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JAKUB KANISZEWSKI

NON-INVASIVE INVESTIGATION OF THE WESTERN BASILICA AT PTOLEMAIS (PLS. 52–57)

In the three articles in this volume, K. Misiewicz (31–39), M. Bogacki and W. Małkowski (45–50) and E. Wipszycka (51–67), describe a series of churches in Ptolemais; however, only one of them has been preserved to a degree allowing for an architectural analysis – the so-called Western Basilica. This task was entrusted to the author of this paper, who took part in the fieldwork in May 2010.¹

This paper does not discuss all the problems concerning the Western Basilica, such as its dating, the analysis of the wall bonds and stone-cutters' marks; it mainly concentrates on issues in which our research brought new evidence.

The study focused on the remains of the Basilica, stone rubble from that building now scattered on the ground, as well as two spoil heaps left behind by an archaeological excavation of G. Caputo.² The aim of the investigation was to make an analysis of architectural and archaeological material of potential use for securing more details, complementing and testing the information contained in current publications. Basing on the data collected, we generated a 3D reconstruction of the architectonic form of the Western Basilica. Material finds secured during surface survey were used to develop a general concept of the original decoration of the building interior.

The first stage of fieldwork was to make an inventory of the remains of the Basilica and create its up-to-date plan and architectural sections (Fig. 1). In the past, the site came under a conservation-reconstruction project³ which at present poses problems for accurate determination as to what elements are the result of reconstruction. The reconstruction work was mostly non-invasive and apparently focused only on those fragments of the building whose

original shape did not give rise to any doubt. Consequently, the remains of the Western Basilica available for research today, despite the conservator's intervention, may represent a reliable object of research.

The Western Basilica is built on the plan of a rectangle, 21.99×35.54 m. It consists of the nave (9.36×23.1 m), two aisles (3.6×23.1 m), a western area (narthex), and four corner chambers. The nave ends on its east side with an apse (diameter 8.06 m), covered originally with a semi-dome. The aisles are separated from the nave by a row of seven heavy pillars (1.2×1 m) supporting arcades. The western chamber (9.54×3.46 m) is separated from the nave by two pillars, heavier than those in the aisles (1.5×1.14 m). In the south-western chamber (3.7×3.85 m), a staircase leading to the upper storey is located as well as one of the entrances (1.08 m in width) to the church. The same chamber also has two other passages, one connecting it with the narthex, the other with the southern aisle. The north-western chamber (3.55×3.75 m) has a single entrance connecting it with the narthex. The majority of published plans feature another entrance which connects this chamber with the northern aisle;⁴ this is a consistent error as no such passageway exists today and there are no traces to indicate that it may have ever existed.

The best preserved room of the entire building is its north-eastern chamber (3.4×3.4 m). In its western wall, an entrance leading to the northern aisle is located, and in the other three walls one finds half-round niches with a roof in the form of a semi-dome (diameter 1.96 m). In the eastern niche a window is placed. It is narrow on the outside and wider on the inside. The chamber is covered with a dome.

The south-eastern chamber (3.5×3.35 m) was originally covered with a dome, which no longer exists today.

¹ The author wishes to express his utmost gratitude to E. Wipszycka, E. Jastrzębowska and M. Rekowska-Ruszkowska. Special thanks go to Z. Kowarska, S. Lenarczyk, and W. Małkowski for their help in surveying and measuring the site.

² G. CAPUTO, *Una basilica cristiana in Tolemaide*, (in:) *Atti del Terzo Convegno Nazionale di Storia dell'Architettura*, Roma 1938, Roma 1940, 159–162.

³ G. CAPUTO, *La protezione dei monumenti di Tolemaide negli anni*

1935–1942, "Quaderni di Archeologia della Libia" 3, 1954, 41–58.

⁴ This sort of entrance is presented in: G. CAPUTO, *Una basilica cristiana...*, fig. 1, and in later publications, e.g. C.H. KRAELING, *Ptolemais, City of the Lybian Pentapolis*, Chicago 1962, 98; R.M. BONACASA CARRA, *La basilica occidentale di Tolemaide dallo scavo al progetto*, (in:) E. Jastrzębowska, M. Niewójt (eds.), *Archeologia a Tolemaide, Giornate di Studio in occasione del primo anniversario della morte di Tomasz Mikocki, 27–28 maggio 2008*, Roma 2009, 219.

However, its presence is indicated by both remains of a pendentive preserved in the northwestern corner of the room and the shape of a stone block found in the debris. The room connects with the southern aisle through a passage in its western wall. Pillars on which arches supporting the vault rested are located in the corners of the chamber.

The outer walls of the Western Basilica are solid and have a thickness of 1.5–1.55 m. Two entrances lead to the church's interior: the one (1.44 m in width) in the northern wall directly into the northern aisle⁵ and the other (already mentioned) to the south-western chamber, with the staircase. Beneath the Basilica, a number of cisterns (**Fig. 1:C**) have been found; at least one of them was definitely used while the basilica was in function⁶ (**Fig. 1:Ca**). Two of the cisterns are in the nave, two in the northern aisle, and one in the narthex. At least a few of them originate from a period earlier than the construction of the Western Basilica. This is suggested by the remains of a massive structural arch (6.7 m in diameter) identified in the northern wall (**Figs. 1:B, 2**). Most likely, its function was to relieve the roof of the underlying cistern of the wall's weight. No such construction was applied in other preserved walls of the Basilica.

The clearing of the outer walls of the church has brought no evidence of any structures directly adjoining to the Western Basilica. Also, the survey of the Basilica's immediate surroundings does not allow supposing that any kind of buildings were erected in the area. At the present stage of research, the general image of the architectonic surroundings of the Basilica comes only from the geophysical research.

The state of preservation of the Western Basilica does not leave any doubts as to its plan, situation of entrances, and layout of its chambers; it also allows a very reliable reconstruct of the vaults in the aisles. However, the reconstruction of the higher parts of the building is quite problematic. According to a universally accepted concept, the nave had a vaulted ceiling and the aisles had vaulted galleries.⁷ However, the material secured by us does not confirm the existence of this solution and leads us to suggest a different concept for reconstructing the upper sections of the building. As a result of the surface survey inside the basilica, as well as on the surface of the spoil heap left by the previous excavation, we succeeded in discovering

a dozen odd fragments of roof tiles. Moreover, in the rubble of stones from the church we found neither voussoirs that may have belonged to the supposed arches nor elements of the nine-metres-wide vault believed to have covered the nave. These two facts suggest that a tiled ridge roof may have existed above the nave. Regrettably, the presence of galleries above the aisles cannot be proved or disproved by the architectural material. At the same time, an attempt to answer the question of how the sunlight penetrated inside the basilica helps us conclude that there may have been no galleries above the aisles. Most probably, apart from a number of narrow skylights in the aisles, the sunlight may have reached the interior of the church only through windows in the upper walls of the nave. The galleries, if there had been any, would have made it difficult or even outright impossible to illuminate the inside of the building. Also, the paucity of the elements of the vaults among the stone rubble fails to support the supposition that the vaults covered both the aisles and the galleries above them. Therefore, it seems that the rooms on the upper storey, if there had been any at all, may have been situated above the staircase and possibly above the rest of the corner rooms. The much heavier pillars on the western side of the nave suggest the presence of some rooms also over the narthex. Consequently, the concept proposed by us here is much 'lighter', than the previous one⁸ (**Figs. 3, 4**). Our concept could also be confirmed by the discovery of a few stone blocks profiled on two and three faces, originating from the basilica walls, 93 and 65 cm thick (**Fig. 5**). These blocks allow us to establish the original thickness of some basilica walls, which measured either 93 or 65 cm. The thinnest walls of the lower part of the edifice (the one between the north-eastern room and the northern aisle and the other between the south-eastern room and the southern aisle) are 96 cm thick. However, since these walls are virtually completely preserved, the blocks could not have originated from them. In turn, the thinnest wall of the staircase is 107 cm thick and that of the northwestern room is 120 cm thick. Therefore, the above described blocks must have been used in the upper part of the basilica, which can also be confirmed by their profiling different from the blocks in the lower part. The walls constructed of such blocks were not thick enough to bear 'heavy' vaults. One could suppose that these blocks were originally elements

⁵ Some researchers suggest that this may have been an entrance to an auxiliary chamber; see: S. STUCCHI, *Architettura Cirenaica*, Monografie di Archeologia Libica IX, Roma 1975, 365. In the available architectonic material there are no traces to suggest that such a chamber existed at all.

⁶ Only a single cistern survived which is not filled in with rubble.

⁷ C.H. KRAELING, *Ptolemais...*, 97; S. STUCCHI, *Architettura Cirenaica...*, 365–366, 409.

⁸ J.B. WARD-PERKINS, R.G. GOODCHILD, J. REYNOLDS, *Christian Monuments of Cyrenaica*, London 2003, 188, suggest a similar solution in the reconstruction of the upper part of the Western Basilica.

of the construction of windows in the main nave. However, they are far too few, which indicates that the windows in the upper part may have been constructed in a way that is hard to detect in the available architectonic material. In a 3D reconstruction, we propose simple, rectangular openings, widening towards the inside and devoid of any profiling (**Fig. 6**). Such a solution is based on both the lack of sufficient number of similar architectonic elements and the shape of the only preserved window in the lower part of the church, in the north-eastern room.

More detailed information on the upper sections of the building could be obtained by making a thorough inventory, not within the scope of our project, and by analysing stone elements belonging to the Western Basilica.

One of the more interesting questions posed by the Western Basilica are stone structures found in the nave. They have so far been interpreted as the remains of an earlier church founded on the same site.⁹ One of the published archival photographs¹⁰ shows clearly that at present these structures are much less visible than during the period of their excavation; unfortunately, we could not investigate their relationship to the stylobate on which the pillars of the basilica rested. However, we were able to analyse the only surviving joint of the wall of these structures with the foundation of the apse (**Fig. 1:D**). The analysis has demonstrated conclusively that the foundation of the apse is earlier, which shows that at least this element does not come from an earlier building. Another fragment of these constructions consists of slabs from what originally was the casing of a cistern located inside the church and may be a trace of some building project, very likely later than the time of the functioning of the basilica (**Fig. 1:E**). In this situation, we can hypothesise that the structures may be first of all the remains of an internal division of the nave of the Western Basilica. Of course, these structures may have incorporated some elements salvaged from an earlier building situated on this very spot, although not necessarily a church. The fact that the nave had some internal division seems certain. The remains of internal structures visible today rest at a higher level than the inlet to one of the cisterns hence they must have been used when the cistern was still functioning. On the above-mentioned archival photograph taken in the

eastern part of the nave, vertical architectonic elements can be discerned resting on the structures of interest and undoubtedly belonging to the arrangement of the basilica interior. The rubble heap has preserved a rich collection of several dozen fragments of small architectural details (**Fig. 7**). These elements, which include fragments of partition walls, a capital, and small profiled elements, are presumably relics of the constructions dividing the nave. At this point, we also need to mention another architectural detail identified among the rubble, namely a stone basin (**Fig. 8**). It has the diameter of 98 cm and the height of 52 cm; its inner surface is coated with hydraulic mortar, and a drain hole is visible in its lower part.¹¹

The interpretation of the inner structures in the basilica proposed above is based only on a few observations; its confirmation or rejection would require additional excavations and a detailed analysis of the architectural remains resting now under ground.

As a result of the inventory studies and surface survey carried out inside the church and on the spoil heaps, we have secured archaeological material giving a general idea on the decoration of the interior of the Western Basilica. The walls of the northern aisle and the southeastern chamber have preserved fragments of plaster¹² (**Fig. 1:A**). Small fragments of plaster discovered on the spoil heap are covered with white and red paint. The largest fragment, painted with a red band against a white background, suggests that the walls may have been painted in a geometric design associated with the architectonic structure of the building. At this point, we also need to mention the remains of polychrome decoration that have survived on a fragment of a stone partition, originally constituting most probably part of some structure inside the nave (**Fig. 9**). During the surface survey, we managed to identify a few dozen tesserae, which suggest that the floor of the basilica, at least in part, may have been laid with a mosaic. Around sixty tesserae are in white and only two in dark-grey. Next to the tesserae, we have also discovered more than twenty small fragments of worked marble,¹³ possible elements of *opus sectile*. In the eastern area of the northern aisle several stone slabs were found, most probably the remains of the original floor (**Figs. 1:F, 10**). In the light of the material finds at

⁹ S. STUCCHI, *Architettura Cirenaica...*, 366.

¹⁰ S. STUCCHI, *Architettura Cirenaica...*, 366.

¹¹ According to S. RISTOW, *Frühchristliche Baptisterien*, Münster 1998, 50–51, monolithic shallow stone basins, measuring c. 1 m in diameter, may have been used in the baptismal ceremony in the 5th and the 6th c. However, the author of this paper shares the opinion of E. Jastrzębowska, who kindly agreed to read this text, that the basin from the Western Basilica was most probably used in ablutions.

¹² The surviving fragments of plaster were in the northeastern corner of the northern aisle, on a pillar between the northern aisle and the nave and in the eastern wall of the southeastern chamber.

¹³ Among small stone fragments (2–10 cm) one can distinguish – with caution – most of all *Marmor proconnesium* and *Marmor caristium* but also single fragments of *Marmor luculleum*, *Marmor claudianum*, *Marmor chium*, *Breccia coralina*.

hand, it seems that there may have been three types of floors in the Western Basilica, namely stone slabs in the aisles, and a combination of a mosaic and *opus sectile* in the nave, possibly filling the spaces separated by the inner structures.¹⁴

During the inventory work, we identified two stone blocks (Figs. 11, 12) allowing the reconstruction of a window in the wall of the aisle (Fig. 13). This window has a form of a narrow slit, splaying and dropping inwards. Its width on the outside and inside the basilica is 11 and 54 cm, respectively. In this, the window was similar to the one in the north-eastern chamber. One of the fragments is finished with a cornice, which allows us to place the window directly under the vault of the aisle. The use of this form of window in the lower parts of the building, in conjunction with thick walls and two pairs of narrow doors, could be an additional argument to support the claim that the Western

Basilica had evident features of a defensive building. Located above the aisles, over eight metres above the ground level, the roof was perfectly suited for defensive purposes. Also, there are no proofs whatsoever that the immediate surroundings of the church were occupied by any buildings which could be an obstacle for the defenders. It is also worth mentioning that in other late antique buildings in Ptolemais it is hard to find any special additional features of a defensive structure which did not occur in the Western Basilica. The question of the defensiveness of this church should be discussed in a much wider context of late antique Ptolemaic defensive structures, a context that has hardly been recognized so far.

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NIEINWAZYJNE BADANIA BAZYLIKI ZACHODNIEJ W PTOLEMAIS

W maju 2010 roku przeprowadzono nieinwazyjne badania Bazyliki Zachodniej w Ptolemais. Uzyskane w wyniku badań dane uzupełniły i zweryfikowały zawarte w dotychczasowych publikacjach informacje i dały podstawy do próby rekonstrukcji, zarówno bryły architektonicznej, jak i przedstawienia ogólnej koncepcji wystroju wnętrza.

Budowla była trójnawową bazyliką, do wnętrza której prowadziły dwa niewielkie wejścia. Nawy boczne przykryte były – opartymi na masywnych filarach – sklepieniami, a nawa główna – dwuspadowym, pokrytym dachówkami, dachem. Materiał archeologiczny wskazuje na to,

że wewnętrzne ściany bazyliki pokrywał malowany tynk, a podłoga była najprawdopodobniej kombinacją mozaik, *opus sectile* i kamiennych płyt. Wnętrze nawy głównej podzielone było konstrukcjami, których pozostałości znajdują się na przyległym do bazyliki składowisku kamiennych elementów. Wąskie okna, grube mury zewnętrzne, tylko dwa wejścia i znajdujący się nad nawami bocznymi tarasy wyraźnie wskazują na to, że Bazylika Zachodnia miała charakter budowli obronnej. Obecny stan badań nie pozwala niestety na rekonstrukcję otoczenia architektonicznego bazyliki.

¹⁴ C.H. KRAELING, *Ptolemais...*, 99, suggests that no tesserae were discovered in the basilica proving that its floor was of stone slabs.

PLATE 52

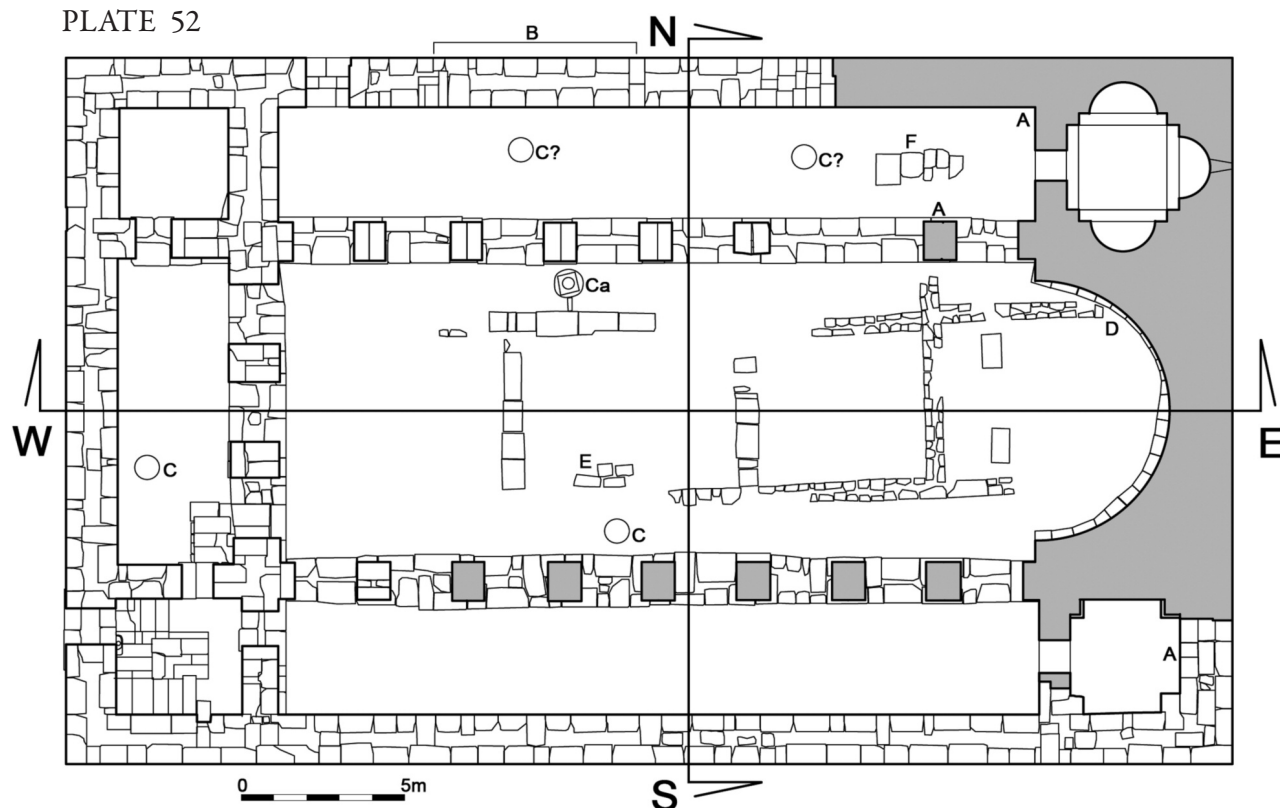


Fig. 1. Western Basilica. Plan. A – places retaining fragments of plaster; B – structural arch; C – cisterns; D – point of junction of the inner structures with the foundations of the apse; E – fragment of inner structures built of elements salvaged from the cistern; F – remains of the stone slabs from the aisle (J. Kaniszewski).

Ryc. 1. Plan Bazyliki Zachodniej. A – miejsca z zachowanymi fragmentami tynku; B – łuk konstrukcyjny; C – cyster-ny; D – miejsce styku konstrukcji wewnętrznych z fundamentem apsydy; E – fragment konstrukcji wewnętrznych zbudowany z elementów cysterny; F – pozostałości po płytowaniu nawy bocznej.



Fig. 2. Relics of the structural arch in the northern wall of the basilica (J. Kaniszewski).

Ryc. 2. Pozostałości łuku konstrukcyjnego w ścianie północnej bazyliki.

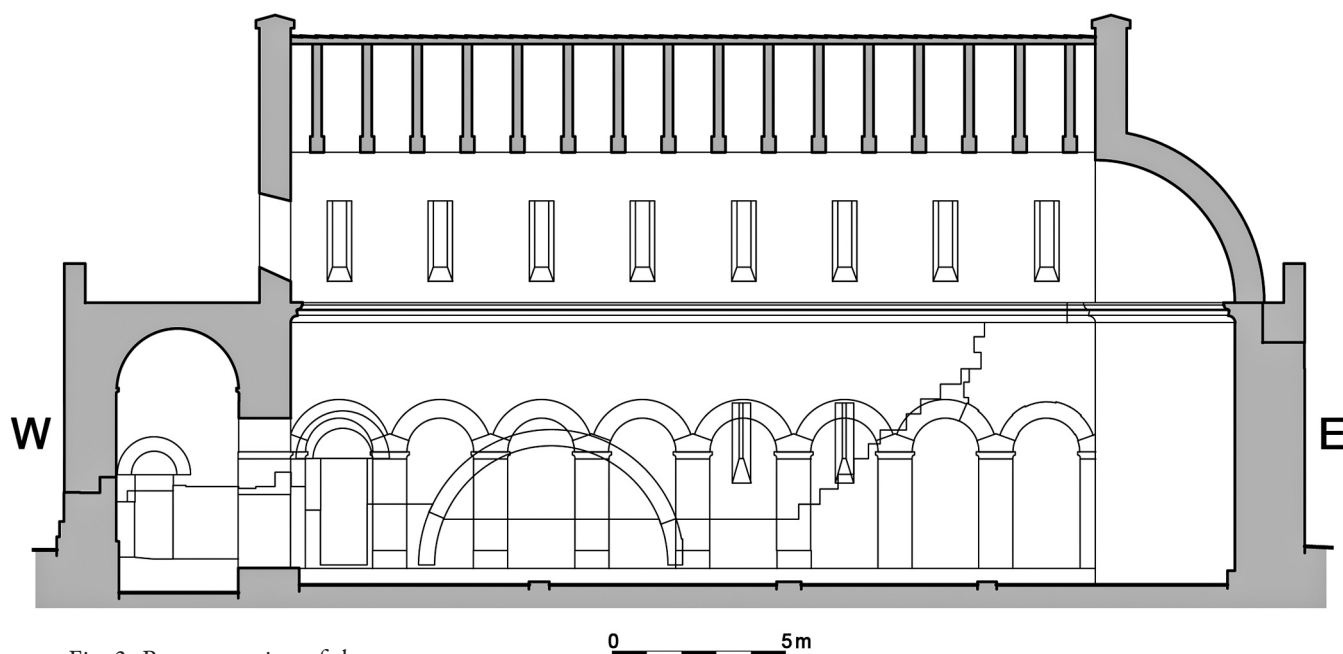


Fig. 3. Reconstruction of the Western Basilica. W-E section (J. Kaniszewski).

Ryc. 3. Rekonstrukcja Bazyliki Zachodniej. Przekrój W-E.

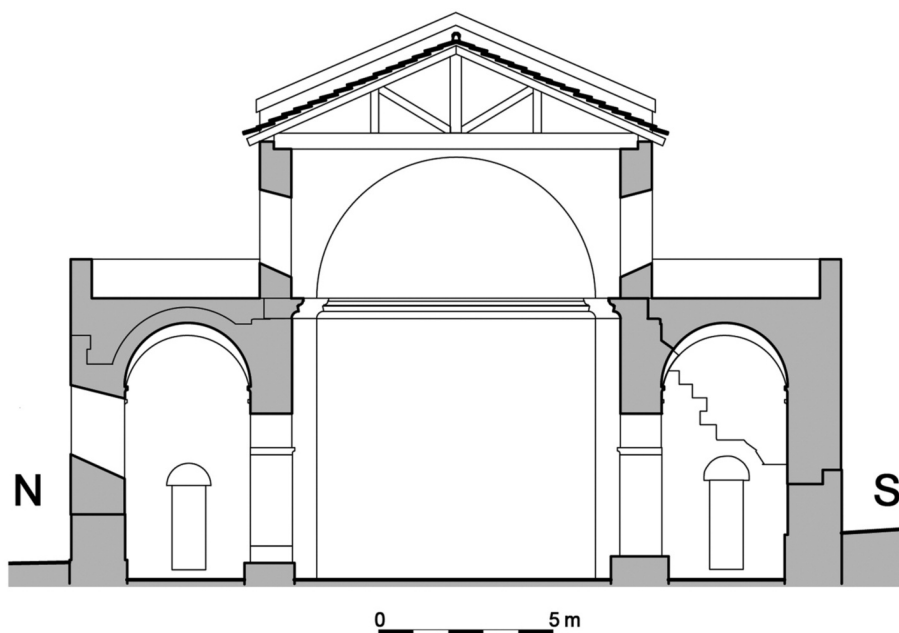


Fig. 4. Reconstruction of the Western Basilica. N-S section (J. Kaniszewski).

Ryc. 4. Rekonstrukcja Bazyliki Zachodniej. Przekrój N-S.

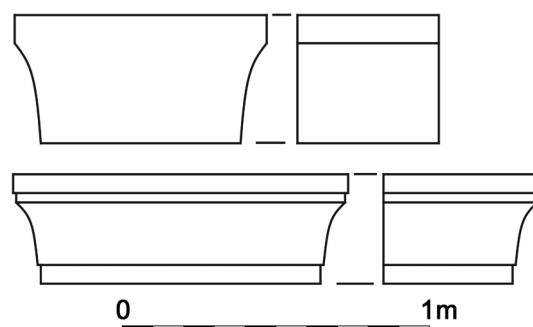


Fig. 5. Two profiled slabs originating most probably from the upper part of the Basilica (J. Kaniszewski).

Ryc. 5. Dwie profilowane płyty pochodzące najprawdopodobniej z górnych partii Bazyliki.

PLATE 54

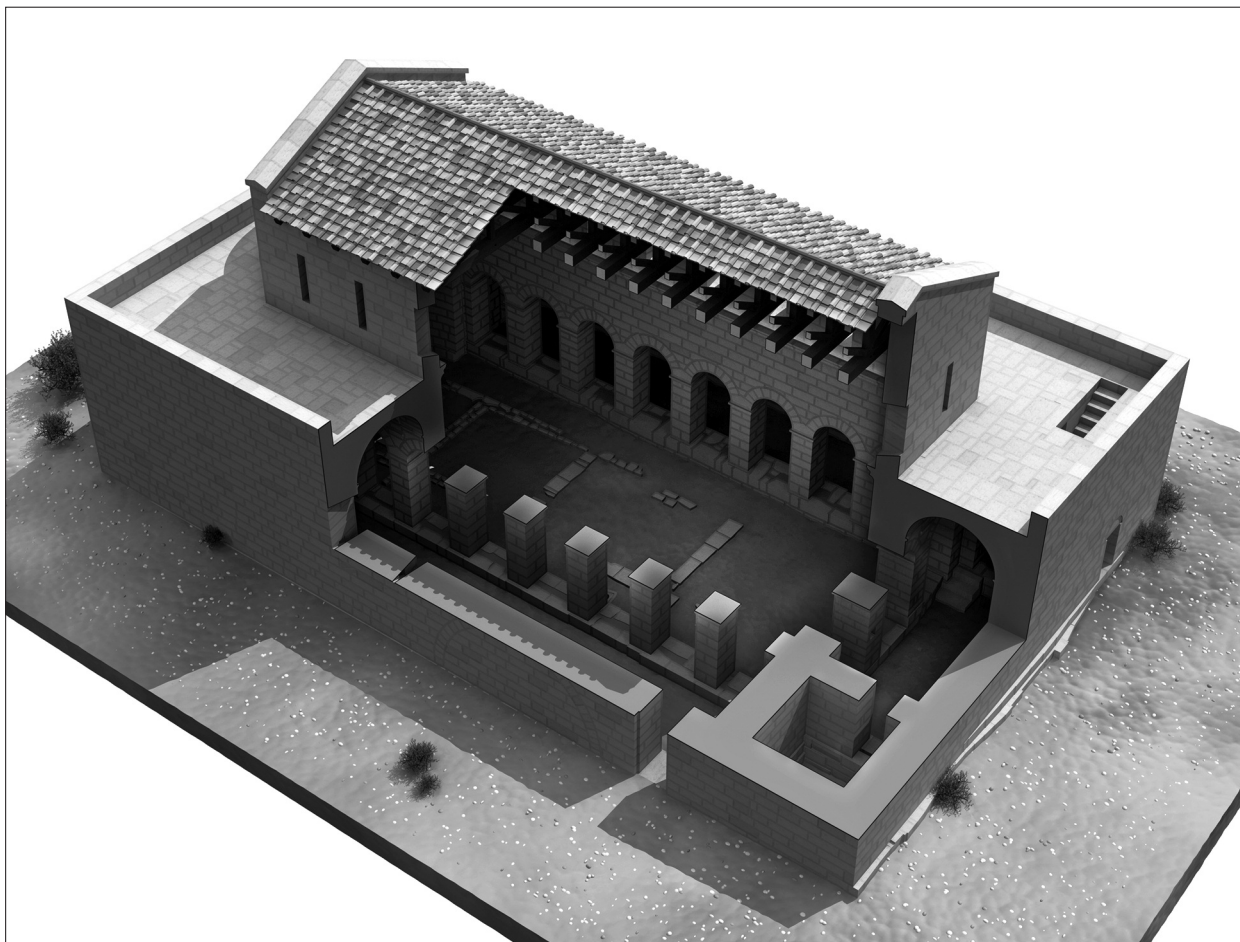


Fig. 6. 3D reconstruction of the Western Basilica (J. Kaniszewski).

Ryc. 6. Trójwymiarowa rekonstrukcja Bazyliki Zachodniej.



Fig. 7. Scatter of small architectural details (J. Kaniszewski).

Ryc. 7. Składowisko drobnego detalu architektonicznego.



Fig. 8. Stone basin (J. Kaniszewski).

Ryc. 8. Kamienna misa.



Fig. 9. Fragment of a profiled slab with remains of polychrome decoration (J. Kaniszewski).

Ryc. 9. Fragment profilowanej płyty, na której zachowały się pozostałości polichromii.

PLATE 56



Fig. 10. Remains of stone pavement in the northern aisle (J. Kaniszewski).

Ryc. 10. Pozostałości płytowania kamiennego w nawie północnej.



Fig. 11. Lintel of the window in the aisle (J. Kaniszewski).

Ryc. 11. Nadproże okna nawy bocznej.



Fig. 12. Lower fragment of a window in the aisle (J. Kaniszewski).

Ryc. 12. Dolny fragment okna nawy bocznej.

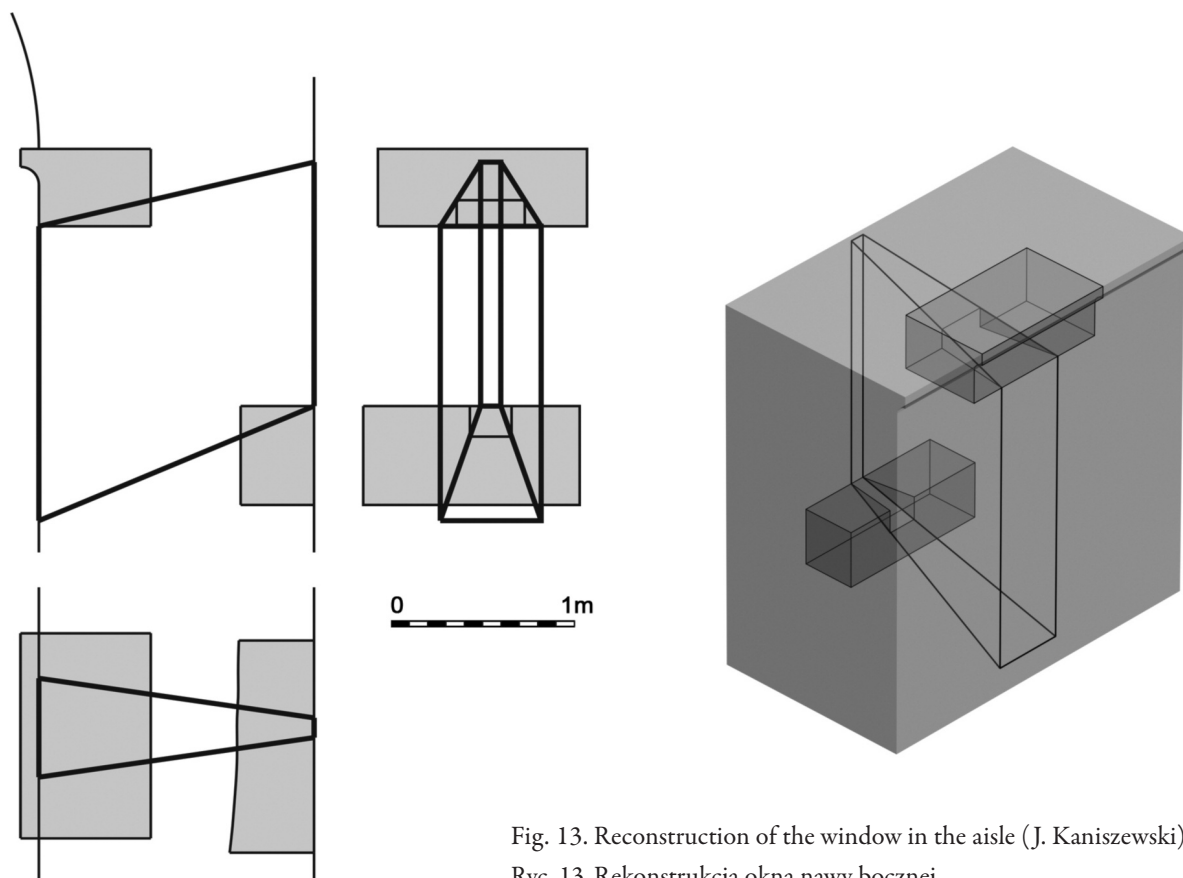


Fig. 13. Reconstruction of the window in the aisle (J. Kaniszewski).

Ryc. 13. Rekonstrukcja okna nawy bocznej.