

Historical Archaeology of Medieval Pilgrimage: Dating the “Walls of the Crosses” in the Holy Sepulchre Chapel of St. Helena

Amit Re'em, Moshe Caine, Doron Altaraz and Yana Tchekhanovets

Introduction

The visitor descending into the Chapel of St. Helena in the Church of the Holy Sepulchre is struck by an extraordinary phenomenon (the corridor): numerous rows of crosses neatly engraved into the walls of the stairway leading to the underground chapel (Figs. 1, 2).¹

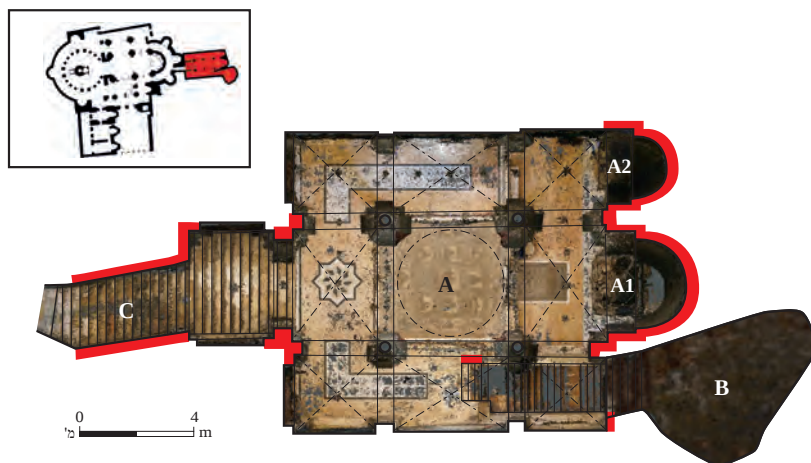


Fig. 1. Photogrammetric bird's-eye view of St. Helena Chapel.
The red lines mark the concentrations of engraved crosses on the walls
(Plan: R. Albag; Orthophoto: M. Caine and D. Altaraz)

1 The authors wish to thank L. MacDonald, I. Berkovich, C. Märkl, K. Borchardt, Y. Yakuteli, and R. Kool of the Israel Antiquities Authority for their expert advice. Our special gratitude is to

There is uncertainty as to the date of the crosses: one opinion - shared by scholarly and popular authors alike - is that these crosses are graffiti made by Crusader pilgrims (Friedman 1999:101–102, caption to Fig. 2; Krüger 2000:93–94, caption to Fig. 91; Tyerman 2019:5,104, Fig. 32). Other cautious scholars date the crosses more generally to the Middle Ages or just refer to them as “pilgrims’ crosses” (Boehm and Holcomb 2016:239, caption to Fig. 92; Grigoryan 2017:134–135, Fig. 5.9; Tucci 2019:246, Fig. 29).



Fig. 2. A cluster of crosses and inscriptions No. 32 and 33 on the southern wall of the corridor (Photo: A. Re'em).

William Purkis, in his important essay (2020) dealing with the movement of sacred matter and relics from East to West during the Crusader Period, proposes several interpretations for these crosses. Firstly, they can be understood as marks left by devotees to symbolize their pilgrimage. Second, they can be seen as triumphal signs of Western European pilgrims to assert Latin domination and control over holy places. The crosses followed and mirrored the mood of triumphalism after the

M.E. Stone of the Hebrew University and to H. Harutyunyan of the Madenadaran Institute, Yerevan, for their decipherment of the Armenian inscriptions and kind consultation. We also wish to thank S. Halevi, A. Vigman, O. Zakaim, A. Karasik, from the Israel Antiquities Authority, and R. Albag, who assisted in the documentation and survey. And finally, our deepest appreciation goes to the local Armenian representatives in the church and to His Beatitude Archbishop N. Manougian, the Armenian Patriarch of Jerusalem.

Crusader conquest of Jerusalem in 1099. A third possibility, according to Purkis, is that the crosses are part of the relic industry during the Crusader period. We will discuss this possibility at length below.

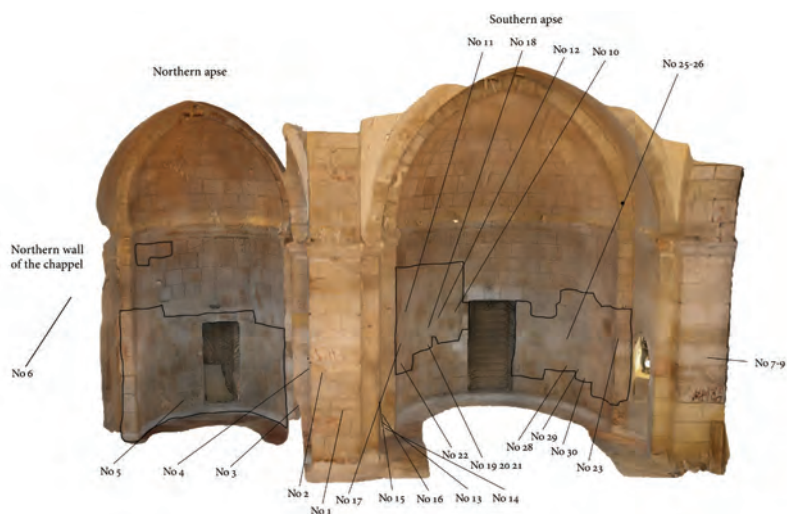


Fig. 3. Photogrammetric view of the two apses with marking of the Armenian inscriptions. The thin black lines mark the border of the engraved crosses clusters (Photo: A. Vigman).



Fig. 4. The southern apse, with engraved crosses (Photo: M. Caine and D. Altaraz).

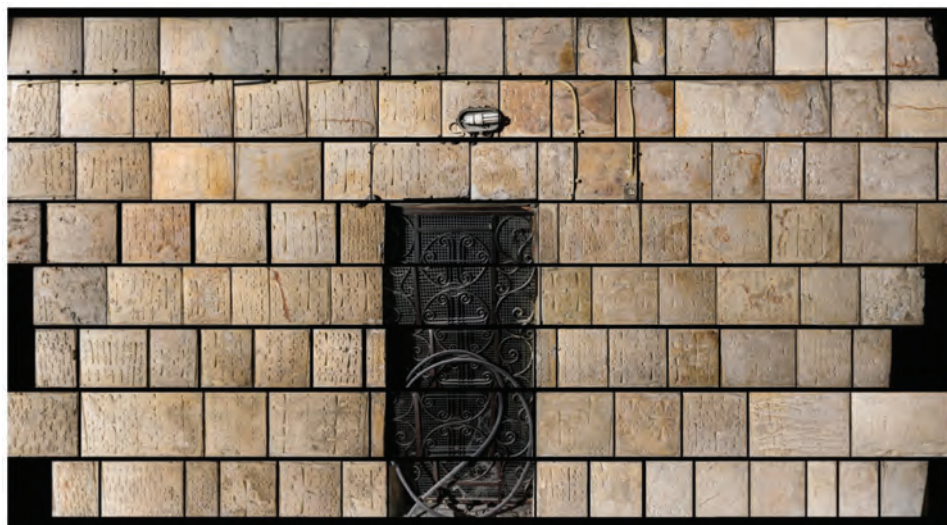


Fig. 5. Flattening of the northern apse, observe the engraved crosses
(Photo: M. Caine and D. Altaraz).

Recent renovation work undertaken in the Chapel of St. Helena by the Armenian community has allowed us to access the area behind the altar. There, on the walls of the two original apses from the Crusader period, additional clusters of several hundreds of engraved crosses were discovered (Figs. 3–5).

Compared to the more orderly patterns in the corridor, the crosses in the apses are more diverse, coming in different patterns, shapes and sizes. Another exciting discovery on the walls of the apses were Armenian and Latin inscriptions, heraldic coats of arms and other visual symbols (Fig. 3).

Although there is extensive scholarly literature on the theme of Christian pilgrimage to Jerusalem in antiquity and the Middle Ages, studies from historical, sociological and literary perspectives predominate, with relatively little attention paid to the material evidence of pilgrimage.² With the exception of the above-mentioned article by Purkis, the engraved crosses have never been thoroughly examined or historically contextualized. Whatever conventional opinions have to say, the actual origin, date and function of these crosses remain unknown.

2 There is an enormous amount of literature on the subject, See, for example, Friedman 1986:55–64; Wilkinson 1988; 2002; Chareyron 2005; Limor 2006; Pringle 2012; Daim et al. 2020.

The present article seeks to test the accepted paradigm of ascribing the engraved crosses to Crusader pilgrim graffiti. To do so we set two research objectives:

- A. To establish the chronology, typology and stratigraphy for the incisions.
- B. To investigate whether the graffiti were made randomly by different pilgrims or if the engraving of the crosses was an established ritual action authorized by the church.

In order to answer these questions, we utilized both traditional archaeological research and a variety of sophisticated imaging technologies. These included 2D panoramic high-resolution gigapixel photography, 3D photogrammetry, photometric stereo photography (‘shape from shading’) and Reflectance Transformation Imaging (RTI). In addition, we implemented advanced computer techniques taken from the realm of forensic science. Using the momentum of the recent renovation, these technologies were employed in an intensive attempt to gather and document as much empirical data as possible during the very short time window available, so this research material could then be analyzed post-factum in leisure.³

A Short History of the Chapels

The complex encompassing the Chapel of St. Helena (also known as the Armenian Church of St. Gregory the Illuminator; Fig. 1:A) and the Chapel of the Invention of the Cross (Fig. 1:B) is one of the most intriguing parts of the Holy Sepulchre Church. This dark underground structure and a mystifying grotto on the eastern side of the church complex is reached by a flight of steps (Fig. 1:C) from the main ambulatory. The most important tradition associated with these chapels was already established in the Byzantine period: the rediscovery of the True Cross or the ‘Wood of the Lord’ (*lignum Domini*), the torture tools, the crown of thorns and the tablet of Pilate. All were revealed to Constantine’s mother Flavia Julia Helena in the first quarter of the 4th century CE after the site had fallen into oblivion.⁴ Later traditions ascribed the tombs of Mary, mother of James, and Mary Salome to the chapels. In late Medieval

3 Despite the limitations of working in a holy place, the short and intense work period provided satisfying results. Over three thousand RAW location shots were post-processed and yielded nearly 50 gigabytes of data. These included 50 high-resolution RTI files, approximately 15 3D photogrammetric models, several 2D panoramic grids and hundreds of high-resolution individual stone images. On the optical documentation techniques, see Mudge et al. 2010; Earl et al. 2011; MacDonald 2011:155–162; Caine and Magen 2017.

4 On the Byzantine tradition of finding the Cross see, for example, the *Historia Ecclesiastica* of Rufinus (401 CE), Theodoret (420 CE; 1864) and Sozomen (439–450 CE). For these sources and others, see Kelly 2019:284–302.

times, some accounts recall a throne upon which St. Helena sat when she searched for the cross within the chapel. A window in the chapel wall is said to lead to Purgatory and through it one can hear the shrieks of souls. There is a medieval belief that the four stone pillars that hold the Chapel of St. Helena stood originally in Pilate's house and now they sweat water night and day on account of Christ's passion.⁵

The underground complex is composed of two levels. The upper level owned by the Armenians is divided by four pillars into a nave and two aisles with two apses in its eastern part. The main apse is dedicated to St. Helena (A1) and the northern is in honor of St. Decimus (A2), the Good Thief. In addition, there are two altars. One is dedicated to St. Gregory and the other to St. John the Baptist. Armenian tradition claims that St. John's relics were buried under this altar by St. Gregory the Illuminator during his visit to Jerusalem in the early 4th century CE (Stone and Harutyunyan 2020a:239). At the eastern end of the southern aisle, instead of a third apse, a stairway leads down to the lower level: a grotto, which is in the possession of the Latins.

The building of the Church of St. Gregory the Illuminator and the association with the legend of the True Cross began in the 11th century CE and the Crusader period (Corbo 1981–1982: Figs. 6, 57; Pringle 2007:44–45).

However, new data has shown that ceremonies were performed at the site already in the Byzantine period (6th century CE) in veneration of the True Cross (Garbarino 2019:108–110). In the first half of the 12th century CE, the Chapel of St. Helena was modified into a three-aisled domed structure by the Crusader builders, who rediscovered the subterranean crypt. Prominent elements of the Crusader church are two built apses abutting impressive Constantinian walls and a stepped corridor leading from the ambulatory down to the underground chapel. In addition, the chapel was roofed with groin vaults and a central dome supported by four monolithic columns creating a three-aisled church. Above the roof, the Augustinian cloister and monastery were built, probably around 1114 CE (Pringle 2007:44–46; Folda 1995:57–60; Krüger 2000:90–96).

The two chapels were entirely excavated. Already in 1929, the pavement of St. Helena's Chapel was removed during restoration works (Harvey and Ernest 1935:8,

5 See, for example, the *Expliciunt peregrinationes totius terre sancta* ("Explanation of many wandering in the Holy Land") dated to 1350 CE (Bernard 1894:5–10), the *Descriptio terrae sanctae* ("Description of the Holy Land") dated to 1350 CE (Suchem 1895: 106) and the *Evagatorium in Terrae Sanctae, Arabiae et Egypti peregrinationem* ("Journey in the Holy Land, Arabia and Egypt, Pilgrimage"), written by the Dominican Frater Felix Fabri around 1484 CE (Fabri 1896–1897:356–363).

Fig. 44). In 1964, all the floor tiles of the chapel were removed following renovations done by the Armenian Orthodox Patriarchate, and exposed rock-cuttings in the bedrock (Corbo 1981–1982:208–209; Gibson and Taylor 1994:8, Figs. 4–5). In 1965, Fr. Virgilio C. Corbo, on behalf of the Latin Community, excavated the Chapel of the Invention of the Cross, revealing upon the bedrock a quarry that had been turned into a water cistern, probably dating to the Roman Period, and additional remains from the 11th century (Corbo 1981–1982:21,168–174, Pls. 3: 309–312, Photos 106–117; Gibson and Taylor 1994:23–24). Between the years 1970–1981, the area behind the apses known as the Chapel of St. Vartan was excavated extensively (Broshi and Barkay 1985; Gibson and Taylor 1994:7–48). The excavation shows that this area was originally a stone quarry used in the Iron Age and the early Roman period. Walls from the late Roman period found in the Chapel of St. Vartan probably belong to the Hadrianic complex in this area. Other walls belong to the Constantinian Basilica from the 4th century CE to the 11th century CE restorations.



Fig. 6. A photo taken from the British archive collection in the Rockefeller Museum. The former altar in the southern apse covered with engraved crosses.

In May of 2019, the Chapel of St. Helena was renovated again, and the flagstones were replaced. Immediately under the floor, the bedrock was exposed. At the same time, the altars inside the apses were dismantled and removed, and new altars were built. Archival pictures of the former altars taken during the renovation works of 1929 and now in the British archive of the Rockefeller Museum show hundreds of engraved crosses on the sidewalls of the built altars (Fig. 6). These crosses are similar to the engraved crosses on the apses walls. The date of the previous altars is uncertain but ascribing them to the Crusader period is reasonable.⁶

Location and Typology of the Crosses

The crosses and other graphic depictions are mainly concentrated along the side walls of the main staircase leading to the chapel, usually about 80 cm above the level of the stairs (Fig. 1). In addition, there is a group of crosses on the engaged western pillars at the end of the staircase. The most dominant clusters, however, are on the southern and northern apses of St. Helena's Chapel (Figs. 3–5). The carved crosses begin 50 cm above the apse floor, spreading on the walls to a height of 1.9 m, which is well above the average height of a human being.

When attempting to define a typology for the hundreds of these crosses, we were faced with a methodological question: what are the criteria for the typological definitions? Do we need to consider the overall shape of the crosses, or rather the scale, rotation, and inclination of the crosses? In the initial typology proposed here, we have chosen to refer only to the general form of the crosses. Yet again, we faced a dilemma of how to relate to the form of the crosses. Is it according to the two-dimensional shape of the crosses, or alternatively, is it according to the three-dimensional shape including depth? We decided to consider only the two-dimensionality option at this stage of the research. Using this typology, we have identified four main types A–D (Fig. 7) with numerous sub-variants (1–11) based on the thickness of the arms of the crosses; the incline of the cross sidewalls; and other decorations added to the main shape, such as split ends resembling the shape of the so-called “budded cross” (variants A6, B6).⁷

6 For a recent rediscovery of the high altar of the Crusader church, see Berkovich and Re'em 2022.

7 In the next stage of the study, we will translate the groups and the variants into mathematical values. Then, with the help of computer software, we will map the distribution of the crosses according to their types. Finally, we will also be able to learn about their exact number according to the typology that we have defined.

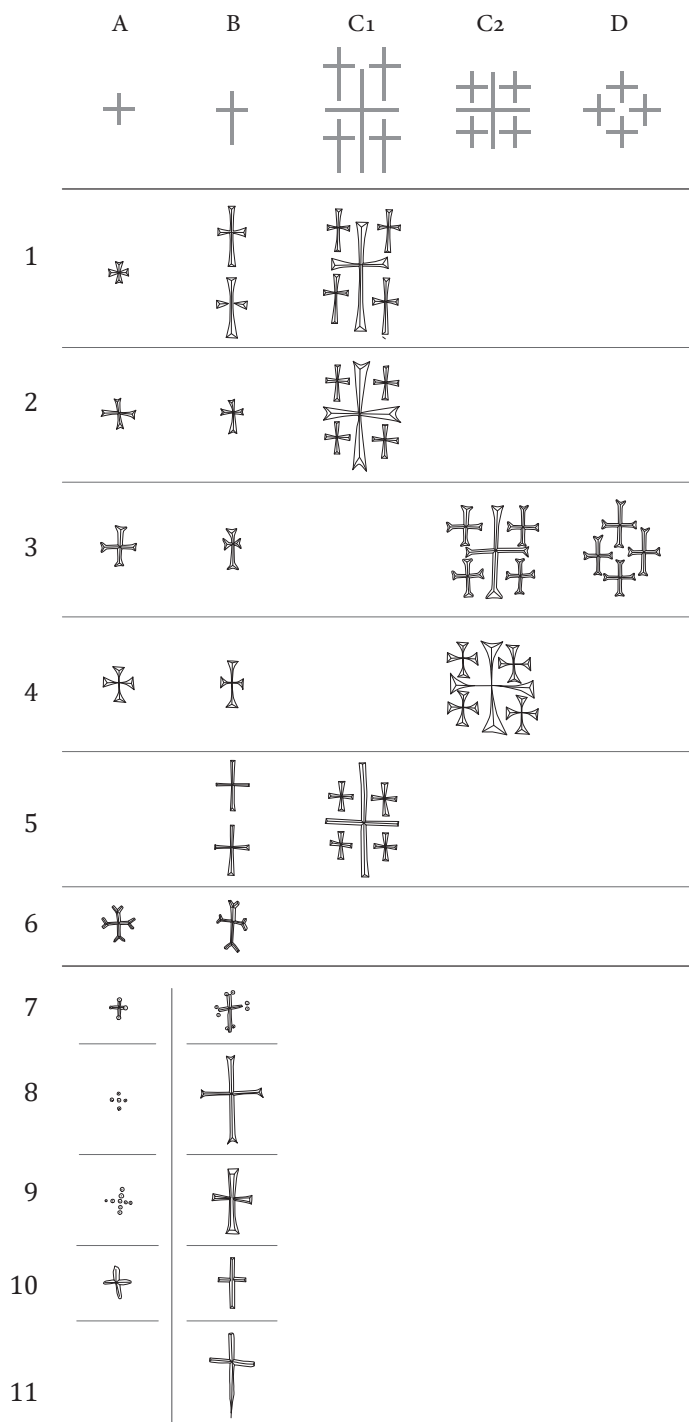


Fig. 7. The typology of the crosses (Drawing: O. Zakaim).

The first group (A) includes the so-called “Greek cross” with four equal arms, in which we identified nine variants. The second category (B) is the “Latin cross” with a more extended vertical base than the other three arms, in which we identified 13 variants. The third group (C), known as the “Jerusalem cross,” is a combination of cross potent (a cross with crossbars at the four ends), cantoned with four crosslets, usually Greek (C1) or Latin (C2) crosses, alluding to the five wounds of Christ (stigmata) and it includes five variants. The fourth group (D) is a cluster of four separate Greek crosses arranged in the form of a cross.

Although many crosses maintain their forms according to the typology, the sizes of crosses vary. For example, the height and width of type B are not standard and range from 5–10 cm in height and 3–6 cm in width.

Graffiti or not?

A graffito is the physical evidence of the graffitist’s presence in an attempt to deliver a message at a certain time, place and circumstances.⁸ Today we tend to think of graffiti as a destructive and illegal activity. We connect them with vandalism done by marginal sociocultural groups and confine the practice to dark and neglected public spaces in urban environments. Graffiti in antiquity and medieval times were common and acceptable and could be found on every public building and space, including temples, churches and tombs. In Christianity, graffiti in churches and holy places were a means of expressing devotion and were accompanied by spiritual content (Yasin 2015:36–60). Naturally, the symbol of the cross is the most dominant form of graffiti in Christianity. Moreover, graffiti were not the sole domain of the illiterate from lower social classes. On the contrary, graffiti were the fingerprint of various people from different social classes who visited these sites and represent a cross-section of ancient society from the elite to the commoners (Keegan 2014:4–8).⁹

“Our study of the crosses” must be viewed in relation to general characteristics of graffiti and compared with other graffiti, mainly those found in the Holy Sepulchre

8 On general aspects of graffiti and on graffiti in antiquity, see, for example, Ragazzoli et al. 2018; Reisner 1971; Keegan 2014. On graffiti in medieval times, see Pritchard 1967; Champion 2015.

9 For example, in Jerusalem, we are familiar with two inscriptions of Venetian noble pilgrims on the south portal of the Holy Sepulcher Church. Lugio Piero Vendramini painted his name and the date of his visit in 1384 in red on the left column of the western entrance. Another name is directly on the opposite column of the western door: Dandolo, who was the Doge of Venice. Lately, a cluster of German knights’ symbols and inscriptions was found on the walls of the former Franciscan abbey on Mount Zion (Berkovich and Re’em 2022).

Church. The most prominent and comparable cluster of graffiti in the Church of the Holy Sepulchre is located in the church’s portal (Fig. 8), the entrance façade to the structure (Brock, Goldfus and Kofsky 2006–2007:415–438; Pataridze and Tchekhanovets 2016:395–422; Stone and Harutyunyan 2020b:219–245).



Fig. 8. Column from the entrance portal of the Holy Sepulcher.
Observe the graffiti of the crosses (Photo: A. Re'em).

We reached the following observations and deduce from them that St. Helena’s crosses do not have the characteristics of random graffiti by individual pilgrims. Instead, they should be viewed as something more organized and institutionalized:

Quality - As seen in the portal of the Holy Sepulchre, graffiti can be textual or pictorial in form and made by cutting, scratching, painting, inking, or tracing charcoal onto stone or any other hard surface. Graffiti is done hastily and carelessly, usually with a sharp tool, most of the time without planning or considering the quality of the results. William Purkis has already observed that the crosses in St. Helena’s Chapel are neater and more consistently arranged than is expected for graffiti, representing a more organized process. He suggested that during the first episode of the Crusades in Jerusalem (1099–1187), the church’s Latin custodians employed skilled masons to carve the crosses as part of souvenir production in response to the demands of the devotees (Purkis 2020:198).

Variability - Since the graffiti could be made by countless hands spanning over a long period of time, we should expect considerable variability in techniques, types, language, and content used. Similarly, we can find Greek, Latin, Arabic, Armenian, Georgian, Syriac and Slavonic inscriptions on the doors of the Holy Sepulchre Church including personal names, prayers, memorial inscriptions, dates, and symbols. Some are painted, others carelessly scratched, while others are well-engraved. Nevertheless, the content and the technique, in our case, resulted in uniformly drawn and deeply cut crosses. As mentioned, our effort to establish a typology fitting for the hundreds of crosses led us to define only four groups. The homogeneous nature of the types may be interpreted in two ways: all the crosses were done simultaneously or within a limited timeframe or they were executed over a considerable timeframe according to specific criteria or by distinct stone masons. Support for our claims can be seen via a detailed examination of a series of 61 crosses by L. MacDonald, displaying unity and systematic technique (Caine et al. 2018:137–139). Analysis of the cross profiles shows that the incision's depth (peak to trough) remains constant between 2.8–4.8 mm. The width of the trough (distance between the left and right walls at half depth) ranges from 6–11 mm. The angles of the side walls (determined by fitting a tangent line through the wall profile at half depth) are mainly in the range of 15–30 degrees (Caine et al. 2018:137–139). The overall shape has a pleasing visual effect. These crosses are evidence of planned work, probably done by several qualified masons and according to well-known and established formulas.

Location - Most of the graffiti found in churches are scattered in accessible areas such as porches, doors, windows and the columns of the nave and aisles. Some graffiti can be seen in inaccessible areas such as roofs, ceilings, and high places. Most of the graffiti in the Holy Sepulchre are located on the front façade, at the entrance of the church. Another excellent example is the numerous etchings on the columns of the main nave and aisles of the Church of the Nativity in Bethlehem (Juhász 2021:141–170). These specific locations probably stem from their role in the religious and secular life of the society in the Middle Ages. For example, the doors and porches were often used for religious ceremonies such as marriage and burial. Near these features, people signed contracts and legal documents and took vows, and perhaps the crosses symbolized these actions and deeds. According to medieval belief, a cross at church entrances prevented malevolent spirits from entering the church (Champion 2015:66–69). The crosses of St. Helena's Chapel, in our opinion, are different as they are an integral part of the sacred fabric of the building, away from the common access and in the most important point of the chapel, the apses. Within

the apses, the crosses were carved at the focal point of the liturgical worship: the altars themselves. Some of the crosses were carved on the higher parts of the apse's walls, which could have only been achieved using a ladder and thus performed by someone with unconstrained access to the chapel.

Clustering - Many places in churches were accessible and available to graffiti artists and naturally, most of the graffiti are concentrated in these places. Competition for space may explain the lack of order in some of these spaces. Each person seized the opportunity and randomly left his mark. The numerous, uncontrolled graffiti inscriptions on the front pillars at the entrance to the Church of the Holy Sepulchre demonstrate this very well (Fig. 8). The crosses in St. Helena's Chapel show order, control, and even spatial planning.

Dating the Crosses

Dating the crosses or any of the pictorial and non-textual inscriptions is difficult since no chrono-typological work has been done on the shapes of crosses. In our attempt to date the crosses, we will show that the common view, which attributes the crosses to the time of the Crusaders, is not archeologically and historically sound. We will then offer a chronological scheme for ascribing the crosses to a period at least three centuries after the Crusaders left Jerusalem by deciphering inscriptions near the crosses bearing names, symbols, and dates of historical figures.

Are these crosses a Crusader creation? - Even the most detailed descriptions of the Church of the Holy Sepulchre from the times of the Crusaders, such as the one by John of Würzburg in the book *Descriptio Terrae Sanctae* (1160's CE) and Theoderic in his *Libellus de Loci Sanctis* (1172 CE), do not mention the practice of engraving crosses on the walls of St. Helena's Chapel. The crosses are not an invisible, marginal phenomenon, and it would be expected that, if the crosses had existed in the 12th–13th centuries CE, there would be some contemporary textual evidence. The absence of historical evidence from the 12th–13th centuries CE is an obstacle for dating the crosses to the Crusader period and to place the phenomenon of the crosses in a chronological context. Yet the silence of the historical sources cannot overrule the possibility that the crosses were made in that specific period. Turning to the Latin East's ecclesiastical archaeology does not assist us either. On the contrary, in our opinion, it strengthens the argument that the crosses are not Crusader graffiti and were made after the Crusaders left the church.

Usually, the walls of Crusader churches were covered with mural paintings and mosaics, especially in the apses. For example, the Invention of the Cross Grotto in the Church of the Holy Sepulchre, some meters away from St. Helena's Chapel, was

covered with paintings of the Crucifixion, still visible today, and iconographically dateable to the 12th century CE (Corbo 1981–1982: vol. I, 171–174, vol. III, Fotos 111–113). The column paintings of the saints and the mural mosaic in the nave of the Church of the Nativity in Bethlehem are exquisite examples of the decorations of this period (Kühnel and Kühnel 2019). Additional examples include the recent discovery of a large part of a fresco depicting scenes from the life of St. Nicholas that was revealed in the apse of the Saint Nicholas Church in the Old City of Jerusalem (Yeger and Re'em 2019) and a complete mural painting in the Crusader church at Abu Ghosh, dating to the third quarter of the 12th century CE, depicting scenes associated with the Last Judgment on the apses, walls, and piers of the church (Fishhof 2017:82–93).

We do not know the nature of the Crusader wall decoration in the St. Helena Chapel. However, pilgrim accounts from the second half of the 12th century CE describe decorations in the church in the form of paintings, mosaics and inscriptions in the Aedicule, the Calvary and the main church (*Chorus Dominorum*) (Folda 1995:230–231). A concentration of crosses, added directly into the stone surface of the walls, as in the case under discussion, would mean the utter destruction of the mural decoration. Therefore, it is safe to assume that such an important chapel, which was one of the first parts of the church to be built by the Crusaders, could not have been erected with bare walls and most likely its walls bore some decoration, painting or mosaic. Therefore, we can presume that the crosses must have been done after the chapel was stripped of its wall decoration. This alone suggests that the cross-etching activity in the chapel began only after the Crusaders left the city.

Although we have already claimed that the crosses are not mere graffiti, we would like to address this issue from a chronological aspect. Assessing the crosses in the context of Crusader graffiti shows a considerable differences. When we examined graffiti dating to the Crusader period, especially the inscribed crosses in churches throughout the Latin Kingdom in the east, we saw that the finds are scattered, and that the phenomenon is uncommon. Of course, we cannot rule out the loss of some specimens as a result of time, vandalism and the temporariness of graffiti. From what survived, we can learn that, in general, Crusader graffiti and engraved crosses tend to be unprofessional, carelessly executed and quickly done resulting in poor workmanship. Moreover, Crusader graffiti do not show the characteristics, qualities and intensity displayed by the crosses in St. Helena's Chapel. In the Church of St. Savior in Tyre, the plastered internal wall of the church is full of Crusader graffiti, including drawings of crosses, names, monograms and a representation of a galley added roughly and hastily done with a sharp tool, probably a nail (Pringle 2004:143–

151, Figs. 10–14). The exterior walls of the buildings flanking the southern street near the Hospitaller Compound in Acre retain plaster from the Crusader period engraved poorly with graffiti of ships, heraldic symbols and other drawings dating to the second half of the 13th century CE- (Kahanov and Stern 2008:21–35). In the Church of St. Porphyrius in Gaza, several pilgrims’ crosses and letters are crudely scratched on the jambs of the north door alongside a heraldic symbol (Pringle 1993:219). Alongside the coarse graffiti crosses, there also were more precise and well-engraved crosses in Crusader churches. However, as we will show below, they should be dated later than the Crusader period.

The Wildenstein Inscription

On the bottom left side of the southern apse, an escutcheon and a Latin inscription were found (inscription No. 11, Fig. 9).¹⁰ Utilizing RTI photography technology, which creates a photogenerated mapped surface and allows a virtually control of light and shade on an object, we were able to decipher the inscription:

M.V.WILDEN

M. V[ON] WILDEN

STEIN. RITER

STEIN KNIGHT



Fig. 9. Details of the Wildenstein's shield and inscription (RTI: S. Halevi; Drawing: O. Zakaim).

10 J. Krüger was one of the first to identify this heraldic symbol (2000:183).

Wildenstein was a family of imperial knights from Middle Franconia and at least three family members were named Martin von Wildenstein, matching the inscription. After serving Christopher of Bavaria during his reign as king of Denmark, Knight Martin von Wildenstein (fl. 1426–d. 1466) [M1] entered the Carthusian Monastery in Nuremberg. He was buried in the nunnery of Gnadenberg, to which he donated an altar and several glass windows. His epitaph still survives.¹¹ His son Martin von Wildenstein [M2] (d. 1483) served as Hofmeister (court-master) of Duke Ludwig of Bavaria-Landshut, held the office of Schultheiß (mayor) of Nuremberg, Neumarkt and was married four times. His grandson [M3] (04/10/1477–10/09/1543) was the only one of the three whose pilgrimage to Jerusalem is attested by primary sources. He was dubbed Knight of the Holy Sepulchre either October 3, 1503 (Biedermann 1748: Tab. CXIII) or 1508 and died in 1543 (Frank and Paulus 2016:228).

In 1460, another member of the family, Ludwig von Wildenstein made a pilgrimage to the Holy Land in the company of Duke Otto II of Pfalz-Mosbach. His Hofmeister Philipp von Gemmingen and Hans Bernhard von Eptingen left an account of their journey (Halm 1994:135).

It is also worth noting that the shape of the letters in the inscription is influenced by a new Italian script that arrived in Germany in the third quarter of the 15th century CE. This influence is to be seen in the semi-circle present in the upright bars of the letters but lacking in the letter ‘N’, while the letters ‘L’ and the rounded ‘E’ are still written in Gothic script. Thus, the inscription is written in an intermediate script incorporating elements from a script that predominated until c. 1450. Dating the inscription based on the font implies that it was written shortly after the script was first introduced. However, someone who learned this type of writing as a child would continue to stick to it later in life. Hence, M3 as the author of the inscription is the most likely of the scenarios.¹²

The escutcheon under the inscription is indeed that of the Wildenstein family as it appears on the tombstone of Martin von Wildenstein [M1] in the monastery of Gnadenberg¹³ and is recorded as the family’s coat of arms in heraldic compendia

11 For an open-access image of the epitaph see https://de.wikipedia.org/wiki/Kloster_Gnadenberg. It should be mentioned that major donations either before or after a return from an important pilgrimage were common, and it is more than possible that Martin followed a family member on his pilgrimage to the Holy Land.

12 We wish to thank C. Märkl and K. Borchardt for their remarks regarding the paleography of the inscription.

13 For an open-access image of Martin of Wildenstein’s grave plaque, see: [https://de.wikipedia.org/wiki/Wildenstein_\(Adelsgeschlecht,_Mittelfranken\)](https://de.wikipedia.org/wiki/Wildenstein_(Adelsgeschlecht,_Mittelfranken))

such as the Scheibler Armorial from the Bavarian State Library (Scheibler 1450–1600:397; Seyler 1884:62, Taf. 58; Fig. 10). The field of the escutcheon is divided in half by a left diagonal line (*per bend*). From historical depictions, we can learn that it was partitioned into red and yellow colors. On the upper corner of the original crest, there is a helmet that is missing in our graffiti. At the middle of the Wildenstein's crest in St. Helena's Chapel are five drilled perforations forming a cross, perhaps evidence of a cross or metal plate affixed to the wall and the crest, although the holes may have been added later. On the heraldic symbol's left and right sides are some indistinct scratching and carelessly made crosses that may have been made after the crest was incised.



Fig. 10. The crest of the Wildenstein family (Scheibler Armoria BSB Cod.icon. 312 c p. 397).

The shield and the inscription were engraved on the upper half of a building stone in the apse. The lower part of the stone, directly under the symbol, is dominated by orderly-placed crosses. Furthermore, the building blocks surrounding the inscription and the shield contain well-made crosses. These elaborated crosses were arranged carefully around the inscription and the coat of arms; thus, they could not have been

made before the middle of the 15th century CE. Consequently, M3's visit to Jerusalem at the beginning of the 16th century can be used as a reasonable *terminus post quem* for the crosses.

A Heraldic Symbol with a Date

On the lower eastern part of the southern wall of the staircase corridor leading down to the Chapel of St. Helena, a carved escutcheon can be seen (inscription No. 31, Fig. 11).¹⁴ Carefully engraved Type B8 crosses surround the coat of arms from all directions. The crest consists in its Chief (the upper part of the symbol) of three hearts above a wall that is built over three arcades. The shape of the shield - square at the top and forming a point at the bottom - is typical of the late 13th–15th centuries CE (Volborth 1973:14).

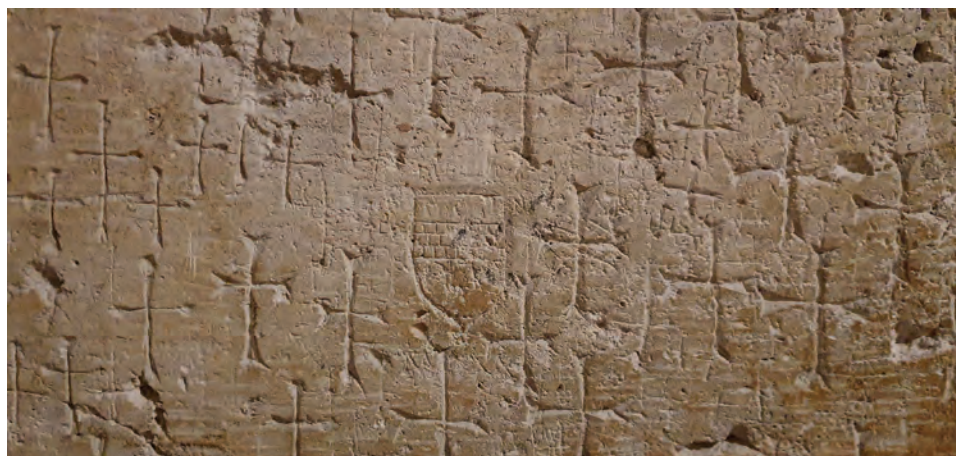


Fig. 11. A heraldic symbol surrounded by crosses at the end of the southern wall of the corridor (Photo: A. Re'em).

The use of RTI photography allowed us to determine that the symbol was framed by a thin rectangular line, dividing it into two registers above and below the shield (Fig. 12). The upper register probably contained the name of the crest owner. We managed to identify faint remains of a few scratched Latin letters, among them 'R' and 'N.' On the sides of the shield and within the frame, we detected two additional Latin letters,

¹⁴ See footnote 10.

‘L’ and ‘N,’ that probably belonged to another inscription circling the crest. The most critical element is in the lower register at the bottom of the shield, directly under the pointed end. A date written in Roman numerals is scratched into the stone. Initially, the date was four or even five letters; now, only three letters can be seen: M[...].XX. The second and third letters after the M are no longer visible as they were cut by the vertical arm of a cross. J. Krüger suggested that the missing letter should be D; thus, the date is MDXX meaning the year 1520 (2000:183a). We do not know if Krüger managed to see some distinct features of the letter D in the past, but today such are invisible. RTI photos were taken to enable careful examination Krüger’s suggestion, but the result is inconclusive.

Other possibilities for the missing number are I, V, X, L and C. Numbers I and V can be ruled out as they would indicate a subtractive notation (in our case it would be IX, V) and cannot stand before an integer of larger value (in our case X). Therefore, we are left with the following numbers and dates: X (MXXX=1030 CE), L (MLXX=1070 CE), C (MCXX=1120 CE) or, as suggested by Krüger, D (MDXX=1520 CE). The years 1030 CE and 1070 CE are not likely option as during the 11th century CE, Jerusalem was under Muslim rule (the Fatimid Caliphate), a few decades before the Crusaders conquered the city on July 15, 1099 CE. The year 1120 CE seems to be too early a date since St. Helena’s Chapel and the overlaying Augustinian canonry were under construction by the Crusaders and were probably completed in 1149 CE when the church was dedicated by erecting four altars (Pringle 2007:44–46). The use of the letter D giving the date 1520 CE is reasonable and consistent with the iconography and shape of the crest, however, we suggest that a letter L was to the right of the D, hence the date MDLXX, 1570 CE.

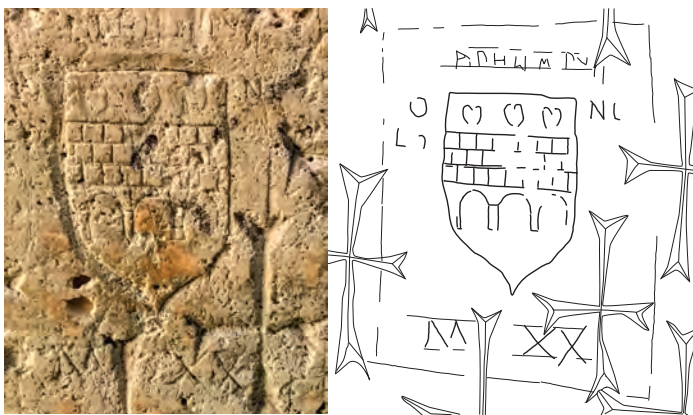


Fig. 12. Details of the shield and inscription No. 31 (RTI: S. Halevi; Drawing: O. Zakaim).

What is essential to our argument is that three crosses cut and penetrated the frame and damaged the inscriptions within. In this sense, the “smoking gun” is the cross that erased the Roman numerical date (Fig. 12) and therefore could not precede the year 1520 CE.



Fig. 13. Inscription No. 1, an Eastern Arabic numeral (RTI: M. Caine).

A date in Eastern Arabic numerals

At the bottom of the pier, between the two apses, another well-engraved inscription consisting of a date and a monogram were found (inscription No.1, Fig. 13).¹⁵ The monogram is above the date and consists of two Latin letters, probably 'L' and 'G.' On both sides of the monogram are small, curved triangles pointing to the right. The date, written in Eastern Arabic numerals, reads ١٤٥٦ (1456) and does not use the Islamic formula of the Hijra year but rather the Latin calendar. It was probably written by someone familiar with Arabic and Latin,

15 The inscription is in front of the pilaster, 3rd row down. 2 lines. Height from the floor 77 cm; length 22 cm (1 line) and 20 cm (2 line); letters' height 7–7.5 cm.

maybe an eastern Christian. Also, in this case, the crosses are spread around the inscriptions meaning that they are contemporary to or, more likely, post-1456.



Fig. 14. The Jerusalem crosses (Photo: M. Caine).

The Jerusalem cross - Type C (Fig. 14) and its variants are one of the dominant types found on the walls of the apses. As mentioned above, this type is known as the “Jerusalem Cross” or the “Crusaders’ Cross.” The Jerusalem Cross is often associated with the coat of arms of the Latin Kingdom of Jerusalem. It appears especially in archaic literature as the coat of arms of Godfrey of Bouillon, the first ruler of the Crusader Kingdom.¹⁶ Ironically, the Jerusalem Cross appears only at the twilight of the Frankish rule in the East (towards the end of the 13th century CE). In every aspect of Crusader archaeology of the 12th and the first half of the 13th centuries CE, there is no image of the Jerusalem Cross on coins, seals, heraldry, sculpture,

16 See for example the images of Godfrey in a French manuscript dated 1330 (https://en.wikipedia.org/wiki/Godfrey_of_Bouillon#/media/File:Godfroy.jpg) and the famous portrait of the king pictured in a fresco from the Baronial Hall of the Castello della Manta in northern Italy dated to 1420 (https://en.wikipedia.org/wiki/Jerusalem_cross#/media/File:Godefrey_of_Bouillon.jpg).

illuminated manuscripts, funerary art or any form of minor art. The only thing reminiscent of the Jerusalem Cross is a cross with four annulets in the four quarters used on coinage of the Crusades in the Latin East, such as on the coins of Henry of Champagne (1192–1197 CE) or early deniers (1194–1205 CE) from the Kingdom of Cyprus (Metcalf 1995: No. 200; Metcalf and Pitsillides 1998:202, Nos. 1–13). The dot cross can be interpreted as a primal or degenerate form of the Jerusalem Cross. The Jerusalem Cross first appears on later coinage minted at the end of the 13th century CE and the beginning of the 14th CE under the rulers of Latin Cyprus such as the coins of Henri II (1285–1324) and Hugh IV (1224–1359 CE) (Metcalf and Pitsillides 1996:142–194, 198–248). Thus, the symbol often associated with the Kingdom of Jerusalem made its first appearance after the Crusaders were expelled from the Holy Land in 1291 CE (Folda 2005:506). So, in terms of chronology, the appearance of this type of cross on the walls of St. Helena's Chapel cannot predate the end of the 13th century CE.

Two more Latin inscriptions (inscriptions Nos. 32, 33, Fig. 2) - Charles Clermont-Ganneau and R. A. Stuart Macalister already observed on the southern wall of the corridor leading to the chapel two Latin inscriptions (Clermont-Ganneau 1899:103; Macalister 1901:19–20, Fig. 2). One of them with 15th-century CE characters is the name of an Italian pilgrim, Justinus Veronensis (No. 32). The other inscription reads “Fra. Cristoforus di Luca” with a date of 1600 CE (No. 33). There is a cluster of crosses on the adjacent stones around the inscriptions. The engravers knew about the inscriptions and were careful with their carving not to disturb them. Therefore, we can conclude that the crosses in this specific area were inscribed around the 15th–17th centuries CE.

Armenian inscriptions - Of the 30 inscriptions in the Armenian script found on the apses alongside the crosses, at least 16 are readable (Stone and Harutyunyan 2020a). Most of the inscriptions contain personal names of biblical or Christian provenance except for inscription No. 5 (see below).¹⁷ It is accepted that names of biblical or Christian significance may indicate that the authors were clerics of one or another sort. However, the sample here is too partial for any definite conclusions to be drawn. Except for No. 5, all inscriptions were written in *bolorgir* (Armenian cursive script), usually not professionally engraved. Here and there, *erakat'agir* (Armenian

17 Such as Pōlos (Paul), Isahak (Isaac), Astuacatur (= Theodore, No. 12), Arak'el (= Apostolos), Grigor (no. 13), Anania (No. 17), etc. One name of Arabic origin is to be observed, in No. 26. Intriguingly, the same inscription also contains Turkish names, Xaspēk and Lal. The use of Turkish names by Armenians was quite common from the later medieval period on.

uncial script) letters are to be found, and only one inscription is entirely in uncials (No. 5). Inscription No. 5 was accurately engraved by a skilled mason. It is a simple dedication without personal names (see further on this inscription below).¹⁸

In general terms, these graffiti should be viewed as part of a broader phenomenon of Armenian graffiti often found in holy places. The motive behind them was the desire of pilgrims and travelers to record their visits to sites of great sanctity, such as the Church of the Holy Sepulchre, the site of the Annunciation in Nazareth and the Church of the Nativity in Bethlehem.¹⁹

Apart from the contribution of the inscription to the Armenian corpus of inscriptions, our interest focuses on the date of the inscriptions and their relation to the crosses. In some cases, the priority of the writings can be determined, meaning that the crosses were carved around the inscription, and in some cases, the arms of the crosses cut the letters of the inscriptions (Nos. 5, 14, 15, 16 and 26). Hence, dating the inscriptions could bear on the chronology of the crosses.

The *erkat'agir* writing was used in manuscripts from the 5th–13th centuries and remains dominant in formal inscriptions to the present day. The *bolorgir*, or “cursive,” script was invented in the 10th century CE, became popular in the 13th century CE and has been the standard script for print since the 16th century CE but is rare in inscriptions. Finally, the *notrgir*, or “minuscule,” script was extensively used in the Armenian diaspora between the 16th–18th centuries CE (Stone, Kouyumjian and Lehmann 2002).

The earliest datable Armenian inscription from the chapel belongs to the year 1451 CE but most of the graffiti are dated to the 18th century CE. One precise inscription (No. 13, Fig. 15), mentioning the priests Aṛak'el and Grigor, is especially interesting taking into consideration its layout in relation to the incised crosses. It is a memorial inscription of five lines written clearly on the stone and deeply incised. The inscription bears a date 1723 CE.

No crosses were found on the stone that bears the inscription. However, crosses were engraved on all the masonry around it. Whoever engraved the crosses was familiar with the inscription No. 13 and ensured its preservation. Thus, the crosses in this section cannot predate 1723 CE.

18 No interpretation can be suggested to the last four letters, which might be a name. Ačaṙean's onomastic dictionary does not help in this instance.

19 See Stone 1990:315–322; Stone, Van Lint and Nazarian 1996:321–337; Stone and Harutyunyan 2020a:179–205; 2020b:219–245. Graffiti from the sites are included in the online database at <http://rockinscriptions.huji.ac.il>.



Fig. 15. Inscription No. 13 (photo: A. Re'em).

The Armenian context

Although the procedure of carving crosses in sanctuaries is not attested in literary sources, it seems that it was a widespread phenomenon in ancient churches and the Holy Land churches were not an exception. As we have demonstrated, carefully planned, and accurately executed groups of crosses in the Chapel of St. Helena differ significantly from the usual, carelessly performed scratched Crusader graffiti and other medieval crosses. These kinds of skillfully-made crosses clustered together mainly characterize Armenian sanctuaries and the Armenian presence in the Holy Land, Armenia and Armenian structures beyond the Armenian lands. Grigoryan already defined this in her work on the Armenian Church of Famagusta (Grigoryan 2017:125–141). Our research adds another layer to her conclusions.

The carved crosses appear in the Holy Land in parts of sanctuaries owned in the past or still owned by the Armenians. Among those, the most striking examples are from the Armenian churches of Jerusalem and the city's vicinity. Since the 12th century CE, the St. James Cathedral has been in the possession of the Armenians and crosses can be seen in the cathedral's portal (Prawer 1976:222–236; Pringle 2007:169). St. Savior Church on Mount Zion has been in the hands of the Armenians since the end of the 13th century CE through the late medieval period until today (Pringle 2007:367), and crosses can be seen on its southern wall and on the stones facing the apse, with engraved crosses mainly visible on the entrance wall and on both sides of the main door. Written sources already point out that from the beginning of the 14th century CE, the Armenian Monastery of the Holy Archangels (Dair az-Zaituna) already existed (Pringle 2007:112). The oldest Armenian inscription from this church is dated to

1355 (Ervine 1995:41; Stone 2001–2002:462). Beautifully carved crosses can be seen on the piers and outer wall of the apse (Fig. 16). Similar groups of crosses are attested at both entrances to the Nativity Grotto in Bethlehem, with significantly more examples on the northern side facing the Armenian precinct of the church. In the 12th century CE, the Crusaders built the Abbey of St. John in the Woods in Ain Karem (now the Church of Visitation). The four courses that survive from the medieval apse bear large numbers of crosses (Bagatti 1948:56–57, Fig. 21). The historical accounts inform us that probably around the 13th century CE, it was handed to the Armenians. A few colophons and written records between the 14th–15th centuries CE mention Armenian monks and an Armenian presence in the abbey (Pringle 1993:39). So, the crosses can be tentatively attributed to the Armenian presence in the Church.



Fig. 16. Engraved crosses on the outer wall of the Armenian Monastery of the Holy Archangels (photo: Y. Tchekhanovets).

This same phenomenon can be observed in Armenia: almost identical groups of elaborate crosses are carved on the inner and outer walls of numerous churches and monasteries, such as the churches in Sevanavank' (Fig. 17), Tat'ev, and Noravank'.



Fig. 17. Engraved crosses on the wall of the Sevanavank Monastery, Armenia (photo: Y. Tchekhanovets).

Outside Armenian territories proper, carved crosses are found in Armenian churches. For example, on the external walls of the Armenian Church in Famagusta (Surb Astuacacin, Holy Mother of God Church), several crosses of different types are carved on the southern and eastern facades. Some have a remarkable resemblance to those from St. Helena's Chapel. The church was built during the 14th or perhaps 15th century CE following Armenian immigration to Cyprus after Mamluk raids on the Armenian Kingdom of Cilicia in 1375 (Grigoryan 2017:125–141).²⁰

20 For numerous other examples of carved crosses in Armenian churches in Cilicia and Cyprus, see Grigoryan 2017:125–141.

Of all the examples cited above, the phenomenon of the inscribed crosses in St. Helena’s Chapel is the most striking in its scope, intensity and quality, perhaps because of the theological context of the chapel as the place where the True Cross was revealed.

In all the Armenian sanctuaries mentioned above, Armenian writing was observed near and in correlation to the crosses, strengthening the association of Armenian ethnicity with the crosses. We have already discussed the 29 inscriptions found in St. Helena’s Chapel. Some inscriptions even mention the relation to a specific cross, probably the one carved on the stone next to the inscription. For example, inscription No. 5 in St. Helena’s Chapel (Fig. 18) is written in *erkat’agir* (uncial) script, beautifully carved on the stone’s surface and specifically referring to a particular cross, probably one of the incised crosses near the inscription: “This holy cross is a memorial of of Bac’in.” (Stone and Harutyunyan 2020a: 192)

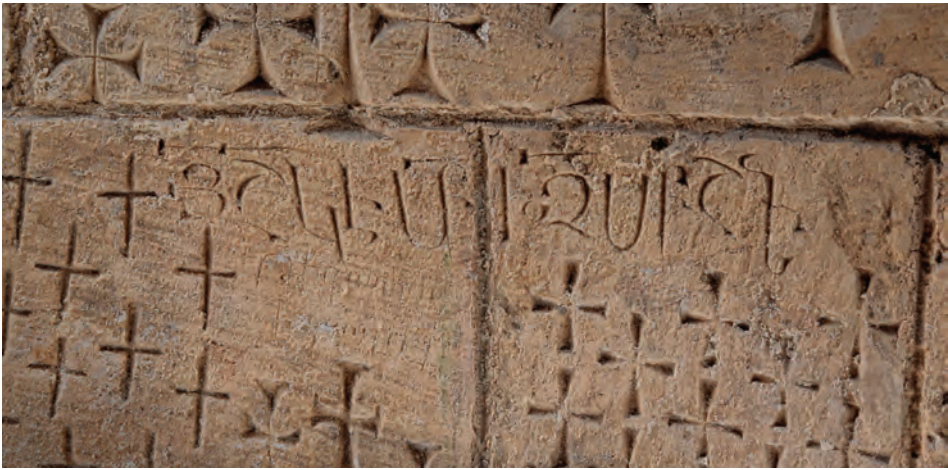


Fig. 18. Inscription No. 5 and the surrounding engraved crosses (photo: A. Re'em).

In the Armenian Monastery of the Holy Archangels, two Armenian inscriptions are carved on the piers adjoining the crosses and referring to them. On the northeast pier: + The Holy Cross was erected for Margaret, and on the northwest pier: + The Holy Cross is for the memory of Sarkis and his parents (Pringle 2007:116).

The connection between the carved crosses and the Armenian ethnicity strengthens when one examines the significance and veneration of the cross in Armenian theology

and art. The veneration of the Holy Cross has a special place in Armenian liturgy. Celebrating the three traditional feast days dedicated to the Cross celebrated already in the ancient Church of Jerusalem - Good Friday, Exaltation of the Cross (September) and Apparition of the Cross (May) - the Armenian Apostolic Church also developed its own liturgical tradition of veneration (Renoux 1969). The canonical Armenian Book of Hymns (*Šarakan*) contains 78 hymns associated with the Feast of the Exaltation of the Holy Cross, strongly related to the liturgical traditions of 4th- and 5th-centuries CE Jerusalem and its holy sites (Findikiyan 2010 and comprehensive bibliography therein). Moreover, some of the Jerusalemite hymns are used in liturgical celebrations of the indigenous Armenian feast of *Šotakat* (Renoux 1969:157, n. 137). This national feast commemorates the miraculous vision of St. Gregory the Illuminator, the early 4th century CE founder of the Armenian Church, and the establishment of the first church of the country, known as Etchmiadzin ("the Descent of the Only-begotten") in the royal city of Vagharshapat. The text of the Armenian historian Agathangelos, describing the vision of St. Gregory, includes numerous references to the Holy Cross (Thomson 2014:285–295). Certain hymns of the *Šotakat* feast could have their origins in the ancient tradition of the Jerusalemite Church and were later incorporated into the hymnography of the indigenous Armenian feast (Findikiyan 2010:53). The establishment of the Etchmiadzin Cathedral is regarded as a starting point of Armenian Christianity. Therefore, the usage of the Jerusalem Church hymns in the celebrations probably stresses the strong connection between the two churches and contributes to the self-image of the Armenians as the custodians of Christianity (for biblical and Jerusalemite self-consciousness of the Armenians, see Stone 2015).

The Holy Cross's special place is well expressed in the ecclesiastic art of the Christian Caucasus. During the Early Byzantine period, in the 5th–6th centuries, stone stelae in the shape of the Golgotha Cross started to appear in Armenia and Georgia produced by local masters (Machabeli 2008; Hakobian 2010; Djavakhishvili 2014). Their first function was to declare the territory's Christianization and the new faith's victory over paganism. Before long, this visual symbol of Christian triumph became associated with the erection of the True Cross on the top of Calvary hill in Jerusalem and became the model of Golgotha. In Armenia, by the end of the millennium, the evolution of the cross-shaped stelae led to the appearance of most original *khachkars* - memorial or devotional stone boards elaborately decorated with carved crosses (Yakobson 1986). These cross-stones served as a sort of mediator between the terrestrial and celestial worlds, expressing the soul's desire for salvation and eternity (Petrosyan 2015). The

appearance of *khatchkars* in Jerusalem is attested from the early 12th century CE (Khatchadourian and Basmadjian 2014:25, 118).

Establishing the connection between the crosses and Armenian ethnicity leads us to the question of the start of Armenian presence and ownership in the Chapel of St. Helena. This will reflect on the dating of the crosses, that is, when were they possibly created for the first time. The Crusaders and the Armenians were trusted allies, involved in intermarriage, creating an Armeno-Latin aristocracy (Sanjian 1965:9–14; Forse 1991:13–22). The Armenians even founded an Armenian kingdom in Cilicia near the Crusader states (Ghazarian 2000). The Armenians also deeply impacted Crusader art and architecture (Kanaan-Kedar 1998:77–91). During the Crusader occupation, the Church of the Holy Sepulchre remained under the hegemony of the Latins. However, the Franks did allow the Armenians, like other non-Catholic communities, to hold liturgical ceremonies, rituals and prayers in the Church (Rose 1991:176–188; Shagrir 2010:57–77).²¹

The question of the rights of the different Christian communities, mainly the Eastern ones, in the Holy Sepulcher is a complicated issue. In the early ages of Christianity, there was no division; all belonged to the Church of Jerusalem. The division between the communities started much later. According to the Armenian records, Armenian rights in the Holy Sepulcher were restored (!) by Saladin. In his history, Tigran Sawalaneanc’ reproduces a translation of the edict issued by Sultan Saladin (1137/38–1193 CE), which authorizes the Armenian Patriarch of Jerusalem Abraham III (1180–1191 CE) to restore the Armenian rights in the Holy City (Sawalaneanc’ 1931:410).²² The Chapel of St. Helena was known as St. Gregory the Illuminator for the Armenians. This tradition was adopted to perpetuate the memory of St. Gregory’s seven-year ascetic experience in Jerusalem. The precise dating of the Armenians’ possession of the chapel is unknown but traditionally, it is related to the post-Crusade period (Hanna 1782:192; Alawnuni 1931:340–347). Therefore, the crosses’ date cannot be earlier than 1187, and as we have shown above, they most likely succeed it by four to five or even six centuries.

21 One exception involving the Armenians reflects the relationship between the Crusaders and the Armenians. Theodoric mentioned that the Armenians owned the Chapel of St. Mary in the church:

“Almost on the [north-] western side, at the exit from the Church itself, that leads by more than thirty steps from the Church up to the street. In front of the exit itself, there is a chapel in honor of St. Mary which is in the hands of the Armenians” (Theodoric 1994:153).

22 For images of this document, see Narkiss and Stone 1979.

Interpretation and conclusions

For the first time, the engraved crosses in St. Helena's Chapel have been studied thoroughly. We have shown that the conventional view ascribing this phenomenon to Crusader pilgrim graffiti is not supported by the evidence. Moreover, we have shown that these crosses were executed with great regularity of carving. The location of the clusters of the engraved crosses on the apses and altars of the chapel enables us to determine that this was an established institutionalized practice under the control of the local Armenian clergy. Whoever engraved the crosses took into consideration earlier inscriptions and symbols and tried not to harm them. The crosses in the Chapel of St. Helena stand in stark contrast to the uncontrolled and disorderly personal graffiti made by pilgrims in other Holy Land churches in the late medieval period. We believe that these crosses were created through an organized process, probably fulfilling the pilgrim's passion for their devout endeavor.

It seems to us that the spectacular concentration of crosses in the Chapel of St. Helena is unique and invokes the tradition of the discovery of the True Cross in that location. Furthermore, it is deeply rooted in the Armenian presence in the chapel, their ancient stone art tradition, and their exceptional veneration of the cross symbol.

Our research showed that the crosses date to the late medieval period. They could not predate the 14th century CE and most likely appear in the beginning of the 16th–17th centuries CE or even the 18th century CE. The orderly engraved crosses are a complementary and parallel phenomenon to the graffiti in the church. Both phenomena became widespread during the Mamluk and early Ottoman periods. It can be said that this time - apart from being the golden age for pilgrimage to Jerusalem - was a golden age for Christian graffiti and inscribing on the walls of holy places. Most of the dateable Christian graffiti in Jerusalem are attributed to these specific periods.²³ There are several reasons for this:

- The increasing numbers of pilgrims flooding Jerusalem mainly from eastern churches (among them the Armenians) and Europe (Ervine 2002:81; Schein 2012:276–309).
- Perceptions established among European pilgrims were not necessarily derived from religious motives but more from a social perspective. Apart from the pious intention, there was a great desire for self. Therefore, the pilgrims

23 See above the inscriptions and graffiti on the Holy Sepulchre's engaged columns in the portal. Also, the inscriptions and heraldic symbols in the Cenacle and adjacent Franciscan cloister on Mount Zion (Chernin et al. 2022, this volume) and the graffiti on the nave columns of the Church of Nativity in Bethlehem (Juhász 2021:141–170).

put their names, family crests and date of visit on the walls so they would be recognized by future pilgrims (mainly aristocrats) from the same regions of Europe. Following this line of thought, apart from being famous, future pilgrims felt obliged to pray for the soul of that visitor who had preceded them (Bacci 2021:18–19).

- Under Crusader rule, the Church of the Holy Sepulcher had only one master: the Latin Patriarch who had the power of the state behind him. With the Muslim reconquest of Jerusalem, central authority within the church ceased to exist. Several Christian communities came to control different parts of the building and its sanctuaries. This led to indifference or perhaps even helplessness in dealing with the graffiti and other damaging acts inside the church. Furthermore, the local Christian communities now came to depend even more on the pilgrims for their economic survival. The desire of the pilgrims to leave a physical mark of their visit on the walls of the church could be capitalized to yield badly needed income.

The “age of inscribing the walls” also figures in contemporary pilgrims’ accounts. The most detailed description of this phenomenon comes from the Dominican friar Felix Fabri from Ulm. Describing his visit to Jerusalem in 1483 CE, Fabri tells how other pilgrims (mainly nobles) brought chisels, mallets and pasted paper drawings, to help them carve their names, armorials and date of birth onto the walls of the Holy Sepulcher and other churches, as well as pilgrim hostels. Fabri does not hide his disapproval of this “madness,” which he sees as an almost pagan idolatrous act (Fabri 1896–1897:86–87). This trend was already common at least a generation before, as witnessed by the English churchman William Wey in his visit to the Holy Land in the middle of the 15th century CE. According to Wey, the Franciscan regulations for pilgrims in the Church of the Holy Sepulcher stated that on “no account are they to inscribe their coats of arms into the walls” (quoted in Champion 2015:113). It is clear this prohibition was not very successful, and the German merchant Hans Tucher even guided his readers who might want to travel to Jerusalem how to leave their marks on the walls by preparing in advance paper musters of their family crests, which could then be chiseled into the walls (Tucher 2002: 635). In his 1601 visit to the Church of the Nativity, Henry Timberlake carefully surveyed the countless graffiti on the walls for familiar English names (1626:16).²⁴

24 For other historical descriptions on the subject, see Bacci 2021:11–28.

The precise significance of the engraved crosses is still enigmatic. William Purkis suggested that the crosses were part of the pilgrim's souvenir industry. While carving deep incisions into the chapel's walls, small particles of stone dust were created and meticulously collected. The stone dust created was a desirable relic infused with holiness and was poured into small containers to be distributed to pilgrims, in much the same way as is known to have happened at other medieval pilgrimage sites (Purkis 2020:198). Felix Fabri's eyewitness testimony echoes Purkis' hypothesis. According to his itinerary, the Cave of the Invention and Chapel of St. Helena were a focal point for pilgrims seeking to take souvenirs or leaving part of them in the church walls. Fabri describes that the pilgrims were busy scraping rock from the cave for medicine. They mixed it with water and wine and drank it to be cured. He also mentioned that ill people with headaches or toothaches shaved their heads and beards and put the hair in the crannies of the rock and between the stones. They believed that if someone's hair touches the sacred rock, a remedy is promised (Fabri 1896–1897:363). Nevertheless, Purkis' interesting theory still needs additional proof.

After showing the connection between the Armenian dedicatory inscriptions and the crosses, we suggest that the anonymous crosses were engraved by the local Armenian clergy, who employed specific stone masons. Engraving a cross was done for payment or donation from the devoted visitors and pilgrims, perhaps for the salvation of the souls of their relatives. Presumably, as the cross was engraved in a more sacred and desirable place in the chapels (such as the apses and the altar), its power grows stronger, and its price was probably higher than for crosses engraved in one of the outer walls.

In our opinion, the crosses also had a liturgical role and the pilgrims and visitors adored and venerated them. Examination of the walls bearing crosses, especially the side walls of the stepped passage to St. Helena Chapel, showed that the areas with the crosses have on them a kind of reddish smeared shade that does not appear on the adjacent stones that do not carry crosses (Figs. 2, 19). It seems that the material accumulated on the stones is the product of numerous human hands that touched the crosses for centuries as part of some liturgy and admiration.²⁵ It should be remembered that for a long time, since its establishment, the chapel was dark, and visitors would need to enter by candlelight. The accumulated material could also be the result of smoke and other substances released from the candles as the visitors brought them closer to the crosses.

25 We have not yet managed to analyze the chemical structure of the patina.



Fig. 19. LIDAR image of the southern corridor wall. Observe the dark stain along the stones with the crosses (photo: A. Re'em).

The study of the engraved crosses and medieval graffiti in Jerusalem is a fascinating subject that enables us to understand the simple faithful worshipper and his religious and social perceptions. We hope that this study will prompt further studies that will help us to get closer and understand the experience and mentality of these medieval pilgrims. However, we must remember that this type of archeological evidence is transient. It is only a matter of time until some of the “marks on the walls” will be lost forever. Beyond that, we believe inscriptions, graffiti, carved crosses and coats of arms, as well as all other types of wall engravings, can inform us of historical changes in Jerusalem. We hope to develop this issue in our future research.

References

Primary sources

- Bernard J.H. trans. and ed. 1894. *Guide-Book to Palestine* (Palestine Pilgrims' Text Society 6). London.
- Fabri F. 1896–1897. *The Wandering of Brother Felix Fabri*. A. Stewart trans. and ed. (Palestine Pilgrims' Text Society 7–10). London.
- Scheibler F. 1450–1600. *Scheiblers'sches Wappenbuch—BSB Cod.icon. 312 c*. Munich. https://codicon.digitale-sammlungen.de/Blatt_bsb00007174,00000.html
- Suchem L. 1895. *Description of the Holy Land, and of the Way Thither*. A. Stewart trans. and ed. (Palestine Pilgrims' Text Society 12). London.
- Theodoric. 1994. *Peregrinationes Tres: Saewulf, John of Würzburg, Theodoricus*. R.B.C. Huygens ed. (Corpus Christianorum Continuatio Mediaevalis 139). Turnhout.
- Timberlake H. 1603. A true and strange discourse of the trauailes of two English pilgrims what admirable accidents befell them in their journey to Jerusalem, Gaza, Grand Cayro, Alexandria, and other places: also what rare antiquities, monuments, and notable memories (concording with the ancient remembrances in the holy Scriptures), they saw in Terra Sancta, with a perfect description of the old and new Ierusalem, and situation of the countries about them. A discourse of no lesse admiration; then well worth the regarding: written by one of them, on the behalf of himself, and his fellow pilgrime. London. <https://quod.lib.umich.edu/e/eebo/A13781.0001.001?rgn=main;view=fulltext>.
- Tucher H. 2002. *Die Reise ins gelobte Land Hans Tuchers des Älteren (1479–1480): Untersuchungen zur Überlieferung und kritische Edition eines spätmittelalterlichen Reiseberichts*. H. Randall ed. (Wissensliteratur im Mittelalter 38). Wiesbaden.

Secondary sources

- Alawnuni M. 1931. *Old Armenian Monasteries and Churches in the Holy Land*. Jerusalem (Armenian).
- Bacci M. 2021. Introduccion. In E.V. Juhász. *Pinturas y Grafitos. Basílica de la Natividad en Belén* (Studium Biblicum Franciscanum Collectio Maior 58). Jerusalem. Pp. 11–28.
- Bagatti B. 1948. *Il Santuario della Visitazione ad 'Ain Karim (Montana Judaeae)*. Esplorazione archeologica e ripristino (Studium Biblicum Franciscanum Collectio Maior 5). Jerusalem.
- Berkovich I. and Re'em A. 2022. Broken, Hidden, Rediscovered: The Story of the Cosmatesque High Altar of the Holy Sepulchre. *Eretz-Israel* 35 (in press).
- Biedermann J.G. 1748. *Geschlechtsregister der Reichsfrey unmittelbaren Ritterschaft Landes zu Franken Löblichen Orts an der Altmühl: Welches aus denen bewährtesten Urkunden, Kauf- Lehen- und Heyrathsbriefen gesamleten Grabschriften und eingeholten genauen Nachrichten von innen beschriebenen Gräflich- Freyherrlich- und Edlen Häusern in gegenwärtige Ordnung verfasst und richtig zusammen getragen worden*. Beirut.
- Boehm B.D. and Holcomb M. eds. 2016. *Jerusalem, 1000–1400: Every People Under Heaven*. New York.

- Brock S., Goldfus H. and Kofsky A. 2006–2007. The Syriac Inscriptions at the Entrance to Holy Sepulchre, Jerusalem. *ARAM* 18–19:415–438.
- Broshi M. and Barkay G. 1985. Excavations in the Chapel of St. Vartan in the Holy Sepulchre. *Israel Exploration Journal* 35:108–128.
- Caine M., Altaratz D., MacDonald L. and Reem A. 2018. The Riddle of the Crosses: The Crusaders in the Holy Sepulchre (Conference Electronic Visualisation and the Arts-EVA 2018) P. 132–139. <https://www.scienceopen.com/hosted-document?doi=10.14236/ewic/EVA2018.28>
- Caine M. and Magen M. 2017. Low Cost Heritage Imaging Techniques Compared. Bowen J.P., Diprose G. and Lambert N. eds. *Electronic Visualisation and the Arts (EVA 2017)*. <http://dx.doi.org/10.14236/ewic/EVA2017.85>
- Champion M. 2015. *Medieval Graffiti: The Lost Voices of England's Churches*. London.
- Chareyron N. 2005. *Pilgrims to Jerusalem in the Middle Ages*. Translated by D.W. Wilson. New York.
- Chernin M., Halevi S., Grigoryan S. and Harutyanyan A. 2022. In: Gadot Y., Zelinger Y., Peleg-Barkat O. and Shalev Y. eds. *New Studies in the Archaeology of Jerusalem and its Region: Collected Papers* 15. Jerusalem. Bathhouses of Shuafat and the Emergence of Public Bathing in Iudae. Pp. 161*–190*.
- Clermont-Ganneau C. 1899. *Archaeological Researches in Palestine during the Years 1873–1874* I. London.
- Corbo V.C. 1981–1982. *Il Santo Sepolcro di Gerusalemme: Aspetti archeologici dalle origini al periodo crociato* (Studium Biblicum Franciscanum Collectio Maior 29). Jerusalem.
- Daim F., Pahlitzsch J., Patrich J., Rapp C. and Seligman J. eds. 2020. *Pilgrimage to Jerusalem: Journeys, Destinations, Experiences across Times and Cultures: Proceedings of the Conference held in Jerusalem, 5th to 7th December 2017* (Byzanz zwischen Orient und Okzident 19). Heidelberg.
- Djavakhishvili G. 2014. *Early Medieval Small-Scale Sculpture of Georgia (Relief Sculpture on the Steles of the end of 5th–early 8th c.)*. Tbilisi (Georgian; English summary, pp. 94–101).
- Earl G., Basford P.J., Bischoff A.S., Bowman A., Crowther C., Hodgson M., Martinez K., Isaksen L., Pagi H., Piquette K.E. and Kotoula E. 2011. Reflectance Transformation Imaging Systems for Ancient Documentary Artefacts. In S. Dunn, J.P. Bowen and K.C. Ng eds. *Electronic Visualisation and the Arts (EVA 2011)*. London. Pp. 147–154.
- Ervine R. 1995. The Church of the Holy Archangels in Jerusalem: Comments on its History and Selected Inscriptions. *Journal of the Society of Armenian Studies* 8:35–51.
- Ervine R. 2002. Changes in Armenian Pilgrim attitudes Between 1600 and 1857: The Witness of Three Documents. In Ervine R.R., Stone M.E. and Stone N. eds. *The Armenians in Jerusalem and the Holy Land* (Hebrew University Armenian Studies 4). Leuven. Pp. 81–95.
- Findikiyan M.D. 2010. Armenian Hymns of the Holy Cross and the Jerusalem Encaenia. *Revue des Études Arméniennes* 32:25–58.
- Fishhof G. 2017. Hospitaller Patronage and the Mural Cycle of the Church of the Resurrection at Abu-Ghosh (Emmaus)—A New Reading. In J. Schenk and M. Carr eds. *The Military Orders 6/1: Culture and Conflict in the Mediterranean World*. Oxon and New York. Pp. 82–93.
- Folda J. 1995. *The Art of the Crusaders in the Holy Land, 1098–1187*. Cambridge.

- Folda J. 2005. *Crusader Art in the Holy Land: From the Third Crusade to the Fall of Acre, 1187–1291*. Cambridge.
- Forse J.H. 1991. Armenians and the First Crusade. *Journal of Medieval History* 17(1):13–22.
- Frank G. and Paulus G. 2016. *Die pfalz-neuburgische Landesaufnahme unter Pfalzgraf Philipp Ludwig* (Regensburger Beiträge zur Heimatforschung 6). Regensburg.
- Friedman Y. 1986. Pilgrims and Crusaders: Was There a Change in Genre of Itineraria in the Thirteenth Century? *Cathedra* 41:55–64. (Hebrew).
- Friedman Y. 1999. Pilgrims in the Shadow of the Crusader Kingdom. In S. Rozenberg ed. *Knights of the Holy Land*. Jerusalem. Pp. 100–110.
- Garbarino O. 2019. The Chapel of St. Helena and Egeria's *locus post Crucem*. In G. Tucci ed. *Jerusalem: The Holy Sepulchre: Research and Investigations (2007–2011)*. Florence. Pp. 108–112.
- Ghazarian J.G. 2000. *The Armenian Kingdom in Cilicia During the Crusades: The Integration of Cilician Armenians with the Latins, 1080–1393*. Surrey.
- Gibson S. and Taylor J.E. 1994. *Beneath the Church of the Holy Sepulchre Jerusalem: The Archaeology and Early History of Traditional Golgotha* (Palestine Exploration Fund Monograph 1). London.
- Grigoryan G. 2017. On the Interpretation of the Crosses Carved on the External Walls of the Armenian Church in Famagusta. In M.J.K. Walsh ed. *The Armenian Church of Famagusta and the Complexity of Cypriot Heritage* (Mediterranean Perspectives). New York.
- Hakobian Z. 2010. Stellae of Armenia and Georgia: To the Problem of Cultural Communion in the Early Christian Period. *Lraber sarakan gitutyunneri* 627/628:403–418 (Russian).
- Halm C. 1994. Deutsche Reiseberichte. In W. Paravicini ed. *Europäische Reiseberichte des späten Mittelalters. Eine analytische Bibliographie*. Teil 1. Frankfurt am Main.
- Hanna V. 1782. *Book of the History of this Holy and Great City of God, Jerusalem and of the Dominical Sites of our Lord Jesus Christ*. Constantinople (Armenian).
- Harvey W. and Ernest T.R. 1935. *Church of the Holy Sepulchre, Jerusalem: Structural Survey, Final Report*. London.
- Juhász E.V. 2021. *Pinturas y Grafitos. Basílica de la Natividad en Belén* (Studium Biblicum Franciscanum Collectio Maior 58). Jerusalem.
- Kahanov Y. and Stern E. 2008. Ship Graffiti from Akko (Acre). *The Mariner's Mirror* 94(1):21–35.
- Keegan P. 2014. *Graffiti in Antiquity*. Abingdon and New York.
- Kelly J.L. 2019. *The Church of the Holy Sepulchre in Text and Archaeology*. Oxford.
- Kenaan-Kedar N. 1998. Armenian Architecture in Twelfth-Century Crusader Jerusalem. *Assaph Studies in Art History* 3:77–91.
- Khatchadourian H. and Basmadjian M. 2014. *L'art des khatchkars : Les pierres à croix arméniennes d'Ispahan et de Jérusalem*. Paris.
- Krüger J. 2000. *Die Grabeskirche zu Jerusalem: Geschichte, Gestalt, Bedeutung*. Regensburg.

- Kühnel B. and Kühnel G. 2019. *The Church of the Nativity in Bethlehem: The Crusader Lining of an Early Christian Basilica*. Regensburg.
- Limor O. 2006. ‘Holy Journey’: Pilgrimage and Christian Sacred Landscape. In O. Limor and G.G. Stroumsa eds. *Christians and Christianity in the Holy Land*. Turnhout. Pp. 321–353.
- Macalister R.A.S. 1901. Notes on M. Clermont-Ganneau’s Archeological Research in Palestine I. *PEFQSt* 33(1):19–21.
- MacDonald L. 2011. Visualising an Egyptian Artefact in 3D: Comparing RTI with Laser Scanning. In S. Dunn, J.P. Bowen and K.C. Ng eds. *Electronic Visualisation and the Arts (EVA 2011)*. London. Pp. 155–162.
- Machabeli K. 2008. *Early Medieval Georgian Stone Crosses*. Tbilisi.
- Metcalf D.M. 1995. *Coinage of the Crusades and the Latin East in the Ashmolean Museum Oxford* (2nd ed.). London.
- Metcalf D.M and Pitsillides A.G. eds. 1996. *The Silver Coinage of Cyprus 1192–1285* (Corpus of Lusignan Coinage 2; Texts and Studies of the History of Cyprus 21). Nicosia.
- Metcalf D.M. and Pitsillides A.G. 1998. *The White Bezants and Deniers of Cyprus 1192–1285* (Corpus of Lusignan Coinage 1; Texts and Studies of the History of Cyprus 29). Nicosia.
- Mudge M., Schroer C., Earl G., Martinez K., Pagi H., Toler-Franklin C., Rusinkiewicz S., Palma G., Wachowiak M., Ashley M., Matthews N., Noble T. and Dellepiane M. 2010. Principles and Practices of Robust, Photography-Based Digital Imaging Techniques for Museums. In Artusi A., Joly-Parvex M., Pitzalis D., Lucet G. and Ribes A. eds. *Proceedings of the 11th International Symposium on Virtual Reality, Archaeology and Cultural Heritage (VAST 2010)*. No pages.
- Narkiss B. and Stone M.E. 1979. *Armenian Art Treasures of Jerusalem*. Jerusalem.
- Pataridze T. and Tchekhanovets Y. 2016. Revisiting the Georgian Inscriptions on the Portal of the Holy Sepulchre Church in Jerusalem. *Le Muséon* 129(3–4):395–422.
- Petrosyan H. 2015. *Khachkar: The Origins, Functions, Iconography, Semantics*. Yerevan.
- Prawer J. 1976. The Armenians in Jerusalem under the Crusaders. In M.E. Stone ed. *Armenian and Biblical Studies*. Jerusalem. Pp. 222–236.
- Pringle D. 1993. *The Churches of the Crusader Kingdom of Jerusalem: A Corpus I: A–K (Excluding Acre and Jerusalem)*. Cambridge.
- Pringle D. 2004. Crusader Inscriptions from Southern Lebanon. *Crusades* 3:131–151.
- Pringle D. 2007. *The Churches of the Crusader Kingdom of Jerusalem: A Corpus III: The City of Jerusalem*. Cambridge.
- Pringle D. 2012. *Pilgrimage to Jerusalem and the Holy Land, 1187–1291* (Crusade Texts in Translation 23). Farnham.
- Pritchard V. 1967. *English Medieval Graffiti*. Cambridge.
- Purkis W.J. 2020. ‘Holy Christendom’s New Colony’: The Extraction of Sacred Matter and the Colonial Status of the Latin Kingdom of Jerusalem. *Haskins Society Journal* 30:177–212.

- Ragazzoli C., Harmansah Ö., Salvador C. and Frood E. 2018. *Scribbling through History: Graffiti, Places and People from Antiquity to Modernity*. London, New York, Oxford, New Delhi and Sydney.
- Reisner R.G. 1971. *Graffiti: Two Thousand Years of Wall Writing*. New York.
- Renoux A. 1969. La croix dans le rite arménien. Histoire et le symbolisme. *Melto. Recherches orientales* 5(1):123–175.
- Rose R. 1991. Communities of Eastern Christian in Crusader Jerusalem. In J. Prawer and H. Ben-Shammai eds. *The History of Jerusalem. Crusaders and Ayyubids (1099–1250)* Jerusalem. Pp. 176–193 (Hebrew).
- Sanjian A. 1965. *The Armenian Communities in Syria under Ottoman Dominion*. Cambridge.
- Sawalaneanc' T. 1931. *History of Jerusalem*. Jerusalem (Armenian).
- Schein S. 2012. The Site of Christ's Passion: Christian Concepts of Jerusalem in the Late Middle Ages. In Y. Friedman and J. Drory eds. *The History of Jerusalem, The Mamluk Period (1260–1517)*. Jerusalem. Pp. 276–309.
- Seyler, G.A. 1884. *J. Siebmacher's grosses und allgemeines Wappenbuch in einer neuen, vollständig geordnetet und reich vermehrten Auflage mit heraldischen und historisch- genealogischen Erläuterungen 6/1: Abgestorbener Bayerischer Adel*. Nürnberg.
- Shagrir I. 2010. The *Visitatio Sepulchri* in the Latin Church of the Holy Sepulchre in Jerusalem. *Al-Masāq* 22(1):57–77.
- Stone M.E. 1990. Armenian Inscriptions of the Fifth Century from Nazareth. *Revue des Etudes Arméniennes* 22:315–322.
- Stone M.E. 2001–2002. Epigraphica Armeniaca Hierosolymitana VII. *Revue des Études Arméniennes* 28:443–464.
- Stone M.E. 2015. Biblical and Apocryphal Themes in Armenian Culture. In R. Gounelle and B. Mounier eds. *La littérature apocryphe chrétienne et les écritures juives* (Troisième colloque international sur la littérature apocryphe chrétienne (COLLAC), 14–16 janvier 2010, Strasbourg). Lausanne. Pp. 393–408.
- Stone M.E. and Harutyunyan K.A. 2020a. Armenian Inscriptions of the Church of Holy Sepulchre in Jerusalem: Part 3. The Church of St. Gregory the Illuminator (St. Helena Chapel). *VEM* 4(72):179–205 (Armenian).
- Stone M.E. and Harutyunyan K.A. 2020b. Armenian Inscriptions of the Church of Holy Sepulchre in Jerusalem: Part 2. The Pillars of the Entrance to the Church and the Southern Wall. *VEM* 3(71):219–245 (Armenian).
- Stone M.E., Kouyumjian D. and Lehmann H. eds. 2002. *Album of Armenian Paleography*. Aarhus.
- Stone M.E., Van Lint T.M. and Nazarian J. 1996. Further Armenian Inscriptions from Nazareth. *Revue des Études Arméniennes* 26:321–337.
- Thomson R.W. 2014. The Vision of Saint Gregory and Its Interpretations. In K. Bardakjian and S. La Porta eds. *The Armenian Apocalyptic Tradition: A Comparative Perspective*. Leiden and Boston. Pp. 285–295.

- Tucci G. ed. 2019. *Jerusalem. The Holy Sepulchre. Research and Investigations (2007–2011)*. Florence.
- Tyerman, C. 2019. *The World of the Crusades*. New Haven.
- Volborth C.A. 1973. *Heraldry of the World*. London.
- Wilkinson J. ed. 1988. *Jerusalem Pilgrimage, 1099–1185*. London.
- Wilkinson J. 2002. *Jerusalem Pilgrims before the Crusades*. Warminster.
- Yakobson L.A. 1986. *Armenian Cross Stones (Khachkars)*. Yerevan (Russian; English summary, pp. 92–103).
- Yasin A.M. 2015. Prayers on Site: The Materiality of Devotional Graffiti and the Production of Early Christian Sacred Space. In A. Eastmond ed. *Viewing Inscriptions in the Late Antique and Medieval World*. New York. Pp. 36–60.
- Yeger D. and Re'em A. 2019. Jerusalem, Old City, Church of St. Nicholas. *Hadashot Arkheologiyot: Excavations and Surveys in Israel* 131. https://www.hadashot-esi.org.il/report_detail_eng.aspx?id=25516&mag_id=127.