



**ABSTRACTS OF THE PRESENTED PUBLICATIONS**

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**PUBLISHED BOOK BASED ON PH.D. DISSERTATION**

*Kantareva-Decheva, E., “Floor Mosaics from the Episcopal Basilica of Philippopolis – Techniques and Materials, Conservation and Display”, AMDF „Prof. Asen Diamandiev”- Plovdiv, 2022, ISBN: 78-619-7682-16-8, 177 p.*

**Abstract**

The project for the sheltering, conservation and display of the *Episcopal Basilica of Philippopolis* was one of the most important initiatives of Plovdiv Municipality as European Capital of Culture in 2019. It took place in 2014 - 2021 thanks to a public-private partnership between the America for Bulgaria Foundation, the Municipality of Plovdiv and the Ministry of Culture with the main goal to preserve and integrate the archaeological site *in situ* into the modern urban environment, as well as to promote Bulgaria's cultural heritage and tourism.

The process of the complete excavation, research, restoration and construction of the visitor center and public space of the basilica began in 2014 and builds on the experience of the America for Bulgaria Foundation and the Municipality of Plovdiv from the successful completion of another joint project in Plovdiv - the Small Basilica site.

The project implementation united the efforts of archaeologists, restorers, architects and builders aimed at the discovery, research, restoration, interpretation and display of the Episcopal Basilica. Restoration of the Episcopal Basilica of Philippopolis was supported not just by the state institutions and agencies but also by the local community and businesses. The archaeological excavations in 2016-2017 were aided by more than 450 volunteers.



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Since only about half of the building had been investigated before the project started, in 2016 Plovdiv Municipality and *America for Bulgaria* Foundation signed a memorandum for the

complete archaeological excavation and display of the Episcopal Basilica site. As a result, the road to the north of the basilica was removed and the start was given to archaeological investigations and unearthing of the northern half of the building. This act is an important management decision by the Municipality of Plovdiv and has historical significance for the overall study, display and preservation of the site.

### **Archaeological Reference**

The *Episcopal Basilica* of Philippopolis was discovered during rescue archaeological excavations, carried out from 1982 to 1986. It is located to the east of the Forum Complex of ancient Philippopolis and to the south of modern-day *St Ludwig* Catholic Church (Кесякова 2011). Until 2002 about half of the building was investigated and in 2016-2017 it was fully unearthed.

It is a three-nave basilica, with an apse to the east and a peculiarly shaped narthex and atrium to the west. Exceptionally large, it has a lavish architectural interior and mosaic floors. It is about 83 m long and 36 m wide, which makes it the largest 4th - 6th century basilica in Bulgaria and one of the largest in the Balkans. The Basilica encompasses almost two Roman insulae, which had previously been occupied by an ensemble of public buildings. The Basilica was erected by the middle of the 4th century and collapsed in the late 6th century; during this time, it underwent one structural reconstruction and several repairs.

The floors of the Basilica are covered with mosaics totaling an area of over 2000 sq. m. A detailed stratigraphic study was carried out during the on-site conservation of the mosaic floors (2015-2018) in order to investigate the mosaic laying techniques and materials used and also to identify their construction periods and phases (Kantareva-Decheva, Stanev, in print). This research revealed three floors, one laid atop the other, and also identified the various tesserae and preparatory mortars.



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Based on the stratigraphic analysis of the Basilica's floor mosaics, the following general, mosaic-laying periods were determined:

The first floor was in an opus signinum made of a pink lime-based mortar, with a terminus post quem determined by a coin of Licinius I found in it. The second floor was an opus tessellatum

laid in several stages between the mid-4th and early 5th centuries. The mosaic in the nave was laid first and the mosaic floors of both side aisles, the apse, the narthex, the porticos and the rooms in the southern portico were laid later. The third floor covers the earlier mosaics. It is an opus tessellatum laid between the late 5th and mid-6th centuries. Exceptions include the floor of the presbytery which was laid in opus sectile, and the rooms to the south of the southern portico (the Diakonikon and its reception area), where the mosaic was not replaced.

According to composition and scale, iconography and decoration, materials and execution, the mosaics can be divided into three groups.

The earliest mosaic, laid only in the nave, differs significantly from the rest of the mosaics in the Basilica. It is not very colourful, large in scale, outstandingly monumental and exhibits features of the early mosaics of Philippopolis, with a marked western influence.

The second group of mosaics, which include those in the side aisles, the apse, the narthex and the porticos, was laid later, in the late 4th–early 5th centuries, under the influence of the eastern Early Christian centres. They depict intricate polychrome geometric-ornamental compositions with extremely rich decoration, including numerous pre-Christian and early-Christian ornaments and symbols.

The mosaics of the third floor depict intricate geometric patterns, including figurative images of vases, flower baskets, plants and birds. The most impressive of them are: *The Spring of Life* scenes laid in the centre of each side aisle, the images of over 100 birds in the middle panel of the nave, as well as the rosette-like peacock with an opened tail, surrounded by other birds and two *kantharoi*, located in the middle of the narthex.



The mosaic-laying technique is *opus tessellatum*, with natural stone tesserae in four to eight colours, each with several different shades.

### **Stratigraphic and Technological Study**

In 2017 – 2018, a detailed stratigraphic study was carried out during the on-site conservation of the mosaic floors in order to investigate the mosaic laying techniques and materials used and also to specify their construction periods and phases. To this end, probes were undertaken in all

the rooms excavated to date, and samples were prepared for the analyses of tesserae and mortars.

Generally, the Basilica's floors and the mosaic foundations were built according to the technological requirements of the Roman mosaic stratigraphy, but in this case there are some differences from the commonly used technology. These specific differences are based on the following factors: firstly, there are three floors, laid one atop the other; secondly, the lower floor mosaic in the different rooms was not built at the same time; and thirdly, in each stage there were several separate workshops (teams of mosaicists) working, each one with methods, technological style and preferred materials of its own. As a result, the floor stratigraphy in the different rooms of the Basilica has different mosaic-laying sequence, techniques and materials.

Since the Basilica's first discovery, a number of technical analyses have been carried out to determine the types, composition and structure of the mosaic-laying materials. In the 1980s, the mortar and tesserae composition and structure were determined by X-ray structure and petrography analyses. In 2017, samples of mortar and tesserae were examined again. Modern methodology was used, including X-ray diffraction (XRD), elemental analysis through scanning electron microscopy (SEM), energy-dispersive X-ray spectroscopy (EDS), polarized light microscopy, etc. Here is a summary of the lab results:

**Mortars:** pale pink in colour, characterized by strong cohesion between components, with slaked lime as a binding agent and aggregates composed of smaller and larger pieces of brick (up to 20 mm), large marble shards and unsorted, different-sized angular sand. The quicklime



was produced from a highly pure raw material. The sand in the mortar is of local origin. The brick shards, strongly heterogeneous in size, predominate in the aggregates, both in terms of quantity and size. The latest analyses show that the sand and the brick shards were used as inert filler, while the hydraulic reactions were caused by a specially prepared artificial pozzolana component of fine brick powder. The analyzed material has survived until present day with no visible deterioration and its qualities have been preserved; it has strong adhesion between particles and a high degree of rigidity and mechanical stability.

**Tesserae:** What is unique about the Episcopal Basilica's mosaics is that the extraordinary variety of colours and shades (more than forty) comes solely from stone tesserae.

It is remarkable that, unlike all similar structures in antiquity, where two to four types of stones were usually used (limestones and marbles and very rarely sandstone or basalt), many more types were determined here - nine, some of them quite rare. The Basilica mosaics contain alunite secondary quartzites, marbles, serpentinites, epidosite, limestones, calcrete, carbonate schist, biotite schist and volcanic tuff.

The tesserae were made not only of low and medium hard stones, easily cut, such as limestones, calcretes and marbles, but also of stones of high and very high hardness, such as secondary quartzites and epidosites.

The material source analysis shows that a very wide area was exploited - within a radius of 50-100 km. The focus was not on the nearest sources of stones, although they were used, but rather on sources of stones that were quite distant and sometimes more difficult to cut (extremely hard), but having interesting and unusual colours.

### **Conservation**

After the completion of the archaeological excavations and the following research of the Basilica site in 1982-86, various conservation efforts were made over the years. Temporary shelters were set up, the last of which collapsed in 1999. In the period after 1990, due to economic changes in Bulgaria and serious cuts in conservation and maintenance budgets, the



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condition of the mosaics worsened considerably. The site was left with fence walls only and unguarded. The mosaics were covered with a polyethylene sheet and a sand layer, which resulted in their further deterioration.

After the initiation of the project, conservation work on site started in early March 2015, after the conservation plan had been approved by the National Institute for Cultural Heritage. The first stage of conservation work on site involved the following activities: the remains of the demolished temporary shelter were cleared out; the garbage piled during the past 20 years was lifted; the trees and vegetation were cleared; and the sand cover and polyethylene sheet were removed from the mosaics.

The mosaic in the southern half of the basilica (excavated in the 1980s) was found in an extremely poor condition due to the polyethylene sheet placed directly onto the mosaic surface. Over the

years, it had prevented the normal transfer of moisture between the soil, the mortar and the mosaic layer (Fig. 9). The mosaic had to be stabilized first and then cleaned. It took conservators a lot of time and effort to stabilize its surface and structure. A decision was made to detach the upper mosaic layer because of its extremely poor condition and to uncover, investigate, conserve and display the lower mosaic layer *in situ*.

From the beginning of the conservation in May 2015 until December 2015, the team unearthed, stabilized and detached the upper-layer mosaics of the southern half of the Basilica (*southern aisle, the southern half of the nave and the narthex*) with a total area of about 800 sq. m. The lifted mosaics, transferred on new supports, are now displayed on the second floor of the visitor center.

After the upper-layer mosaics were detached, the mortar between the two mosaic layers was carefully removed until the lower-layer mosaics in the southern aisle and the nave were reached.

Our team had the unique chance to discover the donor's inscription on the lower-layer mosaic in the southern aisle, which has the name of the bishop, during whose time the mosaic was laid.



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This inscription is of enormous scientific importance as it proves the archaeologists' hypothesis that this was an Episcopal basilica.

In 2016 and 2017, the conservation work was focused on the restoration of the lifted mosaics and on emergency measures on site, related to the consolidation and cleaning of wall paintings and stucco decoration preserved in situ; unearthing, cleaning and stabilization of the mosaics in

the newly excavated northern part of the Basilica; reburial of mosaics and architectural elements occupying an area of 2000 sq. m.

The planned conservation and restoration interventions in 2018 involved the detachment of the mosaics under the foundations of the protective building and the drainage on the inside of the northern retaining wall. These activities were carried out after a conservation plan was prepared in coordination with the National Institute of Movable Cultural Heritage and the Ministry of Culture and a building permit was issued by the Municipality of Plovdiv.

About 70 sq.m. of the upper layer mosaics and 20 sq.m. of the lower layer mosaics were successively lifted. Below them, a large area of the earliest mortar floor in *opus signinum/cocciopesto* was unearthed, examined and documented; additional stratigraphic and technological studies of the mosaic floors were carried out.

After completion of conservation work on site, during the construction works, the mosaics remaining on site were covered with a layer of geotextile and a 40 cm thick sand layer, and the areas where heavy machinery moved were backfilled with ballast. The walls with preserved wall paintings and stucco decoration were covered with geotextile and sandbags and shielded with formwork panels.

Over the period 2019 and 2020, a major challenge the restoration team faced was working on site during the construction of the protective building. This had to be done in order to meet the tight deadline set for the official opening and also because some of the construction works could not be carried out blindly, over reburied mosaics. Unfortunately, some key construction and



finishing works that were supposed be done over reburied mosaics, had to be carried out over the already uncovered mosaics, which made the restoration process even more difficult.

The conservation and restoration work in the protective building under construction began in 2019, when the detached mosaics over the newly built foundations and supporting columns were re-laid on site. This was a real challenge for the whole team, not just because it had never been done before in Bulgaria, and on such a large scale as well, but also because the uneven floor surface made it extremely difficult for the mosaic fragments to be re-laid. The mosaic

fragments were re-laid on a mortar bedding over a previously sculptured support, following its uneven surface, in the same sequence as they were detached. After the mortar bedding had set, the facings were removed, the re-laid mosaic surface was cleaned, stabilized and consolidated and the interstices were filled with mortar.

The lifted upper layer mosaics in the southern half of the Basilica (the southern aisle and ½ of the nave) were re-laid and displayed on the second floor of the protective building, now the Visitor Centre of the Episcopal Basilica of Philippopolis. The mosaics, about 400 fragments with a total area of about 800 square meters, were restored in a studio and re-laid on a new reinforced foaming epoxy support. Unlike the mosaics re-laid under the newly built foundations on the lower floor of the building, these were re-laid and displayed using a different technology.

## **Conclusion**

The floor mosaics of the Episcopal Basilica of Philippopolis feature certain compositional schemes and decorative elements that were commonly used in the Roman Empire, but they have no explicit overall parallel with any known mosaic. They have a peculiar aspect of their own, *i.e.*, a combination of different influences and local culture, traditions and resources. They certainly enrich our knowledge of the development and spread of mosaic art in Late Antiquity.

The technical and technological investigation and documentation of the floor mosaics during the restoration process provided important information about the mosaic-laying sequences, methods, techniques and work processes, and also about the types of materials used and their





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properties. By tracing and analysing the variations in the stratigraphy of the preparation layers and the composition of mortars, as well as the sizes and methods of tesserae production and mosaic-laying, it is easier to understand the construction periods of the building and the alterations, renovations and reconstructions it underwent.

The study of the mortar and the tesserae shows that ancient technologists had profound knowledge of the nature of processes and mastered a wide range of technical skills to reach the desired result by using local raw materials. The technical analyses help understand the behaviour of materials in time and their changes under the influence of various destructive

factors, which contributes to the choice of restoration and preservation strategy and methodology.

The construction of the protective building brought this unique monument back to life and successfully integrated it into the modern urban environment. With its creative exhibit design, the visitor center has become an attractive place for Plovdiv's citizens and visitors, as well as a preferred space for hosting art and cultural events.

In 2017, the Episcopal Basilica was granted the status of a serial property, together with the Small Basilica and the late-Antique *Irene* building. In 2018, the serial property *Episcopal Basilica and Late-Antique Mosaics of Philippopolis, Roman Province of Thrace* entered UNESCO's Tentative List.

In conclusion, I would like to express our confidence that the serial property *Episcopal Basilica and Late-Antique Mosaics of Philippopolis, Roman Province of Thrace* will find its rightful place on UNESCO's List of World Heritage Sites and the newly built museum over the Basilica will continue to be a center of attraction for both Plovdiv's citizens and the numerous visitors to our beautiful city.

## ARTICLES



*Kantareva-Decheva, E., Stanev, S. “New Mosaic Floors of the Episcopal Basilica of Philippopolis (Plovdiv, Bulgaria)” in ProceedIngs of the 14th Conference of the Association Internationale pour l’Étude de la Mosaique Antique (AIEMA), Nicosia 15-19 October 2018, ISBN 978-618-86641-0-4, 500-507, Athens 2023.*

#### **Abstract**

In 2014 a project for the sheltering, conservation and display of the Episcopal Basilica archaeological site started upon the initiative of the America for Bulgaria Foundation and the Municipality of Plovdiv. In 2015 the lower mosaic layer was unearthed after detachment of the upper one. The archaeological investigations in 2016 – 2017 resulted in the unearthing of the

mosaic floors in the northern part of the Episcopal Basilica. A detailed research of the newly uncovered mosaics was carried out during the on-site conservation of the mosaic floors. This presentation focuses on the preliminary report of the results acquired.

*Kantareva-Decheva, E., Decheva, R., 2021, “The Episcopal Basilica of Philippopolis, Plovdiv, Bulgaria: conservation and public presentation of the mosaic floors”, in ProceedIngs of The 13Th conference of The International committee for The conservation of mosaics, Barcelona 15-20 October 2017, ISBN 978-88-7970-907-1, 653-659. Italy.*

#### **Abstract**

An Early-Christian basilica dating from the 4th-6th centuries, decorated with polychrome mosaic floors, was discovered in 1983 in the center of Plovdiv. Over the years various conservation efforts have been made, after 1990 the condition of the mosaics has worsened considerably.

In 2015 a project for the sheltering, conservation and display of the Episcopal Basilica started with the support of the America for Bulgaria Foundation and the Municipality of Plovdiv. This presentation focuses on the joint efforts of the team of architects, conservators and archaeologists in research, conservation, display and integration of the archaeological site into the modern urban environment.



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*Елена Кантарева-Дечева, Райна Дечева, 2019, „Проучване на стенна декорация – живопис и пластика от Епископската базилика на Филипопол“ в Сборник доклади от Втората Международна научна конференция "Наука, образование и иновации в областта на изкуството" проведена в АМТИИ Пловдив на 24-26 Октомври 2019 г., ISBN 978-954-2963-56-1, Пловдив, стр. 385-389*

### **Abstract**

In the period 2016 - 2017, during the archaeological excavation of the northern half of the Episcopal Basilica, apart from the mosaic floors, other elements of the church's artistic decoration were unearthed. The study presents the uncovered wall decoration including wall paintings and stucco.

*The Small Basilica Project. Conservation and Display of the Mosaic Floor. Elena Kantareva-Decheva, Proceedings of the XII Conference of the International Committee for the Conservation of Mosaics (ICCM), Proceedings of the XIIth Conference of the International Committee for the Conservation of Mosaics (ICCM), Algero, Italy, Published by Getty Conservation Institute, Los Angeles, 2017, ISBN 978-1-60606-533-4, page 322-327.*

### **Abstract**

The Small Basilica project took place in 2010-2013 with the financial support of the America for Bulgaria Foundation, the Ministry of Culture of the Republic of Bulgaria and the Municipality of Plovdiv. Its main goal was to create a working model for the integration of an in situ archaeological site into modern urban environment. During the project realization a new cover building was constructed, the detached floor mosaics were provided with new foaming epoxy backings, restored and re-laid back on site, the mosaic floor of the Baptistery was conserved in situ as well as the piscina and architectural details.

*Кантарева-Дечева, Станев, Станчев, 2021, “Новоразкрити мозайки от Епископската базилика на Филипопол – 2019-2021 г”, Годишник на АМТИИ Пловдив 2020 г, Пловдив, 2021, ISSN 1313-6526, 23-34.*

### **Abstract**



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During the construction of the Visitor Center building over the Episcopal Basilica of Philippopolis in the period 2019-2021 continued the research, conservation and display of the mosaics and architectural sculpture. This publication presents the team's preliminary observations on the recently discovered mosaic floors carried out in parallel with their conservation.