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Address / Adres:
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Faculty of Art and Sciences / Fen Edebiyat Fakültesi
Department of Archaeology / Arkeoloji Bölümü
16059 - Nilüfer / BURSA – TÜRKİYE
Tel: + 90 224 2941892
Fax: +90 224 2941677
E-mail: mosaicsjournal@gmail.com / aiematurkey@uludag.edu.tr
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Sinop Balatlar Excavation Pebble Mosaic Pavement

Sinop Balatlar Kazısı Çakıl Taşı Mozaik Döşeme

Derya ŞAHİN - Gülgün KÖROĞLU - Mustafa ŞAHİN*

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Abstract

During the 2022 Sinop Balatlar Excavation, a pebble stone mosaic floor was unearthed. The design of the mosaic, which adorns the andron room of a private residence, is U-shaped and the east-west kline sections are planned without decoration. The pebble floor placed horizontally and vertically on a pink nucleus is called the "hedgehog" model. Surrounded by ranke, wave and palmette motifs, a small part of the mosaic, which we think shows a flying Eros and his wingtips on it, has been preserved in the southwestern corner of the main panel. It is very important with the placement technique of the stones on it and the pattern repertoire created with white pebbles on a black ground. Compared to contemporary examples, the pebble mosaic dated to the end of the 5th century BC includes the Gordion and Olynthos mosaics, where the mosaic tradition in Asia Minor dates back, it occupies an important place in the ancient mosaic chronology as it indicates its existence in the 5th century BC.

Keywords: *Sinop, Balatlar Excavation, pebble mosaic, andron, Eros.*

Öz

2022 yılı Sinop Balatlar Kazısı çalışmalarında, çakıltaşı mozaik bir zemin açığa çıkartılmıştır. Özel bir konutun andron odasını süsleyen mozaiğin tasarımı U formludur ve doğu batı kline bölümleri bezemesiz olarak planlanmıştır. Pembe renkli bir nucleus üzerine yatayda dikine yerleştirilen çakıltaşı döşeme "kirpi modeli" olarak adlandırılmıştır. Ranke, dalga ve palmet motifleriyle çevrelenmiş mozaiğin, ana panosunun güneybatı köşesinde uçan bir Eros ve onun üzerinde kanat uçları olduğunu düşündüğümüz küçük bir kısım korunabilmiştir. Üzerindeki taşların yerleştiriliş tekniği ve siyah zemin üzerinde beyaz çakıl taşları ile oluşturulmuş desen repertuvarı ile oldukça önemlidir. Çağdaş örnekleri ile karşılaştırıldığında İÖ 5. yüzyıl sonlarına tarihlenen çakıl taşı mozaik Gordion ve Olynthos mozaikleri arasında Küçük Asya'da mozaik geleneğinin İÖ 5. yüzyılda da varlığına işaret etmesi açısından antik mozaik kronolojisi için de önemli bir yere oturmaktadır.

Anahtar Kelimeler: *Sinop, Balatlar Kazısı, çakıl taşı mozaik, andron, Eros.*

* Derya Şahin, Bursa Uludağ Üniversitesi, Fen-Edebiyat Fakültesi, Arkeoloji Bölümü, 16059, Görükle - Bursa, Türkiye. https://orcid.org/0000-0003-0021-4271. E-mail: dsahin@uludag.edu.tr

Gülgün Köroğlu, Mimar Sinan Güzel Sanatlar Üniversitesi, Fen-Edebiyat Fakültesi, Sanat Tarihi Bölümü, Cumhuriyet Mah. Silahşör Cad. No: 71, Bomonti - Şişli - İstanbul, Türkiye. https://orcid.org/0000-0002-6369-659X. E-mail: koroglu@msgsu.edu.tr

Mustafa Şahin, Bursa Uludağ Üniversitesi, Fen-Edebiyat Fakültesi, Arkeoloji Bölümü, 16059, Görükle - Bursa, Türkiye. https://orcid.org/0000-0001-5153-1918. E-mail: mustafasahin@uludag.edu.tr

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Introduction

During the 2022 season of the Sinop Balatlar Excavations (Fig. 1), a rectangular mosaic floor, covering plan squares B1-3, C1-3, and D1-3 of Room XXIII, was discovered in the east-west direction (Fig. 2). At an height of 44.60 m, the rubble stone and mortar walls bounding the pavement from the west and south are partially preserved until the present day. The emblemata in the eastern part of the mosaic, which goes under Kaynak Street, which provides access to modern settlements to the south, was deliberately destroyed at an unknown date. According to the design features of the floor, it is clear that a residential building with a pastas or prostas plan belongs to the "andron" space. The plan of the building is not fully understood since the entire building has not yet been excavated due to the road crossing over it.

Figure 1
Sinop Balatlar Excavation aerial photograph.

Figure 2
Aerial photograph of the mosaic structure.

The composition and border arrangement of the pebble pavement of Sinop Balatlar preserved as *in-situ* has a symmetrical appearance. The outermost thick border formed with white-gray-black pebbles in the east and west measures 0.40 x 2.50 m The northeastern and northwestern parts of the border have not survived to the present day (Fig. 3, Drawing 1). It could not be documented because the northern part of the border was destroyed, and the southern part was buried under the road. Gray mortar was used on the thick borders in the east and west. The border inside them measures 1.00 x 2.50 m and has a simpler design. The ground mortar of the border formed with black and gray pebbles is gray. The L-shaped arrangement in the northeast and southeast, northwest and southwest

Figure 3
Mosaic general view.

Drawing 1
Mosaic drawing.

of this border enlivens to the central panel. These sections are 0.30 m away from the perimeter borders where the emblemata is located. In the composition that continues from outside to inside, there is a thin border with pink mortar formed with white and gray pebbles extending 0.05 m wide surrounding the entire composition. The border is followed by a wave motif arrangement of 0.15 m wide from outside to inside made with white and black pebbles (Fig. 4). Within this, there are palmette motifs in a thicker border arranged as a continuation (Fig. 5). In this 0.35 m wide border, the composition is created with white and black pebbles and the mortar is pink. Following this border, another thinner border measuring 0.05 m surrounds the central composition. The mortar of the border made of white pebbles, is also pink. The central composition measures 1.50 m in the north-south direction and 3.60 m in the east-west direction.

The mosaic is technically categorized as pebble mosaic[1]. It was made using monochrome (black-white / gray) colored pebbles collected from the waterside. The oval pebbles were placed vertically rather than horizontally on a shallow statumen in the Sinope Mosaic (Fig. 6). To distinguish the vertical placement technique from the horizontal, we would like to call it the "*hedgehog model*"[2].

1 There is no term for this type of mosaic in ancient sources. See also Salzmann 1982: 9.

2 "Oval-shaped, vertically- laid pebbles."

Figure 4
Border with wave pattern.

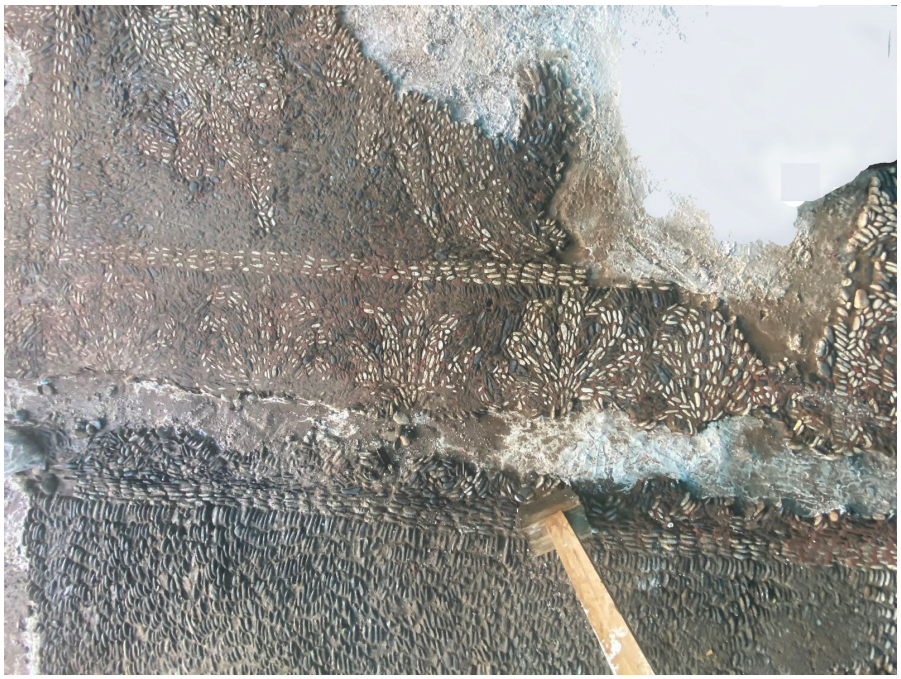

Figure 5
Palmette border.

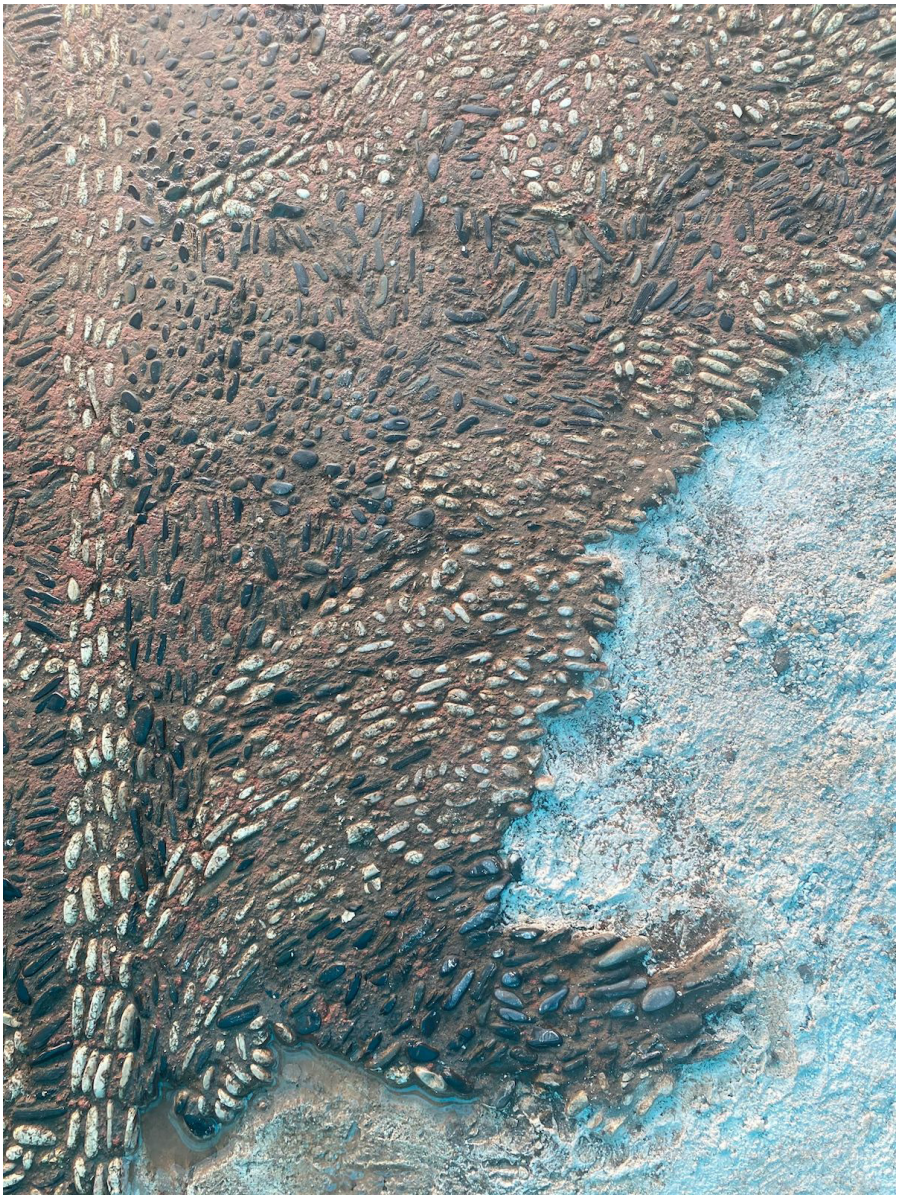

Figure 6
"Hedgehog" form view detail.

The mosaic flooring, located in a square-planned space, was planned considering the entrance of the space. The U-shaped design is first surrounded by a border of waves and then palmette decorations in three directions on the outer part from outside to inside. The northernmost part of the space, below the kline, is decorated with a wider curling branch / ranke motif (Fig. 4). Although the northern kline area is decorated with ranke motifs, there are two undecorated areas on the east and west (Fig. 7). Since these areas were also planned for the placement of the klines, they were not decorated with any special decoration but were flat paved with coarser pebbles placed vertically (in the form of "hedgehog").

The ornaments forming the border designs were made by preferring light colors on dark ground pebbles. In the southeast corner of the main panel, there is a winged Eros figure facing east holding a beak-mouthed vessel (?) with a handle in one hand, and a torch in the other (Fig. 8). Although it seems likely that it was placed in the four corners of the floor, it seems more likely that it is a single figure when considered in terms of symmetry. On the main panel above the figure of Eros, there is a decoration resembling eight wing tips, which are quite damaged. This decoration reminds us of the tips of the eagle's wings in

Figure 7
Undecorated area on the mosaic.

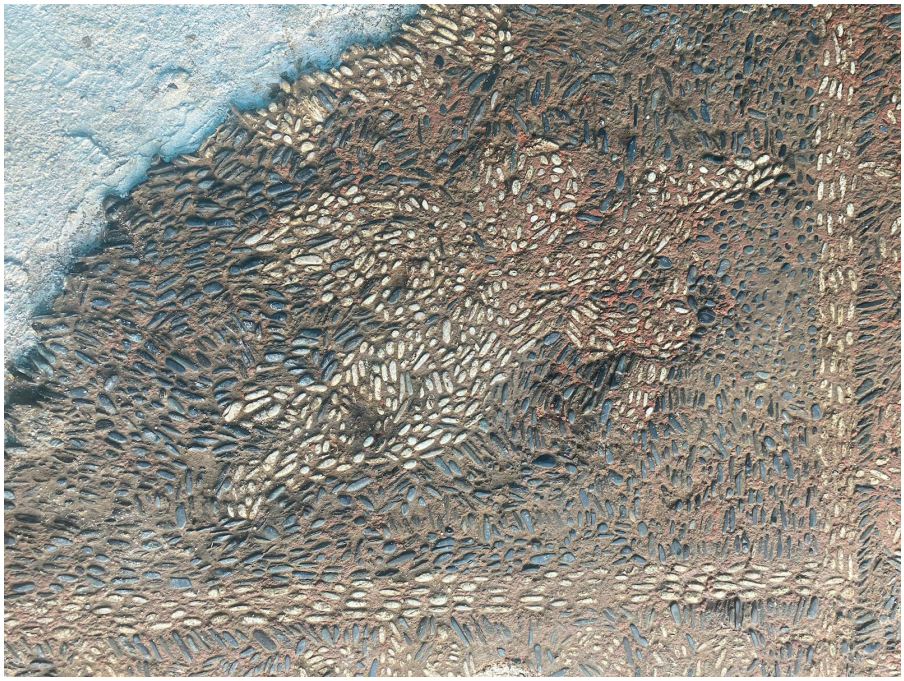

Figure 8
Winged Eros figure on the main panel.

the allegorical expression of the myth of Zeus' abduction of Ganymede with the eagle metamorphosis[3] (Fig. 3). The scene of Ganymede's abduction by Zeus on the pebble mosaic floor unearthed during the drilling excavations carried out in the İncedayı neighborhood near the Sinop Archaeological Museum in Sinop supports this hypothesis.[4]

3 LIMC IV, 162 et seq. nr. 170, 178, 164 nr. 211 see Ganymede (H. Sichtermann). For the purpose of artistic comparisons on the Ganymede theme see Phillips 1960: 242-262.

4 Although not contemporary, it is possible to see examples of the Zeus-Ganymede theme outside Sinope. For example, on a mosaic from Morgantina dated to the second half of the 3rd century BC, Zeus is again seen in the form of an eagle with open wings (LIMC IV, 216, nr. 170; Böselager 1983: 20-24). It is possible to observe similar decoration on later mosaics. See for example. LIMC IV, nr. 178, 211, 216.

The mortar bed, which helps the oval pebbles to be placed vertically, is also quite remarkable with its unusual structure and pink color (Fig. 4). This is because the mortar contains a lot of small particles of broken ceramic sherds.[5] The dense ceramic fractures among the pebbles, which exhibit a very different application technique from the contemporary mosaics, give the impression that they were placed specifically between the joints. The mosaic floors found in Sinope and previously introduced by Hazar Kaba and Eray Aksoy also feature a "hedgehog" model and pink bed mortar (Kaba - Aksoy 2022: 117-139). In other words, the "hedgehog" model pebble mosaics of Sinope are similar to each other in terms of technique and interiority, forming a group. To understand the accuracy of this observation, the mortar analysis of the pavement found in the Balatlar excavation was needed and samples taken from the joint of the mosaic were sent to Ankara Hacı Bayram Veli University, Faculty of Fine Arts, Department of Conservation and Repair for analysis.[6] The on-site cleaning and conservation of the mosaic was planned and carried out by restorer Sedef Öztürk Hetto.

Andron Spaces and Pebble Mosaics

Pebble mosaics were mostly used in androns (Westgate 1997-98: 95 fig. 1). The U- shaped design on the mosaics is a very important indicator for defining the room space. The main reason for defining the room as andron is due to the pebble mosaic design found in the Sinop Balatlar Excavation. The mosaic design was made according to the placement of the klines and especially the sides of the kline areas, for this very reason, were covered with undecorated and larger-sized pebbles (Fig. 3).

In the design of the Andron rooms, especially in the mosaic design, which was made invisible by the couches, the edge floors outside the panels were made with secondary workmanship. There are no ornamental elements in the mosaics found here. In the Balatlar mosaic, the undecorated floors covered with coarser pebbles on both sides of the design, support the same idea. A similar situation can be seen at Olynthos, Corinth, and many other places. In terms of ornamentation, the general impression is that Hellenistic houses were more elaborately decorated than their Classic predecessors (Westgate 1997-98: 111).

Although the main advantage of the mosaic used in the dining room seems to be to show outsiders that it is a classical house that is constantly visited, it must also have other purposes: First of all, it is waterproof, and most of them have a drainage connection to drain the water when the floor is washed. These rooms, the androns, were systematically planned in isolation from the other rooms. Sometimes the androns were connected by a separate front room (side room), the reason for the need for such privacy must have been to prevent direct contact with men. Unfortunately, the existence of such a room in our current structure could not be understood due to the inability to move the excavation towards the road. The symposium events organized in these spaces also gave the hosts a chance to welcome outsiders. The symposium, attended by less formal groups of friends and relatives who met, became dependent on mutual hospitality and loyalty (xenia). Eating with these diverse groups helped to create the interpersonal connections that form the basis of community, and thus strong bonds between individuals (Westgate1997-98: 97).

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5 It is possible to see a similar practice in Delos in opus tesselatum mosaics, except for pebble mosaics. A joint filler described as reddish/pinkish mortar was used in some of the Delos mosaics, thus making the surface shiny. See also Dunbabin 1979: 268.

6 Unfortunately, the results were not available in time for this article, therefore, we cannot provide detailed information on this issue.

Analogy

The earliest known pebble mosaic of the Late Bronze Age that can be defined as a mosaic was found at Uşaklı Höyük. Later, floors from the Archaic and Classical periods were found at Gordion and pebble floors used with tesserae appeared at Assos (Bingöl 1997).

The existence of such paved floors in Sinope was first revealed during excavations in the early 1950s (Akurgal - Budde 1956). The pebble mosaics at Sinope, which were severely damaged due to the construction of the Temple of Serapis, were the first pebble mosaic floors recorded in the region.

Unfortunately, this mosaic consisting of a row of borders with acanthus frieze, then another border and animal depictions made with light-colored pebbles on a black ground has not survived to the present day (Salzmann 1982: 113; Bingöl 1997: 42). Since there is not enough information about this mosaic, we do not have the chance to dwell on it. Although many pebble mosaics were reported during the drilling and rescue excavations carried out in Sinope on various occasions, unfortunately, most of them could not be published except for a few examples (for example, see Kaba - Vural 2018: 439 - 464).

The border design on the pebble paving, which is the subject of this article, presents the same combination as the border design of the black and white pebble mosaic in the andron of the villa of good fortune in Olynthos, and in the center the same combination with Dionysus where his procession is depicted (Dunbabin 1999: 7-9 figs. 4-5).[7] In the border design of the Olynthos example, there is a wave pattern made with black pebbles on a white ground on the outermost side and again a palmette frieze inside it. The mosaics dating to this period were influenced by textile design and red-figure techniques. Studies on the mosaics of Olynthos do not provide detailed information about the mortar content. Publications indicate that the pebbles were placed in a cement/mortar (Robinson 1952: 231).

The depiction of Eros placed in the south-east corner on the Sinop Balatlar example, as well as the Centaur placed in the corners on the mosaics, reminds us of the Centaur Baths in Corinth dating to the late 5th century BC (Salzmann 1982: 95 kat. 63 taf. 9.1-3; Dunbabin 1999: 6 figs. 1-2).

The placement of pebbles in pebble mosaics can be a criterion for dating. For example, in the pebble mosaic pavements found in Eretria and dated to the 4th century BC, it is noteworthy that the pebbles were placed horizontally on the mosaic bed. In dating these mosaics, the Panathenaia Amphoras found in large quantities in the peristyle courtyard of the house in Eretria were also used (Ducrey - Metzger 1979: 36). The mosaic house of Eretria, named after its pebble mosaic floor, is located at the foot of the acropolis of the ancient city. According to the excavators, the house was repaired and was destroyed by an unknown event about a century later. There are two or three andron rooms in this house and the mosaic found in one of them is quite special. It depicts a Nereid (probably Thetis) carrying a weapon to Achilles, and the figural panel is framed by a wave pattern (Franks 2014: 156-169).

7 Campbell, who works on the workshop determination and dating of mosaics, has identified various criteria for the determination of the mosaic workshops in Turkey. One of these criteria is the combination of patterns that make up the border design. For detailed information see. Campbell 1979: 287-292. Although Campbell's article covers Roman Mosaic Workshops, it is possible to use the same criteria for mosaics dating to the Classical and Hellenistic Periods.

The most important of our comparison examples are the pebble mosaics previously found at the same site, the ancient city of Sinope. Sinope is a well-known port city on the southern Black Sea coast and an important settlement that managed to become one of the few Anatolian centers to provide pebble-mosaic floor samples (Kaba - Aksoy 2022: 117-139).

In the design of the pebble mosaics found in Sinope, subjects such as depictions of various sea creatures, aquatic animals, bucrania, star and sun motifs, wave bands, griffins, and hunting scenes were generally preferred.

The pebble mosaics, recently published by H. Kaba and E. Aksoy, were unearthed in a house with rooms arranged around two large courtyards. The pebble mosaics found in Balatlar and the pebble mosaics found in Yalnızlar are very similar in terms of the border decoration with dark wave motifs on a light-colored ground. Although the Eros figure in the corner of the design in Balatlar is very similar to mosaic B in the Yalnızlar Mosaic, it is obviously more stylized.

Almost all known examples have been found in houses. In Greek domestic architecture, it is quite common to find pebble mosaics decorating the floors of rooms adjacent to a courtyard and side by side, and it is also quite common for the first of two adjacent rooms to function as a front room and the other as an andron. This is also evident in the plans of Olynthos houses[8] (Robinson 1932: 16-24).

Since the pebble mosaic technique of Olynthos is well known and most of these examples are represented by Olynthos, they provide important comparative examples. The mosaics of Olynthos and the mosaics of Sinope show parallels, but different techniques were applied in the laying of the stones and the content of the scenes partially differed. In addition, there are significant similarities between the floor mosaics in Sinope Yalnızlar and the floors in other centers (such as Sikyon, Eretria, Ambrakia, and Pella). For this reason, the floors at Yalnızlar are considered among the pebble mosaics of the wider ancient world, rather than Olynthos or any other single center. Given both the quantity and quality of the examples from Sinope, it is now clear that such floors were also popular in Sinope in the past. Despite being far from the center, Sinope's adaptation to the rest of the Greek world, in the use of pebble-mosaic floors, is both a very important sign of interaction and a representation of wealth, luxury, and elegance. The map of pebble mosaics should now include the pebble mosaics found in Sinope, including the Balatlar.

Dating

Pebble mosaics are often quite difficult to date. Even those already dated are controversial (Dunbabin 1979: 266). Therefore, we have to establish some criteria that will help us in dating. We think that the placement techniques of the pebbles forming the pebble mosaic floors are very important. When we look at the early examples, the vertically placed pebbles, which we define as "hedgehog-shaped", are quite remarkable. It is possible to observe this practice in Tiryns and on some of the Sinope mosaics. However, in the publications on Sinope pebble mosaics, the construction technique and placement of the pebble mosaics have been neglected in technical terms. Especially the "hedgehog" form and the pinkish bedding mortar feature have not been included. Since we had the chance to look at more detailed photographs of the mosaic, it is noteworthy that the pebbles in the pebble mosaics found in Sinope were placed

8 On the dating of houses at Olynthos, Hoepfner - Schwandner 1994.

in a “hedgehog” form, that is, vertically, and especially due to this placement, a deep joint opening was exposed, and this opening was filled with very small broken terracotta sherds (?) (Fig. 9).

Figure 9
The terracotta density in the mortar.

As mentioned before, we have not received the mortar analysis results yet. However, even if there is at least a mixed mortar bedding, the terracotta density in this mortar should be taken into consideration. The dense terracotta-tempered mortar, which we see especially in the cistern plasters, is quite suitable for watery floors and walls. The reason why this type of mortar was preferred for the mosaic floors in the androns must be the frequent cleaning of the floor with water. It is noteworthy that the pebbles were placed horizontally on the floor in the Olynthos, Pella, and Corinthian mosaic examples, which are among the early decorated pebble examples. In other words, both the bed mortar and the vertical placement of the stones are quite different in Sinope examples compared to Mainland Greece.

Salzmann identified four major stylistic phases on pebble mosaics: In the 5th and early 4th century BC, figural mosaics were made with white pebbles in silhouette form with few details. In the middle of the 4th century BC, pebbles such as red and

yellow were added to the colors, and the exterior details were silhouetted with simple shading techniques. In the 330s BC and onwards, the pebble technique in Pella reached its peak, and exterior color effects were enhanced by using fine colors and lead on the mosaics. By the 3rd century BC, we can say that reality and dramatic expression were completely replaced in favor of decorative figures. Obviously, in later periods, pebble mosaic producers realized that they could never effectively reproduce the complexity of contemporary painting (Salzmann 1982).

The floral and dwarf designs on contemporary ceramics also provide guidance in dating and evaluating mosaics (Salzmann 1982: 14-20). Curved branches similar to vine branches, a wide variety of flowers, stars, crowns, and bells, and the shape of traditional palmettes on ceramics can guide us in dating. This will be a method that can give an idea in terms of style-critical comparison. This is because the palmette motifs found on mosaics in Macedonia or Illyria are similar to those found on all South Italian vases. Probably one of these arts must have influenced the other (Robertson 1965: 82-83). Floral decorations developed in the 4th century BC. The designs made with dark-colored pebbles on a light ground remind us of the black ground technique on ceramics based on the previous argument. It was extensively used on vessels from Attica, Boeotia, and Southern Italy, especially in the 5th and 4th centuries BC. In terms of character, as in the mosaics dated to the late 5th century BC in Olynthos, the mosaic in the andron of the Sinop Balatlar residence is dominated by light-colored pattern designs on a dark ground. This is also the case for the other pebble mosaics found in Sinope. In the pebble pavement of the building known as the Centaur Bath in Corinth, the figure of a Centaur in one of the corners was made with light-colored pebbles on dark ground (Salzmann 1982: 95 kat. 63 taf. 9.1-3).

Terracotta ceramic sherds dating between the 2nd century BC and the 4th century AD were found during the investigations around the mosaic. In addition, 18th-19th century ceramic sherds found close to the mosaic floor indicate that the area was used until the Late Ottoman Period and that the destruction continued for a long time. Therefore, there is no contextual group of finds on the floor that can help dating. Consequently, the archaeological data obtained could not be used to date the mosaic.

One of the closest examples to the Balatlar Mosaic is the "Yalnızlar Mosaic" found in Sinope and dated to the middle of the 4th century BC (Kaba - Aksoy 2022: 132-136). The Balatlar mosaic must be from an earlier date than the Yalnızlar Mosaic due to its workmanship and lack of detail.

The dating of House 26 in Olynthos constitutes one of the most important criteria for us. The earliest figure with mythological scenes on mosaics is the mosaic with palmettes and animal figures from Corinth.[9] Olynthos mosaics date back to the 5th century BC. In his study, Robinson proposes another dating criterion as follows: "If they (the palmettes) were later than the 4th century BC, the tips of the petals of the palmettes would be directed upwards rather than downwards" (Robinson 1932: 17). Moreover, in another house numbered 31 in Olynthos, the downward turn of the petals of the four-leafed palmettes in the pebble mosaics consisting of floral palmettes designed in a central circular form indicates the 5th century BC art (Robinson 1932: 20 fig. 4).

9 T. L. Shear believes that the Corinthian mosaics are as early as the Olynthos mosaics (Shear 1929: 526-528 fig.10), however, Robinson concluded that the Corinthian mosaics are later than the Olynthos mosaics because the red figure fragments found at Olynthos were dated to the 5th century BC (Robinson 1932: 17).

Context finds constitute the primary dating criterion in mosaic studies. Then, the technique and design of the mosaic are evaluated by making an analogy with the style criticism method. Since there was no context found in the Sinop Balatlar example, we will consider the placement of the pebbles and the styles of the preserved palmettes as dating criteria. When we look at figure 10, the palmette belt following the wave pattern at the entrance of the andron is very important and the petals of these palmettes are directed downwards (Fig. 10). For this reason, we believe that the pebble mosaic found at Balatlar should be considered contemporary with the mosaics of Olynthos and dated to the late 5th century BC.

Figure 10
The palmette belt following the wave pattern.

Pebble Mosaics and the Problem of Chronology

Ancient mosaics are generally analyzed in two categories: natural pebble mosaics and hand-shaped cut-stone mosaics. Pebble mosaics, as they are technically called, are clearly considered the earliest form of mosaic. However, the debate about the origin of this type of mosaic has not yet ended.[10] Before starting this discussion, reviewing the definition of mosaic is useful. Mosaic is the name given to the art of combining various colored materials such as stone, glass, terracotta, and marble to form a pattern. In other words, it is not possible to call a pavement made of stones arranged side by side without any pattern as a mosaic. But perhaps it can be accepted as one of the steps in the emergence of this type of art.

Dieter Salzmann in his book (Salzmann 1982) "Untersuchungen zu den antiken Kieselmosaiken" dealt with and evaluated the pebble mosaic problems on a very broad basis, but the discovery of new examples in the past period has caused us to bring this issue to the agenda again.

The earliest known application that fits our definition, that is, where stones of different colors are brought together to form a pattern, is found at Uşaklı Höyük. The Late Bronze Age pebble pavement found during the 2018 excavation

10 For example, Salzmann, an important researcher on pebbles, believes that although the technical invention of pebble mosaics is Near Eastern, they are of Greek origin, based on the Late Bronze Age example from Tiryns, and argues that they continued in the same region in the Geometric and Archaic periods (Salzmann 1982).

season and dated to around 1500 BC shows black and white colored river stones arranged in a triangular pattern that do not touch each other (D'Agostino 2019: 1-8 figs.5-6).

It is suggested that this pattern example was continued by the Tiryns pavements dating back to around 1200 BC. In 1974, the excavations in the so-called Westtown part of Tiryns and the pebble pavement unearthed on the floor of the house called House 49 formed the basis for this suggestion (Podzuweit - Salzmann 1977: abb. 2-5). However, in the Tiryns example, the oval-shaped pebbles were placed horizontally and haphazardly without forming any pattern in a style that can be called "hedgehog" paving.[11] Therefore, it is not possible to accept the floor covering at Tiryns as a mosaic. If we accept every floor made by arranging pebbles without creating any pattern as a mosaic, we will have to go back to the Neolithic Period in Anatolia.[12]

On the other hand, excavations in Gordion, the capital of Phrygia, not far from Yozgat, which is home to the Uşaklı Höyük in the Central Anatolia Region, unearthed the pavements indicating the continuation of the mosaic tradition. It is noteworthy that a heterogeneous design consisting of random geometric patterns was applied on the floor dated to the 8th century BC. The Uşaklı Höyük pavements show that the sophisticated decorative mosaics unearthed at Gordion did not emerge by chance, but that a pre-existing art continued.[13]

The practice of arranging small pebbles in a checkerboard pattern, which we think originates from local traditions, is a practice seen both in Syrian-Hittite cultures and in Assyrian provincial palaces. Evidence for multicolored pavements in the Iron Age is known from Phrygian Gordion in Central Anatolia. However, the Mycenaean pebble pavement at Tiryns is considered to be the earliest known example of mosaic art and has been dated about 600 years earlier than examples from Gordion, Arslan Tash, and Till Barsib, suggesting that these eastern examples were influenced by Tiryns (Podzuweit-Salzmann 1977: 127). However, the pebble mosaic pavement found at Uşaklı Höyük in 2018 invalidated this hypothesis. Nevertheless, although it is difficult to suggest a logical stylistic development between the Uşaklı pavement and the Phrygian or Syrian-Hittite examples, the multicolored and patterned designs and later pebble mosaic floors should be considered as a possible source of inspiration (D'Agostino 2019: 7).

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11 Salzmann presented the discovery of the mosaics at Tiryns as evidence that the transformation of these pavements into decorated pebble mosaics was not only practiced in Asia Minor in the 8th century BC, but also in the Mycenaean period. It cannot be said whether this Asiatic art in Mycenaean Greece was developed enough to influence the mosaics of Asia Minor and Classical Greece (Podzuweit - Salzmann 1977: 137). However, the mosaics found at Uşaklı Höyük show that the researcher reached some preliminary conclusions which proved to be incorrect, as a result of the discovery in 2018 of a floor dated to 1500 BC in the courtyard of a Hittite temple to the east of the building, named Uşaklı Höyük Building II (D'Agostino 2019: 1-8 figs. 5-6). Instead of pebbles, these mosaics are new mosaic pavements made with stones that we can perhaps call river stones, which are larger than pebbles and have changed/updated the status of the earliest mosaic example in chronology. In terms of design, it has a geometric plan consisting of triangles that do not touch each other.

12 Patterned mosaic floors have also been found in the open courtyards and passageways of the Arslan Taş (Thureau-Dangin et al. 1931: 43-44; Bienkowski - Millard 2000: 31) and Tell Ahmar (Thureau-Dangin - Dunand 1936: 24 plan B 42.1; Bienkowski - Millard 2000: 291) Palaces in Northern Syria, at Tille Höyük (Blaylock 2009: 127-170) and Karkamış (Marchetti 2016a: 44-55; Marchetti 2016b: 363-380) on the Euphrates River, and at Ziyaret Tepe (Matney et al. 2017: 222) and Assur (Preusser 1954: 59 pl.30) on the Tigris River and at Altıntepe on the Erzincan plain (Özgüç 1966: 8 taf.16, 1.2.).

13 Discovered in 1956, the Gordion Megaron 2 mosaics, consisting of about 33 eclectic geometric designs that were not integrated with each other, were dated to the 8th century BC with their contextual assemblage (Young 1965: 10) and were considered the earliest pebble mosaics for a long time. The most important technical feature of the Gordion mosaics is that the pebbles of different sizes were placed in one mortar.

As can be seen from the examples described above, the pebble mosaics of the Early Period generally have simple decorative features. In the following periods, they made great progress and evolved into highly sophisticated designs. Technically, all of the pebble mosaics have a similar application; a coarse layer of mortar at the bottom, which can be called blockage, another thin layer of mortar on top similar to plaster, and pebbles placed in the layer (Robertson 1965: 72-89).

The floor consisting of triangular geometric patterns that continue without touching each other, which was uncovered in the temple courtyard of Uşaklı Höyük, evolved into a heterogeneous design of random geometric patterns at Gordion.[14] Subsequently, it has been suggested that this tradition was somehow forgotten until the 5th century BC, after which it suddenly appeared spontaneously in Olynthos without any precedent. However, the textile-patterned mosaics consisting of adjacent meander strips made of white, yellow, and dark blue pebbles dated to the late 5th and early 4th centuries BC at Gordion (Salzmann 1982: 94 kat. 52-56 taf. 6, 3-4) are an important indication of the continuation of the tradition in the same place and should not be ignored.

Located just west of the Dardanelles (Gallipoli Strait), Olynthos was a very poor small city when it was first founded. The capital of the Chalcidian League, the city began to make a name for itself only in 432 BC (Robertson 1965: 72 - 89). In the new city, which was designed on the hippodamian plan as in Miletus, the androns of the houses were decorated with beautiful mosaics.[15] In 1952, Robinson dated the mosaics he found in the "villa of good fortune" at Olynthos to the late 5th-early 4th century BC, before the Hellenistic Period (before 323 BC). In the dating criteria used in the study, the hippodamian plan used before the Hellenistic Period and some finds with seals before Alexander the Great were taken into consideration, rather than the technical and the critical stylistic features of the mosaics (Robinson 1952: 234-235).

In her study published in 1979, K. M. D. Dunbabin focused especially on the dating criteria of Hellenistic Period mosaics and mentioned that they were found in peristyles surrounding two or three sides, and in the androns and courtyards of some houses in Olynthos (Dunbabin 1979: 265-277). Around the courtyard, the men's dining room, called andron, was arranged with a mosaic or mortared floor. On these floors, there must have been klines on which diners reclined slightly above the ground.

On the pebble mosaics of the dwellings dating to the last quarter of the 5th - first half of the 4th century BC, different mythological scenes appear for the first time (Robertson 1965: 73). In other words, geometric patterns are replaced by mythological designs with figures. Therefore, the general opinion is that the first mosaics with mythological themes developed in Mainland Greece in the 5th and 4th centuries BC and were a Hellenic idea.

For example, according to K. M. D. Dunbabin, one of the most respected mosaic experts, the earliest pebble mosaic appeared spontaneously and independently at Olynthos in Mainland Greece, and it is doubtful whether this new type was influenced by the mosaics of Asia Minor and Assyria in the 8th century BC (Dunbabin 1999: 5). D. Salzmann, on the other hand, states that relatively

14 The mosaic tradition of Asia Minor is thought to have continued in Gordion until the 5th century BC (Salzmann 1982: 35).

15 Of the fifteen decorative and figured pebble mosaics found at Olynthos, eight were found in androns, one in the anteroom, two in the andron with the anteroom, one in the pastas and three in the courtyards of houses (Robertson 1965: 73).

few pebble mosaics are known outside Mainland Greece and the islands and argues that Greece is the main center of pebble mosaic art, and that the mosaics found in the Greek colonies, especially in the Black Sea, are purely mainland traditions (Salzmann 1982: 35). However, when we look chronologically, we see a very similar floor design to the one we see in the Megaron II of Gordion, in the Swastika Mosaic, and on the Circle at Olynthos dated to the late 5th - early 4th century BC (Salzmann 1982: 100 kat. 83 taf. 8,1). Therefore, contrary to popular belief, the artistic interaction must have been from east to west rather than from west to east.

The mosaics found at Gordion in Asia Minor in the 8th century BC, followed by the examples from Olynthos and Motya in Mainland Greece, have long been included in the literature as examples of early and chronologically consecutive pebble mosaics (Dunbabin 1999: 5). This sequence is likely to be disrupted by the pebble mosaics found in different excavations in Sinope that are recently being published. As claimed, ignoring the existence of the late 5th century and early 4th century pavements in Gordion, then a gap of about three hundred years and then suddenly appearing in Olynthos, should not be the case. The Sinope examples show that the reason for the gap is not that the mosaic art ended before it started in Asia Minor, but that the intervening examples are still not excavated or unpublished. In a few individual examples published, only an introduction has been made and the subject has not been examined in detail.[16]

Towards the end of the 4th century BC, we encounter highly sophisticated pebble mosaic floors at Pella (Dunbabin 1999: 10-15). After this, from the mid-3rd century BC onwards, the transition to mosaic floors made in the tesselatum technique began, with the first known examples at Morgantina in Sicily.[17]

Conclusion

In conclusion, pebble mosaics were probably first used in public buildings, and then they were applied in residential buildings. This suggestion of Salzmann, who points to Greece as the place of origin and development of pebble mosaics, has become open to discussion. Because the earliest known examples in Greece are the undecorated House 49 in Tiryns (Podzuweit - Salzmann 1977: 123-137) and the mosaics found in the building called “Building Z” (probably a house) in Keramaikos, Athens, are dated to the 3rd quarter of the 5th century BC, around 430 BC (Knigge - Kovacsovics 1983: 218-219 fig. 18). These two examples are followed by the mosaic from the Baths of Centaur in Corinth (Salzmann 1982: kat. 63 taf. 9.1-3). These mosaics are not of the traditional type; they were made with white pebbles on a dark ground and a darker mortar was used than the black pebbles.

The mosaics of Peiraeus, composed of white-colored pebbles on black pebbles with figures driving chariots, have been dated around 376 BC by comparing them with mosaic floors found in cities such as Pergamon, Delos, and Corinth. In these examples, no other supporting archaeological material other than stylistic criteria was used (Donalson 1965: 77-88).

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16 See for example. Priene (Rumscheid 1998: 95 abb. 75; Bingöl 2023: 223 fig. 295).

17 In addition to these examples, there is very little evidence of Hellenistic mosaics dating before the 2nd century. When we look at these examples, we notice two features of the floors (including the Morgantina examples); the first is formed by irregular stone forms, irregular and dominating and partly homogeneously shaped tesserae, and the other is artificially shaped stones, meaning regular and irregular stones in the same pavement. Unfortunately, most of the dates of these pavements are disputed (v. Böselager 1983).

To conclude, we should emphasize that considering the newly published mosaics from Sinope, after the Gordion examples it is not possible to say that the pebble mosaic tradition evolved into figurative examples displaying mythological subjects in Olynthos and developed in Mainland Greece. In other words, it would be a biased and erroneous point of view to ignore Asia Minor, where very early examples of the pebble mosaic tradition were also seen, and to suggest that it emerged and developed spontaneously in the west in Mainland Greece.

The mosaic pavements that emerged in Anatolia later developed not only in Olynthos, Pella, etc. but also had a significant presence in Sinope. These mosaics found in Sinope can be interpreted as the influence of the Mainland practice on the colonies (Salzmann 1982: 35), or they can be explained as an integration of the pebble mosaic tradition seen at Olynthos from Northeast Asia Minor (Robertson 1965: 83). However, the most appropriate interpretation would be the latter; why would a mosaic tradition that began in Anatolia be forgotten and then spontaneously appear elsewhere! Of course, it is not extraordinary that it continues to exist in the culture from which it originated, on the contrary, it is what should happen naturally.

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