC. They are pebble mosaics in Assos, Kyme and Priene, from the 3rd and early 2nd centuries BC. A new technique using polygonal pieces mixed with pebbles and cubes demonstrates how Greek artisans liked to experiment and invent new styles. Simultaneously introduced in Egypt and Sicily, the new technique opened up new modes of home decoration. Ionia was a flourishing centre of this technique, as is evidenced from examples dating to the second half of the 3rd century BC in Knidos, Aphrodisias, Erythrai, Klazomenai and Pergamon. A predecessor of the pure tessera mosaic was excavated in the andron

of an early Greek house in Klazomenai: a mixed-technique mosaic, made up mostly of cubes, with the main panel showing Amphitrite riding a hippocamp, and Eros and Psyche depicted in the entrance-field.

Mosaics made solely of tesserae were created in the second half of the 3rd century BC, probably in Greece, Lower Italy, Northern Africa and Egypt simultaneously. The oldest example found in Greece is in a bathhouse in Phthiotic (Thessalian) Thebes and was probably made before 217 BC. The mosaics of Morgantina in Sicily were laid some 30 years earlier.

All these Greek mosaics preserve the composition method practiced with pebbles: a concentric central panel framed by several borders.

Pergamon

In western Anatolia, Pergamon became a centre of tessellate production, its fame irrevocably linked to Sosus, the only mosaic artist whose name was recorded in literature. The pavements decorating shrines, palaces and houses of the upper and lower town are distinguished by their high quality and originality. Rooms A and D of Palace IV hold fragments of a fish mosaic with a frieze of tendrils and the fragments of a polychrome pavement respectively. The two best-known mosaics were laid in Palace V: the Hephaestion mosaic and the so-called parakeet mosaic in the Altar Room. These four floors are singular masterpieces that use cubes of not more than 4–5 mm in length. In ancient Turkey, a sole example of this high-quality technique is the palace mosaic of Constantinople of the Justinian period.

The palace mosaics of Pergamon were created in the second quarter of the 2nd century BC. Their artistic hallmark is the combination of tradition and innovation. The images are characterised by their pronounced naturalism, and were composed in accordance with the traditional arrangement of a central panel surrounded by multiple frames to highlight the centre of the floor: the Hephaestion mosaic has 21 borders enclosing the central panel. The delicate, naturalistic interlacing is interspersed with Erotes and animals, including a grasshopper such as we see in the later mosaics of Zliten and Constantinople. The mosaic in the Pergamon palace features a white piece of parchment bearing the signature of its maker, Hephaestion. Its central panel had three emblemata – valuable works of art on their own which could be transported separately. Gaius Julius Caesar, who refused to forego the art of living even on his expeditions, had mobile mosaics (emblemata) taken along to his command quarters. The so-called parakeet mosaic comprised four genuine inserts, two on either side of an altar or statue base showing a mask of tragedy and comedy respectively, and two in the central panel of which the Alexandrine parakeet has survived.

Antiochia, House of Polyphemos – Ephesos, Upper Agora:

Terracotta-slab of clay

A tessellated pavement of a quality equal to the Palace mosaics was found in the cella of the sanctuary of Hera in Pergamon. Of this, only borders with scalloping (running dog; R 101) and a delicately rendered garland are still extant. Other compositions in the Hellenic-eastern tradition are in the Peristyle House II and in the rooms 37–38 of the House of Attalos, which shows a central panel with a perspective cube pattern in the opus sectile technique and several tessellated borders.

A characteristic of the Greek tessera mosaics in Pergamon is the distinctive naturalism of the images. Pliny the Elder attributes this singular style to Sosus whose masterpiece *asàrotos òikos* (Unswep House), much admired already in Antiquity, has survived only in copies. The copy displayed in the Capitoline Museums in Rome consists of a dining room with space for three couches and a figural centre panel showing doves drinking from a bowl. This scene is again dominated by naturalism that was emulated until late Antiquity. The high quality of Sosus's art is exemplarily shown in the palace mosaics of Pergamon.

The composition method used by the tesserae pavements in Pergamon reflects the Hellenistic mosaics in the East which draw on the older pebble mosaic style where a central panel is framed by a rich zone of multiple borders. Another characteristic of the Hellenistic tesserae technique is the graduation of cubes, which get more delicate from the edge to the centre. Examples of this are found not just in Pergamon but also in pavements of Halikarnassos (Hellenist House), Didyma (northern house on the Sacred Way) and Ephesus (Hillside House 2, Apartment 2, Room SR 25). When figural motifs were not used, geometric patterns could be designed with a perspective effect.

The Greek mosaics in Ionia are comparable only to the decorative pavements on the Island of Delos which was a free harbour and trade centre since 166 BC. Fully 354 pavements of a similar composition have been found on Delos. The settlement, founded by Roman/Italic merchants (*negotiatores*) and tax farmers (*publicani*) in the early 2nd century BC, introduced Italic techniques to the production of pavements. At Anatolia's western coast it was Pergamon which acted as intermediary.

West Meets East. Italic-Roman pavement technologies in Ionia

The Kingdom of Pergamon was taken over by Rome in the structure established by its kings. Following the revolt of Aristonicus (129–126 BC), the proconsul-governed province of Asia was created, one of the largest and wealthiest provinces of the Imperium Romanum. Recent archaeological research has found new evidence regarding the Romanisation of Ionia, through excavations in Pergamon, Ephesus, Milet, Erythrai, Metropolis, Smyrna, Phokaia and other cities (e. g. Sagalassos), which fully confirmed Cicero and Strabo.

Which changes were wrought by Roman settlers when it came to art in general and the laying of pavements in particular?

Initially, mosaic art continued along its traditional ways. As we have seen, tesserae mosaics in Ionia (and in Asia since 129 BC) date back to the first half of the second century BC, with the most exemplary works found in Pergamon. The reason is clear: mosaics are not mobile trading goods but are locally tied elements of architecture – with the exception of the emblemata. When Italic settlers moved in and Roman magistrates assumed political rule in the province of Asia (which included Ionia), new techniques were introduced in the making of pavements which had not been seen before in western Anatolia. These novelties came about by the socio-cultural changes in the cities of Ionia and its rural parts. Italics made up a large part of the population, considering that the Wars of Mithridates killed some 80,000 to 150,000 Romans and Italics in Adramyttion, Ephesus, Pergamon, Tralleis and, particularly, in the Carian sea port of Kaunos. Next to children and women, it was especially tax farmers, agents, merchants, businessmen and money lenders – so-called toga wearers (*tebenophorountes*) – who were favourite targets.

From the 1st century BC, pavement types started to appear in the cities which were without precedent in the eastern Mediterranean. These include *opus signinum* floors, or cube-decorated screeds. Laid as a reddish lime mortar floor of linear rows of white cubic patterns, the technique probably came to Italy via Carthage and was quite common in central and lower Italy. It was most frequently used between 200 and 80 BC, when it practically displaced the traditional Greek-style mosaics. The *opus signinum* technique is clear evidence of the economical character prevailing in Roman construction. Examples of this typically Italic floor in the eastern Mediterranean have so far been found only in Aetolia (Calydon), Macedonia (Mieza), on Delos and in Pergamon. *Signinum* floors in Pergamon were discovered in the House of Attalos (room 38) and the Musala Mezarlık, a peristyle house built by Italic settlers near the amphitheatre in the early imperial period. These apart, no further *signinum* pavements have become known or identified in the province of Asia. It will be necessary to look out for this type of floor when excavations are carried out in Turkey.

Another type of pavement frequently laid in Rome and lower Italy since the end of the 2nd century BC is the so-called *crustae* pavement, which may be identical with the *opus scutulatum*. The technique involves a combination of small, irregularly crushed stone plates and tesserae set in a lime mortar screed. Apart from examples found on Delos, the technique was introduced in the province of Asia as well. A pavement of this type was excavated in the eastern stoa of the agora of Iasos dating to the second half of the 1st century BC. In Ephesus, too, an example of this combination of marble slabs and tesserae was found (Hillside House 1-2 SR 14 and SR 22).

Italic black-and-white mosaics

Excavations in Pergamon, Ephesus, Iasos and Metropolis found that, in addition to the *signinum* floors and *scutulata* pavements, the Roman settlers in the 1st century BC introduced a third, genuinely Italic type of floor covering: the black-and-white mosaic. This type had spread from Italy starting in the second half of the 2nd century BC, mostly in the western Mediterranean, but had also found its way to Ionia.

One of the oldest floors in the black-and-white style was discovered in Room 4 of the so-called Grand Peristyle House in Pergamon. It was made in the mid-1st century BC, pioneering the spread of a new type of mosaic production in western Anatolia, which reduces floor decoration to the contrast of black and white areas using geometrical patterns. Room 4c of the so-called Peristyle House II, also in Pergamon and dating from the period of Augustus (27 BC to 14 AD), offers checkerboard, hourglass and honeycomb patterns in its pavement; all of which were imported from the west. This design of the living rooms points at a fashion resulting from the fusion of the local upper class with the Italics. The local urban aristocracy intentionally emulated western fashions, while Roman settlers encouraged the spread of styles prevalent in Italy. Another significant example of this trend are the palace mosaics of Masada which were laid (in 36-30 BC), in several rooms of the northern palace villa after Herod had visited Rome in 40–39 BC.

But Pergamon and Masada are not the only specimens using the checkerboard-hourglass and honeycomb ornament. In a dwelling in Metropolis near Ephesus, explored by R. Meric, we documented a mosaic floor decorated with very similar elements already back in the 1970s, which was dated, due to the laying

technique used, to the first half of the 1st century AD. The tessellate covers the floor of a corridor, perhaps a peristyle, and consists of four geometrically decorated panels that show the following motifs: orthogonal checkerboard pattern (R 120g) [with squares diagonally across,] honeycomb pattern (R 204a) with small cross stars (Rép. 106') and a central composition made up of white and black [isosceles] triangles (R 341b) with a black cross-shaped flower (Rép. 109) in a white centre. The black-and-white mosaics found in Ephesus and Iasos confirm the dating of the Metropolis mosaic in the early imperial period.

This bond with Rome, combined with the wish to demonstrate a novel taste, was evident in Herod the Great when he furnished his palace in Masada with black-and-white mosaics at the time of Augustus, same as in the citizens who ordered up the *signinum* floors in Delos and Pergamon. These pavements were made by craftsmen who either derived from Italy or who skilfully emulated the technique. *Signinum* floors and black-and-white mosaics can be found only in western Anatolia but not in the south and southeast of Anatolia, or in Syria, where only mosaics of the Hellenist type featuring large-sized figural images were produced. This issue should be considered in any future research on mosaics.

Ephesus – Hillside Houses 1 and 2

The overwhelming majority of floors in the Hillside Houses 1 and 2 of Ephesus are black-and-white mosaics, dated, from the re-examinations in the 1990s following Hermann Vetters' excavations and regardless of stylistic criteria, between the start of the 1st century AD and the early half of the 3rd century AD. The apartments with peristyle courtyards, combined in two insulae on the northern slope of the southern city hill, cover a space of about 8,000 square metres, distributed over artificially built terraces. Backing a northern street front of halls and taverns, Hillside House 1 has six apartments and Hillside House 2 has seven units. The two insulae appear to have been hit by an earthquake in the second quarter of the 3rd century, after which they were repaired and redecorated. Another earthquake occurred in the third quarter of the 3rd century AD which so seriously damaged the two hillside houses that the noble terrace apartments were more or less abandoned. After this disaster, the only repair work to be carried out was at the edges of the insulae.

Contrary to Pergamon, neither mosaics of the Hellenistic decorative type nor *signinum* floors have so far been found in Ephesus. The oldest tessellated pavements were laid in the late Hellenistic predecessors to the two hillside houses. They are fragments of white surfaces without any ornament, placed there in the pre-Christian period. The new insulae, built in the early 1st century AD, featured mostly black-and-white mosaics in each of the 13 peristyle apartments, which represent the Italic type.

Rooms in apartments 1–4 and 6 of Hillside House 2 were furnished with this type of flooring in the early 1st century AD.

Apartment 1 originally had a large banqueting or reception hall (SR1 + SR6), which was used daily by the *patronus* or master of the house to receive his clients on their morning visit (*salutatio matutina*). The mosaic floor consisted of two longish rectangular pattern panels laid in parallel, [sized 6.30 by 1.16 metres in the north and 5.20 by 2.00 metres in the south,] with a repeat pattern of cross-shaped flowers on a white base (R 237) and a checkerboard and hourglass pattern (R 120f), similar to what we have seen in Metropolis. Inbetween, two small squares with a reticulate decoration are inserted, indicating the location of the

pieces of furniture. The hall was reduced in size during the last building phase, i.e. in the mid-3rd century AD, by inserting a wall, while the mosaic floor was retained – a sign of the longevity of tessellated pavements.

At the time or before this large-sized mosaic was placed in peristyle apartment 1, black-and-white mosaic floors were put into almost all the other units of Hillside House 2.

I have already mentioned the mosaic of room SR 25 in Apartment 2. Its centre panel was originally a white base decorated with a red-framed lozenge (R 299c) and, after suffering some damage, repaired using crushed marble slabs. In the space between the lozenge and the edge, a black cross with a white centre (Rép. 106) emphasises the coffer-like structure of the composition. The cube material of the mosaic floor gets more delicate from outside towards the centre, showing a Greek tradition in its manufacturing. The pavement is comparable to two late Hellenistic mosaics in Halikarnassos and Didyma.

Apartment 3 features two black-and-white mosaics that similarly show typical Italic ornaments. The floor of the ambulatory of peristyle courtyard 16b is decorated with a simple black square-grid pattern (R 124a) and centrally placed cross stars (Rép. 106). The older mosaic in room 16a to the south shows the well-known checkerboard-hourglass motif, made from delicate tessera (R 120f). Room 16a was converted into two small rooms (16a west and 16a east) in the first half of the 3rd century AD, which were given new decorated floors with figural panels that show a bust of Dionysus and a Medusa's head.

In the early phase of Hillside House 2 (c. 40 AD), Apartment 6 was fitted with two black-and-white mosaics which follow the Italic tradition: the mosaics in the western and eastern corridor of peristyle courtyard 31a and staircase 36b. The floors of the Ephesus courtyard corridors show a coffer pattern made in opus sectile technique with squares and trapezoids (R 128b). Room 36b was decorated with a repeat checkerboard-hourglass panel (R 120g). The rather careless repair work of crushed marble slabs once again points at the longevity of the mosaic pavements.

Black-and-white mosaics of the 2nd to 3rd centuries AD.

Italic-type mosaics of exclusively geometric black-and-white patterns become increasingly prevalent in the history of the two hillside houses in Ephesus. This means that the residents of these insulae were either Italic or Roman or were Romanised local citizens.

Two rooms (E1–E3) of Apartment 1 in Hillside House 1 were apparently fitted with tessellate pavements during the Flavians. They show very plain patterns on a white ground – a panel with black cross stars and a second panel with grid lines (R 124e).

In the building phases of the 2nd and 3rd centuries, the Italic mosaic tradition with its infinite geometric patterns is vividly present in Hillside House 2. There are very few rooms that show a different taste. Four pavements each of Apartment 1 (vaults A and B, SR 14, SR 18) and Apartment 2 (SR 17, SR 19–20, SR 23, SR28) and at least five rooms on the lower level of Apartment 6 (marble hall 31, rooms 31b, 42, 36c, 36e) were fitted with geometric black-and-white mosaics, deliberately continuing in the second quarter of the 2nd century AD the Italic fashion first introduced during the first building phase in the peristyle courtyard. In this manner, the owner of the house, C. Flavius Furius Aptus, being a member

of the urban aristocracy, expressed his cultural ties with Rome and Italy not least through his choice of floor fittings.

From the early 2nd century AD onwards, the knowledge of how to produce figural black-and-white mosaics was exported from Italy to western Anatolia. Two major buildings of this period, the Vedius-gymnasium and the so-called Casa dei Mosaici, excavated in Ephesus and the harbour town of Iasos, indicate how this type was introduced in the black-and-white mosaics of Ionia.

The Vedius-gymnasium featured marine animals in the black-and-white technique on a pavement originally 90 square metres in size. Same as the walls in the apartments of the hillside houses, it reflected the taste of its founder, P. Vedius Antoninus Phaedrus Sabinianus, for the Roman and Italic fashion of the time. At the Casa dei Mosaici of Iasos, the marginal zones of geometrically decorated panels depict animals in the Italic black-and-white technique. This style expresses the intentional reference of its owner, and it can be assumed that craftsmen from Italy were commissioned to produce the black-and-white mosaics in the centres of the province.

As we can see from the pavements in Pergamon, Ephesus and Iasos, personal bonds to Rome and Italy caused homeowners to choose typically Italic floor types. In Pergamon and Ephesus, mosaic floors can be tied to specific names – Attalos, Paulina (?) and C. Vibius Salutaris (Hillside House 2, Apartments 1 and 2). C. Flavius Furius Aptus (Hillside House 2, Apartment 6) and P. Vedius Antoninus Phaedrus Sabinianus (Vedius-gymnasium). However, since the persons commissioning mosaic floors are typically unknown, details of content and technique need to be assumed from stylistic properties. It is therefore necessary to carefully analyse the composition of tessellated pavements as much as the repertory of images used.

Regional colour modifications of the black-and-white style

The mosaics decorating private and public buildings in the urban centres such as Ephesus, Milet, Pergamon and Smyrna demonstrate that the Italic black-and-white style was not mindlessly copied but was, beginning in the second half of the 2nd century AD, enriched in its geometrical patterns by the addition of colour elements (red, purple, yellow, ochre, green), the inclusion of own regional designs and the retention of traditional Greek types of decoration. Typical examples of this can be found not just in Ephesus, but were also discovered in Milet, Halikarnassos, Iasos and Erythrai. Thus, the peristyle courtyards of Apartments 1-2 and some rooms of Apartments 5-7 at Hillside House 2 in Ephesus featured geometrical patterns adorned by colour elements. The same was found in a pavement excavated in Pygela near Ephesus, whose checkerboard-hourglass composition shows red elements in addition to the black-and-white pattern. This design reflects the traditional Hellenistic-Greek love of polychromy. V. Scheibelreiter (2011) assumes that this could i.a. be due to the proliferation of coloured stones in Ionia.

The Hellenistic tradition of strong colours interspersing geometrical tessellated floors in the 3rd and 4th centuries AD is also maintained in various pavements excavated in Erythrai, to which we will make a final visit. Located vis-à-vis the island of Chios, Erythrai was a traditional centre of mosaic craftsmanship that reached from early Hellenism to the early Byzantine period.

The floors of a villa on the slope down from the theatre and the large peristyle house on the Cennettepe both demonstrate the prevalence of polychrome areas

in geometrical ornamental systems, next to well-known Hellenistic patterns such as sawtooth and excessively large spiral tendrils. The mosaic fragment made up of polygonal tesserae found on the northern side of the Cennettepe below the villa dates the building right back to the 2nd century BC. The pavements laid in Erythrai in the 3rd and 4th centuries AD, while using the geometrical structure developed in Italy, still show a limited influence only of western form traditions. The geometrically decorated mosaics of Erythrai are an example of the synergy of Hellenistic-Greek tradition and mosaic innovation from the West. The polychromy penetrating right into small areas of the geometrical patterns clearly indicates the local style of this group of mosaics.

Bibliography - Kaynaklar

- Andreae 2003 B. Andreae, *Antike Bildmosaiken*, Mainz am Rhein.
- Bachmann 2011 M. Bachmann, "Bau Z in Pergamon – Analyse einer "Langfristnutzung", *Ladstätter – Scheibelreiter* 2010, 179-191.
- Balty 1981 J. Balty, "La mosaïque antique au Proche-Orient I. Des origines à la Tétrarchie", *ANRW II* 12.2, 347-429.
- Berti 1983 F. Berti, "I mosaici di Iasos", *CMGR III*, 235-246.
- Bingöl 1997 O. Bingöl, *Malerei und Mosaik der Antike in der Türkei*, Mainz am Rhein.
- Bruneau 1972 P. Bruneau, *Les mosaïques, Delos* 29, Paris.
- Bruneau 1981 P. Bruneau, "Tendances de la mosaïque en Grèce à l'époque impériale", *ANRW II* 12.2, 320-346.
- CMGR III R. Farioli Campanati (Hrsg.), *III colloquio internazionale sul mosaico antico Ravenna 1980*, Ravenna 1983.
- CMGR V P. Johnson – R. Ling – D. J. Smith (Eds.), *Fifth International Colloquium on Ancient Mosaics held in Bath, England on September 5-12, 1987*, I. II (Ann Arbor, MI 1994/1995).
- Daszewski 1985 W. A. Daszewski, *Corpus of Mosaics from Egypt I. Hellenistic and Early Roman Period. Aegyptiaca Treverensia, Trierer Studien zum Griechisch-Römischen Ägypten Band 3*, Mainz am Rhein.
- Décor I C. Balmelle – M. Blanchard Lemée – J. Christophe – J. P. Darmon – A. M. Guimier Sorbets – H. Lavagne – R. Prudhomme – H. Stern, *Le Décor Géométrique De La Mosaïque Romaine I*, Paris, 1985.
- Décor II C. Balmelle – M. Blanchard Lemée – J. P. Darmon – S. Gozlan – M. P. Raynaud, *Le Décor Géométrique De La Mosaïque Romaine II*, Paris, 2002.
- Donderer 1986 M. Donderer, *Die Chronologie der römischen Mosaiken in Venetien und Istrien bis zur Zeit der Antonine*, AF 15, Berlin.
- Donderer 1987 M. Donderer, *Die antiken Pavimenttypen und ihre Benennungen (Zu Plinius, Naturalis Historia 36, 184-189)*, JdI 102, 365-377.
- Donderer 1989 M. Donderer, *Die Mosaizisten der Antike und ihre wirtschaftliche und soziale Stellung. Eine Quellenstudie*, Erlanger Forschungen Reihe A – Geisteswissenschaften Band 48, Erlangen.
- Donderer 2008 M. Donderer, *Die Mosaizisten der Antike II. Epigraphische Quellen – Neufunde und Nachträge*, Erlanger Forschungen Reihe A – Geisteswissenschaften Band 116, Erlangen.
- Dunbabin 1979 K. M. D. Dunbabin, *Technique and Materials of Hellenistic Mosaics*, AJA 83, 265-277.
- Dunbabin 1999 K. M. D. Dunbabin, *Mosaics of the Greek and Roman World*, Cambridge.
- Hellenkemper-Salies 1986 G. Hellenkemper-Salies, *Römische Mosaiken in Griechenland*, BJB 186, 241-284.
- Hoepfner 2011 W. Hoepfner, *Ionien – Brücke zum Orient*, Darmstadt.
- Hoepfner – Schwandner 1994 W. Hoepfner – E. L. Schwandner, *Haus und Stadt im klassischen Griechenland, Wohnen in der klassischen Polis Band I2*, München Berlin.
- Jobst 1977 W. Jobst, *Römische Mosaiken aus Ephesos I. Die Hanghäuser des Embolos, Mit einem Beitrag von H. Vettors*, FiE VIII/2, Wien.
- Jobst 1999 W. Jobst, *Antike Tessellatpavimente in Ephesos*, H. Friesinger – F. Krinzinger (Hrsgg.), *100 Jahre Österreichische Forschungen in Ephesos. Akten des Symposiums Wien 1995*, Österreichische Akademie der Wissenschaften, Philosophisch-Historische Klasse Denkschriften 260. Band, Wien, 569-578.

- Jobst 2014 W. Jobst, OPUS MUSIVUM – “Bunte Steine. Die Technik der antiken Mosaikkunst”, M. Novotná et al. (Eds.), Proceedings of the International Conference “Arts and Crafts over the passage of time”, Pezinok 19-21 October 2012, Anodos, 11/2011, 159-169.
- Kankeleit 1994 A. Kankeleit, Die kaiserzeitlichen Mosaiken in Griechenland I. II, Diss. Rheinische Friedrich-Wilhelms-Universität Bonn.
- Ladstätter – Scheibelreiter 2010 S. Ladstätter – V. Scheibelreiter (Hrsgg.), Städtisches Wohnen im östlichen Mittelmeerraum 4. Jh. V. Chr. – 1. Jh. N. Chr. Akten des Internationalen Kolloquiums vom 24.-27. Oktober an der Österreichischen Akademie der Wissenschaften, Denkschriften der Philosophisch-Historischen Klasse 397. Band, Wien.
- Levi 1947 D. Levi, Antioch Mosaic Pavements, Princeton, NJ.
- Marek 2010 C. Marek, Geschichte Kleinasien in der Antike. Unter Mitarbeit von Peter Frei, München.
- Morricone Matini 1971 M. L. Morricone Matini, I pavimenti di signino repubblicani di Roma e dintorni, Roma.
- Ovadiah 1994/1995 A. Ovadiah, Mosaic pavements of the Herodian Period in Israel, CMGR V, 67-76.
- Salzmann 1982 D. Salzmann, Untersuchungen zu den antiken Kieselmosaiken von den Anfängen bis zum Beginn der Tesseratechnik, AF 10, Berlin.
- Salzmann 2011 D. Salzmann, “Hellenistische und frühkaiserzeitliche Mosaiken und Pavimente in Pergamon”, R. Grüßinger – V. Kästner – A. Scholl (Hrsgg.), Pergamon. Panorama der antiken Metropole. Begleitbuch zur Ausstellung, Berlin, 101-107, 518-521.
- Scheibelreiter 2005 V. Scheibelreiter, “Ein schwarzfiguriges Mosaik aus dem Vediusgymnasium von Ephesos”, Römische Historische Mitteilungen 47, 55-79.
- Scheibelreiter 2007 V. Scheibelreiter, Römische Mosaiken in Westkleinasien, M. Meyer (Hrsg.), Neue Zeiten – Neue Sitten. Zu Rezeption und Integration römischen und italischen Kulturguts in Kleinasien, Wiener Forschungen zur Archäologie Band 12, Wien.
- Scheibelreiter-Gail 2011 V. Scheibelreiter-Gail, Die Mosaiken Westkleinasien. Tessellate des 2. Jahrhunderts v. Chr. bis Anfang des 7. Jahrhunderts n. Chr. Sonderschriften des Österreichischen Archäologischen Instituts Band 46, Wien.
- Thür – Rathmayr H. Thür – E. Rathmayr (Hrsgg.), Hanghaus 2 in Ephesos. Die Wohneinheit 6. Baubefund, Ausstattung, Funde, FiE VIII/9, Wien.