THE ARCHITECTURAL EVOLUTION OF THE ANCIENT LEBANESE CHURCHES IN KOURA, BATROUN AND BYBLOS, FROM THE 8TH CENTURY TO THE 13TH CENTURY

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ABSTRACT

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I think this work is intriguing for a wide circle of readers interested in the history of ancient Lebanese churches. Monumental historical temples are the symbol of cultural identity showing the spiritual value of their old period and reflecting the social, cultural and economic endurance of the past. They are the main part of the architectural heritage that signalizes the continuity of history and the important link between our time and history that helps to understand the development of the architectural features in time and space. Like in many countries, ancient churches need to be identified, classified and then assessed; for this reason, in this research, I will offer an overall picture of the original ecclesiastical parts, which is based on the latest architectural and documental data. The study of these structures is important because it helps to identify the structural forms, the disaster preparedness and the potential hazards. The original damaged and undamaged parts of these churches should be examined in order to achieve proper results, considering the first step to accomplish this, is to recognize them in their original status, so that the applied intervention could be implemented respecting these results. Documentation, protection and conservation of historic monuments are the most important procedures of the cultural heritage preservation, therefore large inventory of these temples should be well documented before starting to detailed analyses and restoration projects.

Keywords: architectural parts, heritage, ancient churches, Lebanon, historical origin.

INTRODUCTION

Most of the historic churches and monasteries of Lebanon are located in the north of Lebanon, especially in the studied regions (Koura, Batroun and Byblos), where the majority of Christian communities still reside until now.

This study relates to ecclesiastical temples from the 8th century to the 13th century. This era, which is located in the Middle Ages that lasted from the 5th to the 15th century, is the most important period in our old ecclesiastical architecture.

Unfortunately, there are no surviving churches before the 8th century, especially after the great earthquake that struck Lebanon in 551 AD. At the beginning of the sixth century, a series of terrible earthquakes struck Lebanon in 494, 502, 529, 551 (it was the greatest) and 555 AD. The earthquakes caused large waves of tsunamis, which flooded the entire coast of Lebanon, as a result, most coastal cities and many important temples were destroyed.

The Crusader period takes place from the end of the eleventh century to the end of the thirteenth century (between 1095 and 1291 AD). In the 13th century, the Fourth Crusade left behind a series of important churches that had a great impact on the architecture of Lebanon. During the Crusader period, the Christian Churches have increased in a significant number. The Cistercian monks came along with the Crusaders to various areas of Lebanon and founded many monasteries and churches. They built their big churches with new ideas and new architectural rhythms, the influence was very obvious on the local architecture, as a result, many architectural changes were made to the existing local architecture. After the 13th century, due to the occupation of Lebanon by the army of the Mamluks and the Ottomans, the Christian community had many difficult times until the French mandate.

The historical Greco-Roman influence

In the Hellenistic era, the Greeks created great temples that had a strong influence in the Roman Empire, this contact led to creating the known Greco-Roman architecture, which resulted from the merging of both ancient Greek and Roman characteristics. This architecture spread throughout the Mediterranean world and the Middle East country including Lebanon, where structural architectural changes have initiated.

In 330 AD, the Roman Emperor Constantine decided to relocate his capital Rome to Constantinople (city of Constantine in the Greek language) which was built by him on the place of the ancient Greek city Byzantium, so it became the new imperial capital city of the Roman Empire.

In 395 AD, the Roman Emperor Theodosius died and designated in his will the division of the empire into two parts, east and west. Consequently, Rome became again a capital, but this time for the Western Empire only and Constantinople became the capital of the Eastern Empire. The western part quickly lost its provinces, while the eastern part,

which will be known later as the Byzantine Empire, has survived till the 15th century and Constantinople has been the center of architectural and art production for a long time. Lebanon was a part of the Eastern Roman Empire.

After the collapse of the Western Roman Empire, the Eastern Roman Empire continued the traditions of the ancient Greco-Roman culture and tried hard to maintain its Roman name in order to appear as the sole heir of the great Latin Roman Empire, but the Hellenism was constantly imposed on the Eastern Roman Empire. In the royal court, the gradual departure from the Roman artistic expression began; many wrote and spoke the Greek language, increasingly penetrating eastern elements to create a new culture. The Romans, who dominated the Greeks, were eventually defeated by the Greek culture and we can say that the Byzantine Empire converted to the Greek Empire of the Middle Ages.

The influence of the Byzantine culture extended across Europe, North Africa, and the Middle East and reached the most remote areas of the then known world. It continued for centuries to play a religious leadership role impacting the human and architectural history, for example, the brilliant creation of the cubic domed church St. Sophia of Constantinople, instead of the old type of Basilican church with a wooden roof.

The Byzantine Empire had a major impact on Lebanon that was within its sphere of influence. The architecture of our historic churches was based on the Byzantine architectural tradition, as a part of the big Byzantine school.

The early architectural standards of the church

The temple in ancient Greece was God's dwelling place, the building that housed the worshiping statue of God or Goddess that was firstly a wooden structure; about the 6th century BC, it was gradually replaced by stone. This temple mainly included the atrium, the priests' residences, the sacred area and the altar.

Also, the place of prayer and worship of Christians is called House of God or House of Lord or Church; it is considered as heaven on earth and the means of salvation. Although, the early Christians tended to the standards of the ancient Greco-Roman architecture, but the ecclesiastical architectural elements took a new meaning and changed characters according to the new concepts and to the new religious mentality, as follows:

➢   In the perception of space, contrary to the ancient temples, the design rules of the first historic churches were directly related to the proportional scale of the human body.

➢   The interior of the ancient Greek temple was closed to the public, so it was built outward, where the faithful used to gather in the surrounding area outside the temple and where the altars had existed for sacrifices and worship liturgies. Unlike the ancient temple, the church was built inward, since the faithful had to enter in the church to participate in worship. The interior of the church was more important than the exterior; therefore it was distinguished by its emphasis on the interior layout and decoration imposed by religious needs.

➢　　　When Christians grew up and could freely perform their religious duties, they sought an adequate type of ancient Greco-Roman architecture, large enough to serve the gathering of the first Christian group. The main type of old worship Christian buildings was an elongated rectangular hall that may be single-naved or multiple-naved. It is dictated by functional reason that is the need to accommodate a large number of believers in front of the holy bema.

➢　　　The early Christians tried to focalize on the clear geometric shapes in the architecture of the first churches.

Study methodology

In total, 128 temples were examined in my article, certainly, they constitute the vast majority of old churches in the selected regions during the required period. Special attention was given to the location, for this reason, they will be tabulated later in three tables, sorted by location. Knowing that there are no architectural differences between coastal and mountain churches, but the limestone is mostly used in the mountain area and the sandstone is mostly used in coastal areas.

The purpose of this research is to explain the evolution of the ecclesiastical parts of the studied churches, using logical analysis and leading to more clear scientific results. Explanation methodology for each part is very obvious, first comes history, then architectural description, then examples of churches in Lebanon attached with figures.

In this particular article, the historical evolution of our ancient churches imposes us to write about the Greco-Roman architectural influence that was an essential integral part of our local history. International history, which has no immediate architectural effect, is not part of my current research.

The architectural parts of the Lebanese historic churches and their origin

Although, many temples can be adjoined by additional volumes from the west (i.e., propylaea). The building intended specifically for Christian ritual in Lebanon consists of two basic architectural parts that are:

➢　　　The main nave for the laity. It is the largest place in the church, where the people stand during the liturgy to pray.

➢　　　The bema or the Sanctuary for the clergy. It is a raised platform in the eastern end, within this holy area there is the altar table. It is separated from the main nave by an iconostasis, literally a wall of icons, with three or two doors, the central door (royal door) and the two doors to the right and left (deacons' doors).

Generally, it is widely supposed that the width of the historic churches is about 1/3 of the length, but in Lebanon, it is often about 1/2.

There is a characteristic contemporary Gyneconite, which is a special place for women to be isolated from men, in the temple of Koura-Enfeh-Our Lady of The Natour (Figure 1). The Gyneconite is a mezzanine above the side aisles or the narthex at the west

end of the temple, where women and children used to stand. The term is taken from the Greek word "γυναικωνίτης" that means it belongs to the woman. Some known parts of the Byzantine architecture are absent in our churches, such as the ancient Greco-Roman atrium that is an open-air court space surrounded by walls or columns in front of the west side.

Figure 1. A contemporary Gyneconite of Koura-Enfeh-Our Lady of the Natour.

General information about propylaea

First of all, it is necessary to specify some main terms which will be applied in our research: A propylaea, propylea or propylaia means the front part in the Greek language "Προπύλαια" that forms the entrance to an ancient temple. It is a very important architectural part that is formed of porches, narthexes and outer-narthexes.

A propylaea exists in many Lebanese churches as it is tabulated later in three tables at the end of this article.

I note that many times the use of the Greek words narthex and outer-narthex in other languages is not accurate. In this regard, we will specify that the narthex and the exonarthex have generally cross-vaulted ceilings and must be equal or nearly equal to the naos by width and height. They were built in the period of the Crusaders, so they belong to the Crusader architecture or mixed-character architecture, according to my journal article in Lebanese Science Journal, entitled "The morphological characteristics of the old Lebanese churches in Koura, Batroun, and Byblos, from the 8th Century to the 13th Century", Vol.20, No.20, 2019.

The exonarthex or the outer-narthex

The prefix "exo" of the word exonarthex means "outer" in the Greek language. The exonarthex is usually located along the west narrow side, in front of the church

façade, occupying the entire width of the building. It is a rectangular arched passage that is covered with a cross-vaulted ceiling, frequently at the same height as the temple. The entrance from the outer-narthex to the narthex or the main nave is done by an axial access door from the west. This outer arched covered passage is a distinctive Greco-Roman architectural element and it gives immensity to the church's volume.

There is an interesting case in the temple of Bkeftine-Our Lady of the Dormition & St. George, where the west wall of the temple was removed to be opened to the exonarthex and later the exonarthex's openings were closed; it is shown in Figure 2.
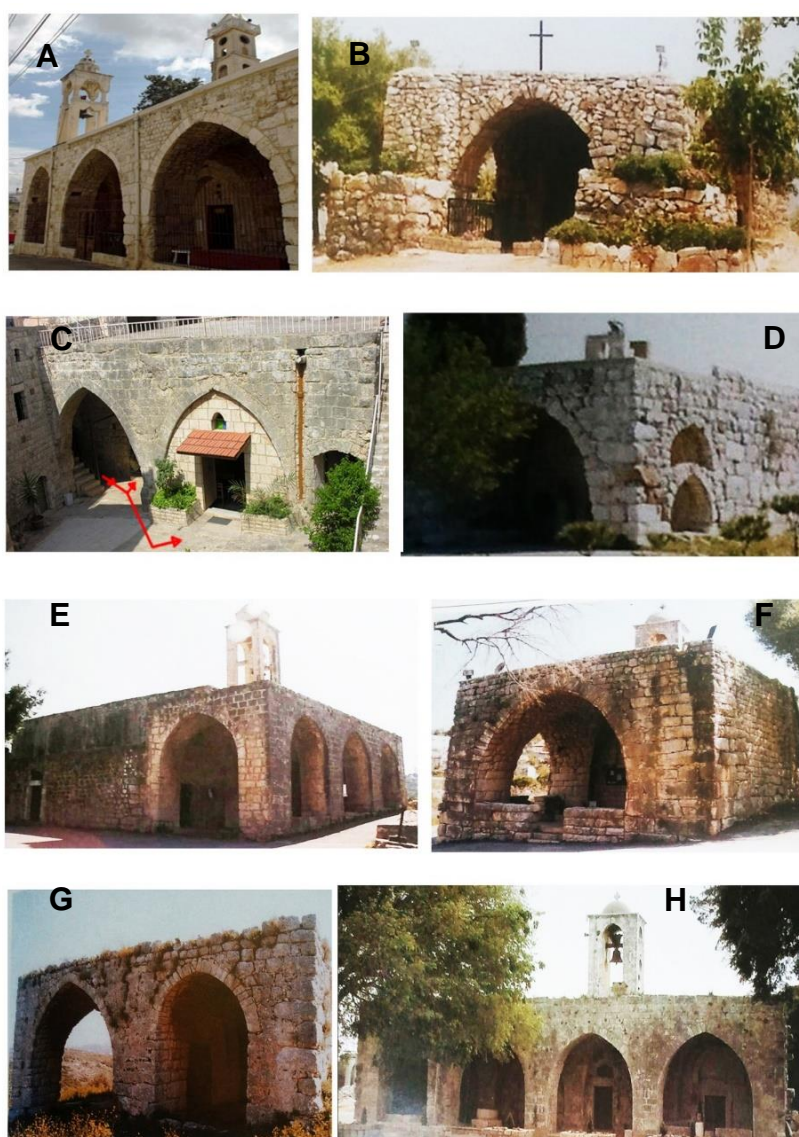

Figure 2. Outer-narthexes of some historic churches, (A) Koura-Amioun-St George Al Dahliz, (B) Koura-Bhabboosh-Our Lady of Al Rass, (C) Koura-Bkeftine-Our Lady of the Dormition & St George, (D) Batroun-Edde-St Mammes, (E) Batroun-Edde-St Sava, (F) Batroun-Kfar Hay-St Sava, (G) Batroun-Rachkida-St Korkis, and(H) Batroun-Smar Jbeil-Sts Basilios & Nohra.

Such temples exist in the following areas in Lebanon:
- Koura – Amioun - St. Phocas (Destroyed - Crusader architecture).
- Koura - Amioun - St. George Al Dahliz (Crusader architecture - It's atypical because the outer-narthex adjoins the temple from the north); it is shown in Figure 2.
- Koura - Bhabboosh-Our Lady of Al Rass (Mixed-character architecture); it is shown in Figure 2.
- Koura - Enfeh – St. Simon & Archangel Michael (Destroyed / Mixed-character architecture).
- Koura - Bkeftine Our Lady of the Dormition & St. George (Mixed-character architecture).
- Batroun – Bchaaleh - St. Domitian (Destroyed / Mixed-character architecture).
- Batroun – Edde-St. Mammes (Mixed-character architecture); it is shown in Figure 2.
- Batroun – Edde - St. Sava (Crusader architecture); it is shown in Figure 2.
- Batroun - Kfar Hay -St. Sava (Mixed-character architecture); it is shown in Figure 2.
- Batroun – Rachkida - St. Korkis - the first church (Crusader architecture); it is shown in Figure 2.
- Batroun - Smar Jbeil-Sts Basilios & Nohra (Crusader architecture); it is shown in Figure 2.
- Byblos - Chamat-St. Thecla & St. Stephen (Destroyed / Mixed-character architecture).
- Byblos - Mayfouk-Our Lady of Elige (Destroyed / Mixed-character architecture).

However, when we see some traces of a destroyed cross vault on the outer west wall, they indicate that there was once an outer-narthex. Such temples exist in the following areas in Lebanon:
- Koura-Amioun-St. Phocas (Crusader architecture); it is shown in Figure 3.
- Koura - Enfeh-St. Simon & Archangel Michael (Mixed-character architecture); it is shown in Figure 3.
- Batroun - Bchaaleh-St. Domitian (Mixed-character architecture); it is shown in Figure 3.
- Byblos - Chamat-St. Thecla & St. Stephen (Mixed-character architecture); it is shown in Figure 3.
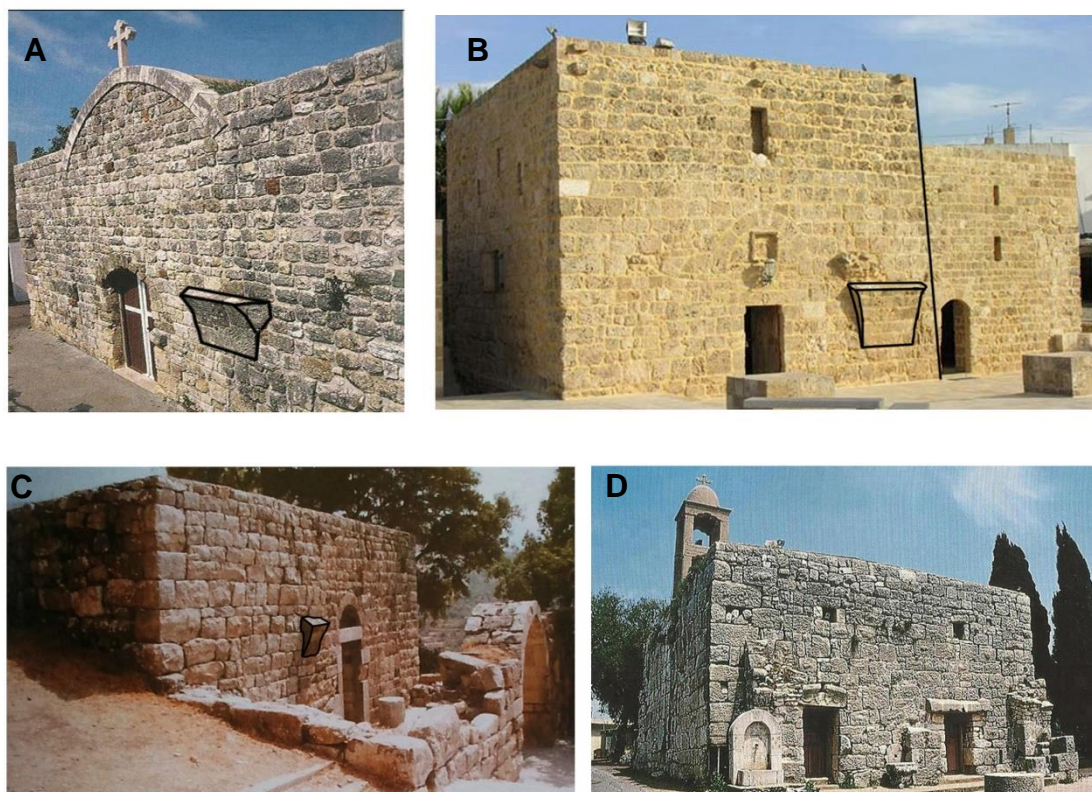- Byblos - Mayfouk-Our Lady of Elige (Mixed-character architecture).

Figure 3. Traces of old destroyed outer-narthexes, (A) Koura-Amioun-St Phocas, (B) Koura-Enfeh-St Simon & Archangel Michael, (C) Batroun-Bchaaleh-St Domitian, and (D) Byblos-Chamat-St Thecla & St Stephen.

The narthex

Since the 5th century BC, a lot of ancient Greek temples had an inner private space just after the entrance gate, occupying the entire width of the building. This area, which was known as Chalkidikon, led to the existence of the narthex in the Christian Churches.

In the early Christian centuries, it was the place of catechumens, who had not yet been baptized but attended catechesis classes, because they were not allowed to attend the mystery of the Divine Liturgy inside the church. It occupies the entire interior west width side of the entrance that leads to the main nave or the naos, where the faithful are gathered. It is separated from the naos by a wall with axial apertures. The access to the narthex from outside or the outer-narthex is done through lateral doors on the west because the catechumens did not have the right to look directly at the holy sanctuary. It is a rectangular part of the temple that is usually covered with cross vaults at the same height as the temple.

In Lebanon, there is only one narthex that keeps its basic form in Byblos - Maad - St. Charbel the Martyr (Mixed-character architecture); it is shown in Figure 4. It is separated from the main nave by two openings, one axial and one lateral. But here, the entrance from outside to the narthex is done through an axial door. This narthex, which

was built a little later, is triple-naved and it is the only narthex that is covered with three barrel vaults.

Figure 4. The only one old narthex of Byblos-Maad-St Charbel the Martyr.

According to the researches of the author in the historic churches of Lebanon, the entrance area, which is covered with a cross-vaulted ceiling, could have been previously a narthex. Due to magnification after the increase in the number of religious participants, the eastern wall of the narthex was removed to make it as one-room with the naos, especially since there is no longer any functional reason to exist. In this case, I will use the term "*open-narthex*".

Churches with open-narthex, where its eastern wall was removed to be opened to the inner chamber, are located in Koura; only one church is located in Batroun. All the open-narthexes are covered with cross vaults and they are:
-        Koura - Enfeh-Our Lady of the Wind (Mixed-character architecture). It was added a little later; it is shown in Figure 5.
-        Koura -Kaftoun-Our Lady of the Dormition (Mixed-character architecture). It is carved into the natural rock / new extension with a barrel-vaulted ceiling.
-        Koura - Kaftoun-St. Sergius & St. Bacchus (Crusader architecture).
-        Koura - Kfar Hazir-Our Lady of The Dormition (Local architecture). It is contemporary with a new concrete slab.
-        Koura - Kousba-St. Dimitrios & St. Nicholas (Mixed-character architecture); it is shown in Figure 5.
-        Koura - Kousba-Our Lady of the Nativity (Local architecture). It is contemporary with a new concrete slab.
-        Koura - Kousba-Our Lady of Hamatoura (Mixed-character architecture); there is a small area in front of the open narthex that is covered with a barrel vault. It is a later extension as shown in Figure 5.

- Batroun - Hamat-Our Lady of Al Nouriyeh (Mixed-character architecture); it is shown in Figure 5.
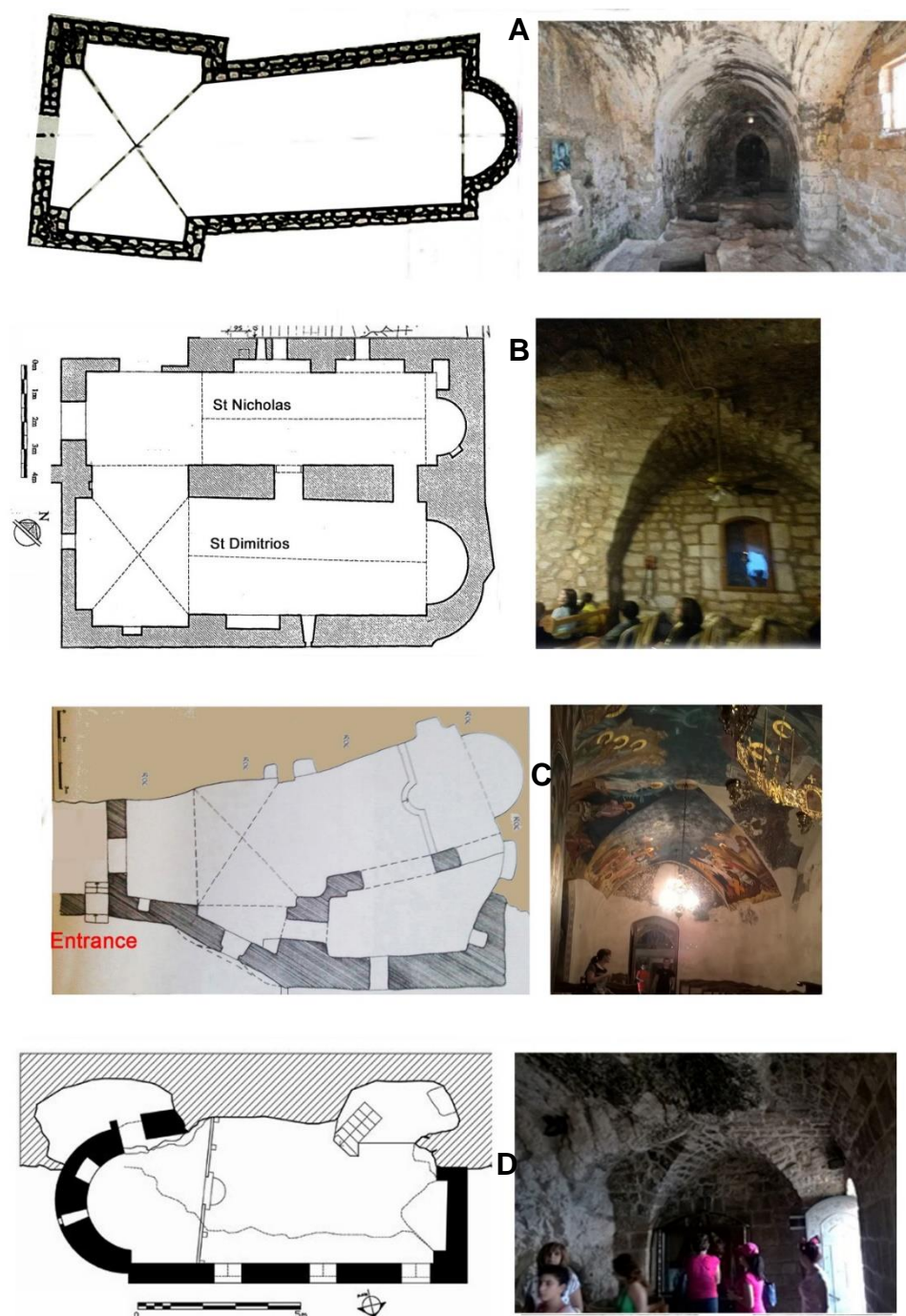

Figure 5. Open-narthexes of some historic churches, (A) Koura-Enfeh-Our Lady of Wind, (B) Koura-Kousba-St Dimitrios & St Nicholas, (C) Koura-Kousba-Our Lady of Hamatoura, and (D) Batroun-Hamat-Our Lady of Al Nouriyeh.

The porch

It is a very important architectural element in archaeological temples, where it was supported by columns or walls. The porch was designed to emphasize the access and to give a monumental appearance to the entrance of the old Greek temples. This element is considerably narrower and lower than the naos, so it does not occupy the entire width and does not reach the height of the church as we have seen previously about outer-narthex.

In Lebanon, It is an outer arched extension, projecting in front of the main western entrance and forming about 1/3 of the total length. All the porches are supported by two blind walls and they are covered with a barrel vault. The transition from the porch to the main nave is usually done by a central door.

Most of the ancient Lebanese churches with porch belong to the local architecture and are single-naved /single-apsed, according to my accepted journal article in Lebanese Science Journal, entitled "The typological classification of the old Lebanese churches in Koura, Batroun, and Byblos, from the 8th Century to the 13th Century", that will be published in a few days.

These churches are located especially in Byblos and they are:
- Koura - Kfar Aaqa-St. Nohra (Local architecture); it is shown in Figure 6.
- Koura - Rishdibbeen-St. Jacob (Local architecture).
- Batroun-Abrine-kfarkhollos-St. Sassine (Local architecture); it is shown in Figure 6.
- Batroun - Smar Jbeil-Our Lady of the Help (Mixed-character architecture); it is shown in Figure 6.
- Byblos - Ain Kfaa-St. Simon and St. Abdas (Local architecture).
- Byblos - Bahdidat-St. Nicholas & Our Lady of Bzez (Local architecture); it is shown in Figure 6.
- Byblos - Bahdidat-St. Theodoros Stratilatis (Local architecture); it is shown in Figure 6.
- Byblos - Bejji-Our Lady of al Mazraa (Local architecture).
- Byblos - Edde-St. Elias (Local architecture); it is shown in Figure 6.
- Byblos - Edde-Prophet Lichaa (Local architecture).
- Byblos - Edde-St. Theodoros & St. John (Destroyed / Local architecture).
- Byblos - Gharzouz-40 Martyrs (Mixed-character architecture); it is shown in Figure 6.
- Byblos - Habil-Our Lady of Habil (Destroyed / Local architecture).
- Byblos - Jbeil Town-St. Simon Stylites (Crusader architecture). Only here, it is big and it reaches the height of the domed church's roof; it is shown in Figure 6.
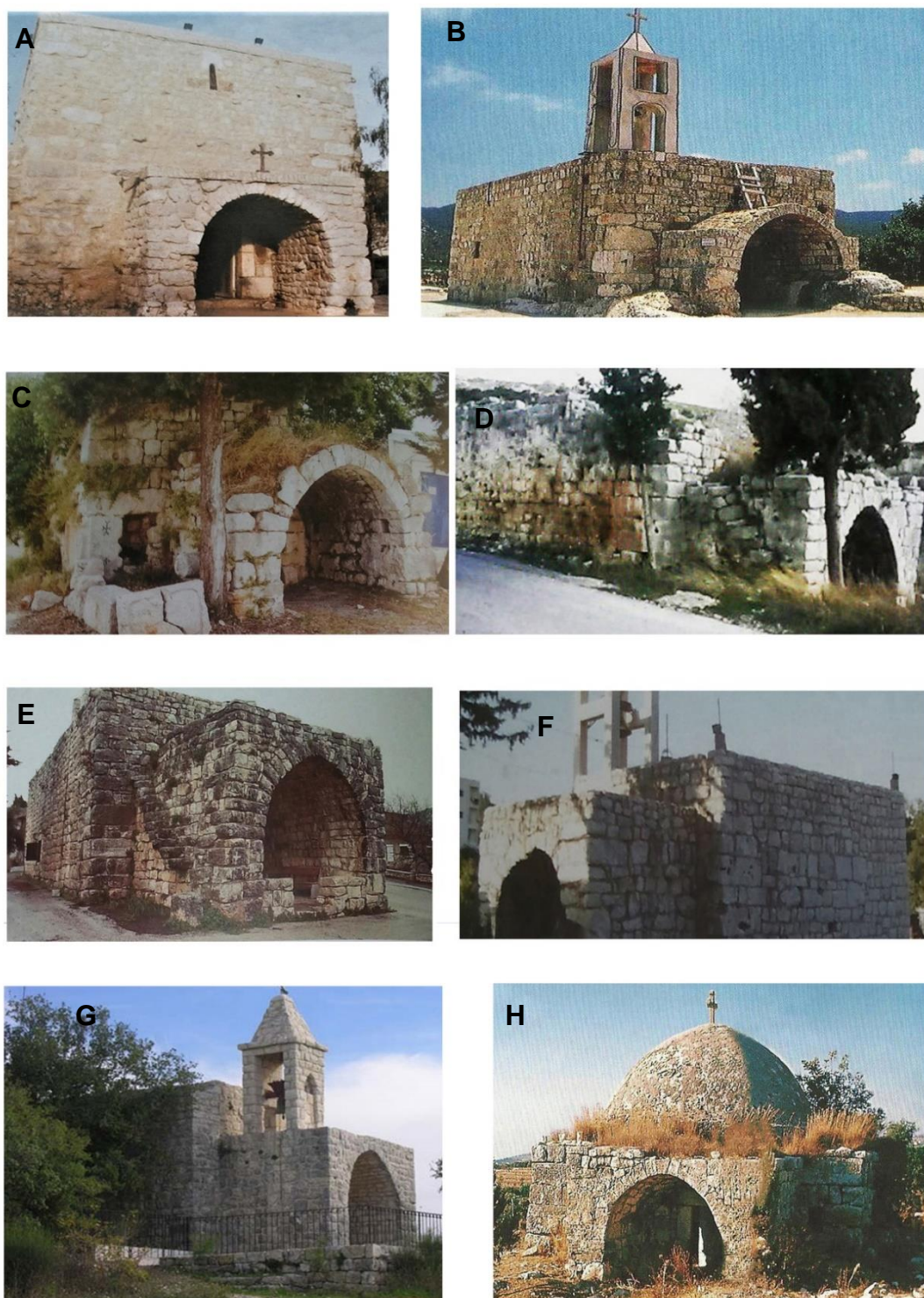- Byblos - Michhlan-St. Edna (Destroyed / Local architecture).

Figure 6. Porches of some historic churches, (A) Koura-Kfar Aaqa-St Nohra, (B) Batroun-Abrine-kfarkhollos-St Sassine, (C) Batroun-Smar Jbeil-Our Lady of the Help, (D) Byblos- Bahdidat-St Nicholas & Our Lady of Bzez, (E) Byblos-Bahdidat-St Theodoros Stratilatis, (F) Byblos-Edde-St Elias, (G) Byblos-Gharzouz-40 Martyrs, and (H) Jbeil Town-St Simon Stylites.

When we see some traces of a destroyed barrel vault on the outer west wall or some traces of an upright old wall standing beside the main door, they indicate that there was once a porch. Such temples exist in the following areas in Lebanon:

- Byblos- Edde-St. Theodoros & St. John (Local architecture); it is shown in Figure 7.
- Byblos - Habil-Our Lady of Habil (Local architecture); it is shown in Figure 7.
- Byblos - Michhlan-St. Edna (Local architecture).

Figure 7. Traces of old destroyed porches, (A) Byblos-Edde-St Theodoros & St John-New picture of the porch, (B) Byblos-Edde-St Theodoros & St John-old picture of the porch, and (C) Byblos-Habil-Our Lady of Habil.

The naos or the main nave

The naos, which is from the Greek word "ναός", is the inner chamber of an ancient Greek temple in classical antiquity. At the beginning of Christianity, it has used to indicate to the central volume or the primary area of the internal church space, where the ceiling symbolizes the sky and the floor symbolizes the earth.

It occupies the largest area of the temple because it is the place of the faithful, where people stand to participate in their religious rituals. The central nave is located in front of the sanctuary, taking usually a rectangular shape, although a few times it can be a square (Koura- Amioun-St. Phocas).

According to the Greek tradition, the women should sit to the left (north) section and the men to the right (south), although in the oldest Greek churches there were only seats around the walls for elderly people.

According to my journal articles in Lebanese Science Journal, entitled "The morphological characteristics of the old Lebanese churches in Koura, Batroun, and Byblos, from the 8th Century to the 13th Century", and "The typological classification of the old Lebanese churches in Koura, Batroun, and Byblos, from the 8th Century to the 13th Century", most temples of Lebanon are single naved but there are also double and triple naved churches, which have three or two longitudinally parallel naves. The interior space can be emphasized by a colonnade, a row of columns supporting the roof, or by an arcade, a covered passageway with arches. The capital, the top section of a column, is usually in Doric style (Byblos – Chikhane - St Thecla and Byblos – Chamat - St Thecla & St Stephen); they are shown in Figure 8.
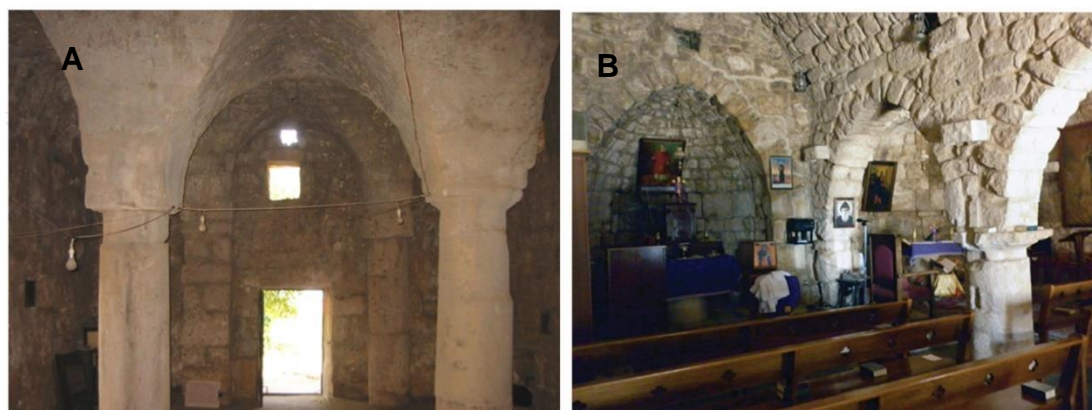

Figure 8. Naoses of some historic churches, (A) Byblos-Chikhane-St Thecla, and (B) Byblos-Chamat-St Thecla & St Stephen.

The sacred bema or the sanctuary

The term bema is derived from the ancient Greek world (βῆμα), which means both 'step' and 'platform'. It was used to refer to the place where the orators used to speak with the citizens.

The sacred bema, which is usually a raised rectangular shape, composes about 1/3 of its main temple's size and occupies the eastern end of the temple. It represents the kingdom of God, where the sacred invisible world (sanctuary) is separated from the secular visible world (main nave) by the iconostasis. Also, the kingdom of God is represented by its elevated platform that reflects the hierarchical structure of the church, where it is always higher than the rest of the floor with one, two or three steps, under the influence of the Greco-Roman architecture.

In this sacred place, the altar table is located to prepare the holy mysteries, especially the mystery of the Eucharist. Usually, this place is intended for clergy and not

for the laity, but during the Byzantine times, also the Emperor was allowed to enter, as an honorable sacred person.

As it is known, it ends in an apse with a triumphal arch and it includes two important built architectural forms that are Prothesis and Diaconicon. They will be explained in the following paragraphs:

Apse of the church

In the depth of the cella, which is the main inner area of the ancient Greco-Roman temple, there was usually a semicircular niche. It was covered with a quarter-dome to highlight the statue of God, which was placed in its center.

The apse of the sanctuary is the most distinctive architectural part. It is centered on the eastern narrow side of the church, occupying the most area of the wall. It is usually semicircular in plan with a diameter little smaller than the width of the temple and covered with a quarter-spherical vault, forming a welcoming shape in the depth. Sometimes the apse is flat in plan with a flat cover (Byblos-Jbeil Town-Poor Mother); it is shown in Figure 9. The internal stone cornice, which protrudes from the base of the apse's quarter-sphere, has always been a distinct Byzantine character (Batroun-Asya-Our Lady of the Castel); it is shown in Figure 9.

Figure 9. Interior views of old apses, (A) Byblos-Jbeil Town-Poor Mother, and (B) Batroun-Asya-Our Lady of the Castel.

According to my accepted journal article in Lebanese Science Journal, entitled "The typological classification of the old Lebanese churches in Koura, Batroun, and Byblos, from the 8th Century to the 13th Century", the apse can protrude from the east wall in a semicircular, rectangular and polygonal shape (Batroun-Abrine – kfarkhollos - St. Sassine); it is shown in Figure 10, or it may be inscribed within the flat east wall (Koura- Barghoun-St. Barbara). The exterior cover may be flat (Byblos-Amchit-St. Zakhia) or a quarter-dome, usually lower than the roof of the main temple (Batroun-Abrine – kfarkhollos - St. Sassine). In the old Lebanese churches, we consider that most of Crusader apses are a little different from the locals because they are being approximately on the same level as the church's roof and larger than the topical churches (Byblos-Gharzouz - 40 martyrs); it is shown in Figure 10.
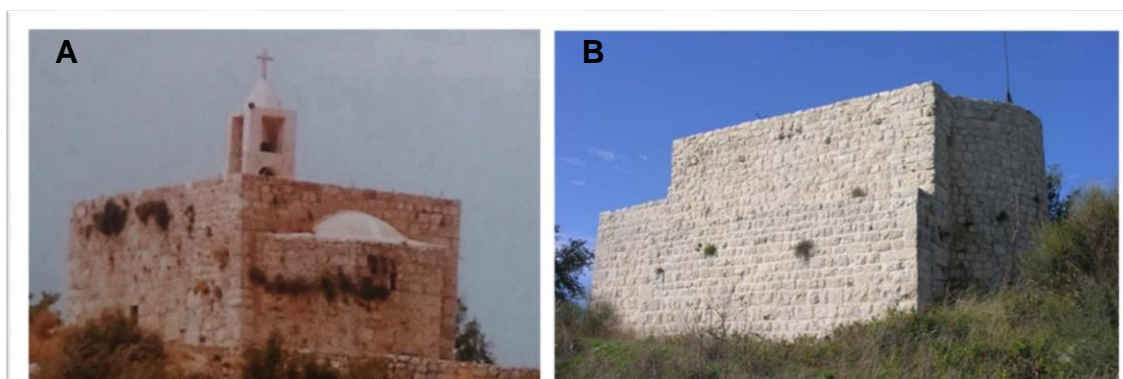
Figure 10. Exterior views of old apses, (A) Batroun-Abrine-Kfarkhollos-St. Sassine, and (B) Byblos-Gharzouz – 40 martyrs.

The triumphal arch

The triumphal arch is the arch of the apse's opening in the sanctuary. This name comes from the Greek word "θριαμβικός" and it used in Greco-Roman architecture as a symbol of glory. So also, in ecclesiastical architecture, it symbolizes the triumphant church. The shape of the triumphal arch follows the inner ceiling of the church, which is usually pointed barrel-vaulted in Lebanon (Byblos-Blat al - Mdamit - St. Domitian) and few times semicircular (Byblos-Barbara al - St. Sergius).

In some Crusader churches, we can notice the existence of the double triumphal arch. These churches are:
- Koura - Enfeh-St. Catherine (Crusader architecture); it is shown in Figure 11.
- Koura - Qolhat-our lady of Balamand (Crusader architecture).
- Koura – Amioun - St. George Al Dahliz (Crusader architecture); it is shown in Figure 11.
- Batroun - Abrine-St. Charbel the Martyr (Mixed-character architecture).
- Batroun - Sghar-Archangel Michael (Mixed-character architecture).
- Batroun - Smar Jbeil - Our Lady of the Help. (Mixed-character architecture).
- Byblos - Jbeil Town-Our Lady of Najat (Crusader architecture).
- Byblos - Jbeil Town-Our Lady of the Gate (Crusader architecture); it is shown in Figure 11.
- Byblos - Jbeil Town - St. John Marcus (Crusader architecture); it is shown in Figure 11.
- Byblos - Mayfouk-al Qattara-St. Moura (Local architecture - new addition).
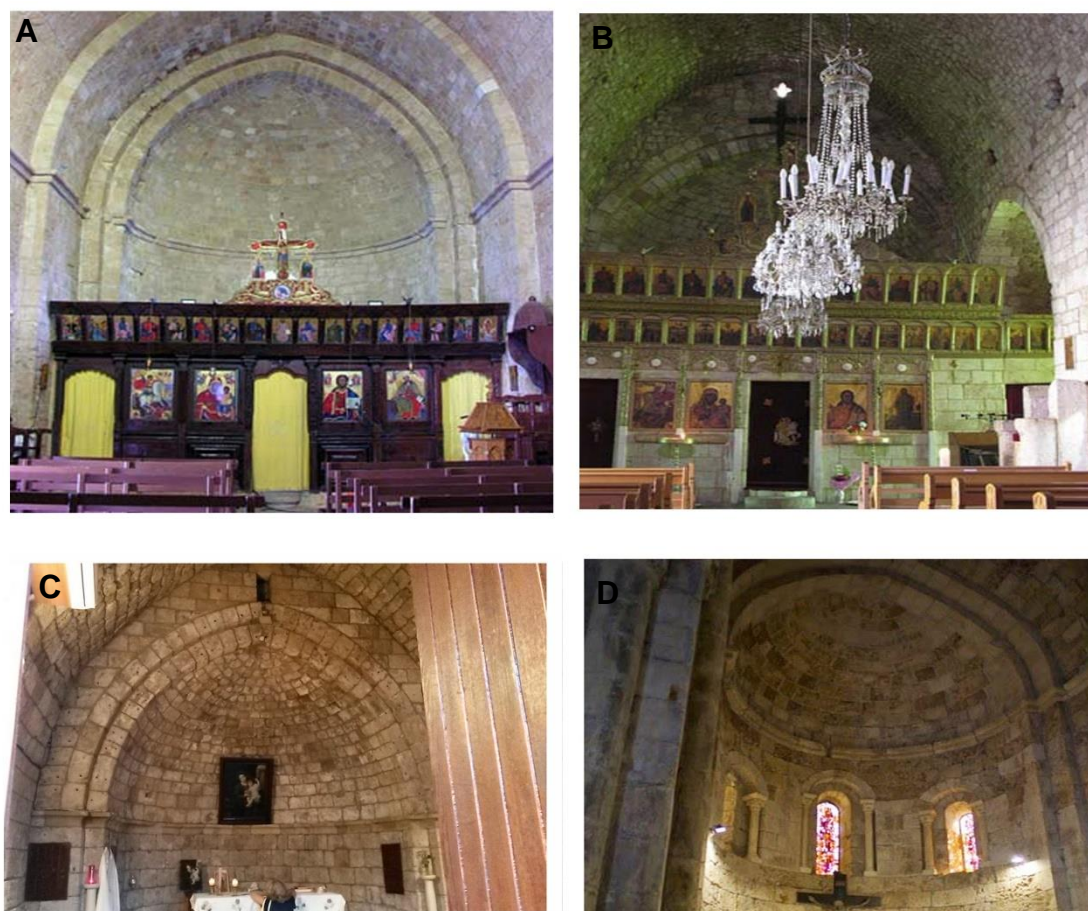- Byblos - Mayfouk-St. John (Local architecture - new addition).

Figure 11. Double triumphal arches of some historic churches, (A) Koura-Enfeh-St Catherine, (B) Koura-Amioun-St George Al Dahliz, (C) Byblos-Jbeil Town-Our Lady of the Gate, and (D) Byblos-Jbeil Town- St John Marcus.

The Prothesis and the Diaconicon

The function of the Orthodox Byzantine Divine Liturgy is particularly evident in the organization of the eastern part of the sanctuary, where it mostly includes two niches, the Prothesis and the Diaconicon. Two small niches, which are built at a distance from the floor, are inscribed within the flat east wall on the right and left sides of the sanctuary. They are semicircular or rectangular in plan and arched or rectangular in façade. These niches are covered with a flat or barrel or quarter-spherical vault.

The Diaconicon doesn't play an important role in the church, consequently, it doesn't always have a fixed position or it doesn't exist at all. Also, the Prothesis does not play any role in the Catholic Church because the entire Divine Liturgy is done on the altar table. On the contrary, it is very essential in the Orthodox Church and it remained permanently constant. The two arched niches on the east wall of some Maronite Catholic Churches of Lebanon are located for decorative purposes only, where they can display various statues of Holy Saints (Byblos - Edde-St. George); as it is shown in Figure 12.
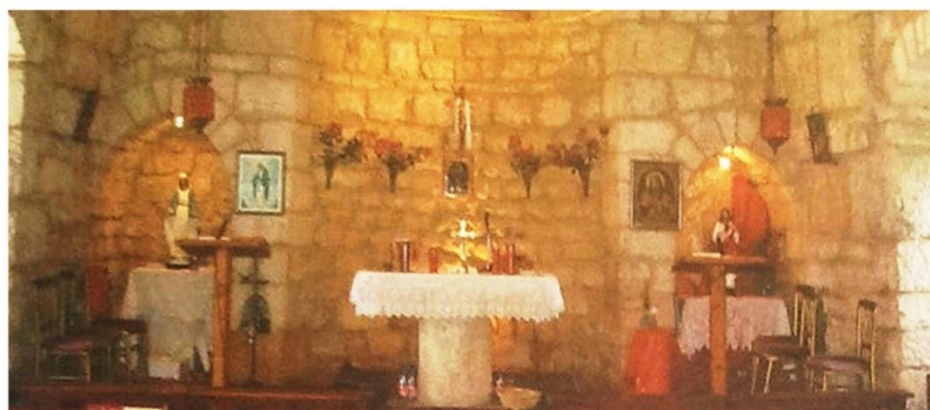
Figure 12. Two arched niches for decorative purposes in Byblos-Edde-St. George.

There is an interesting type of sanctuary in the church of Koura-Qolhat - Our Lady of Balamand (Figure 13), where the holy sanctuary is divided into three parts constructed into the east wall that are: the central apse, the south compartment of Diaconicon and the northern compartment of Prothesis. The two side chambers are connected with the sanctuary through two small access doors. I note that now the Prothesis was transferred to a small niche.
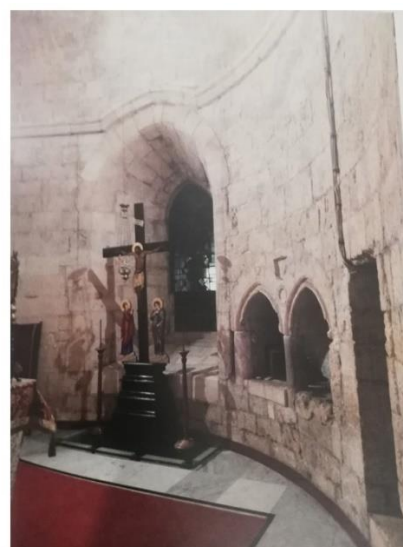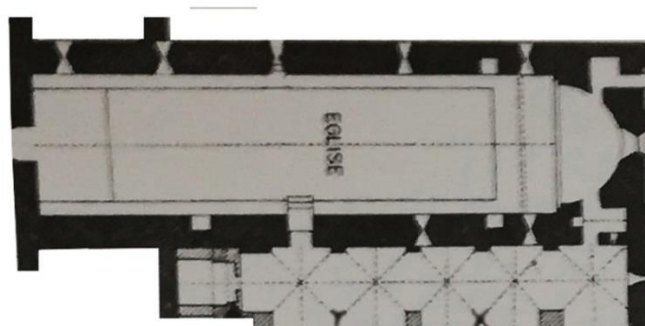
Figure 13. An interesting type of sanctuary in Koura-Qolhat-Our Lady of Balamand.

The Diaconicon

The word Diaconicon originates from the Greek word "Διακονικός" that means it is related to the deacon. At the beginning of the Byzantine era, it was a compartment directly related to the narthex, where the deacons accepted the offerings of the faithful and kept the sacred vessels, the vestments, the books, etc. So, it was served as a vestry, which was a place in a church used for changing into the vestments and as a sacristy,

which was a place in a church used for keeping into the sacred associated liturgical elements that are restricted for ceremonial use by the clergy. Later, it changed position to the southeastern side (right) of the bema opposite to the Prothesis, but it kept the same use.

It isn't a necessary element in the church, so it may be absent in many Lebanese churches. However, the existence of the Prothesis in the northeastern side leads to the necessity of Diaconicon's creation in the southeastern side as a corresponding symmetrical appearance of the sanctuary's elevation (Koura - Barghoun-St. Barbara); it is shown in Figure 14.

Figure 14. The symmetrical appearance of the sanctuary's elevation in Koura-Barghoun-St. Barbara.

The Prothesis

The word Prothesis originates from the ancient Greek word "Πρόθεση" that means "πρό" before + "θεση" place. According to the Byzantine Orthodox Ritual, the Divine Liturgy is prepared in the Prothesis before the transfer to the altar table. It plays a primary role in the church, so it must exist as a niche on the northeastern side (left) of the sanctuary. It symbolizes the Sacred Cave of the Nativity of the Divine Child. For this reason, it usually bears the icon of the Nativity or the Crucifixion or both icons and it contains the Holy Grail with bread and wine. The most Prothesises' niches are arched (Koura-Kousba-Our Lady of Hamatoura), although a few of them are rectangular (Koura-Kousba-St Joseph); they are shown in Figure 15.

A

B

Figure 15. Prothesis's niches in some historic churches, (A) Koura- Kousba-Our Lady of Hamatoura, and (B) Koura-Kousba-St Joseph.

When the Prothesis is not formed in the thickness of the eastern wall, we notice that some fixed or portable structure is used as an alternative solution, which can be a raised marble or stone or wooden table that is located on the northeast side (Koura-Bkeftine-Our Lady of The Dormition & St George). Sometimes, a closed box, containing the necessary liturgical elements, can be found on this table (Koura-Deddeh-St. Anthony). In the church Byblos-Gharzouz- 40 Martyrs the Prothesis is formed as a stone low rectangular corner; they are shown in Figure 16.
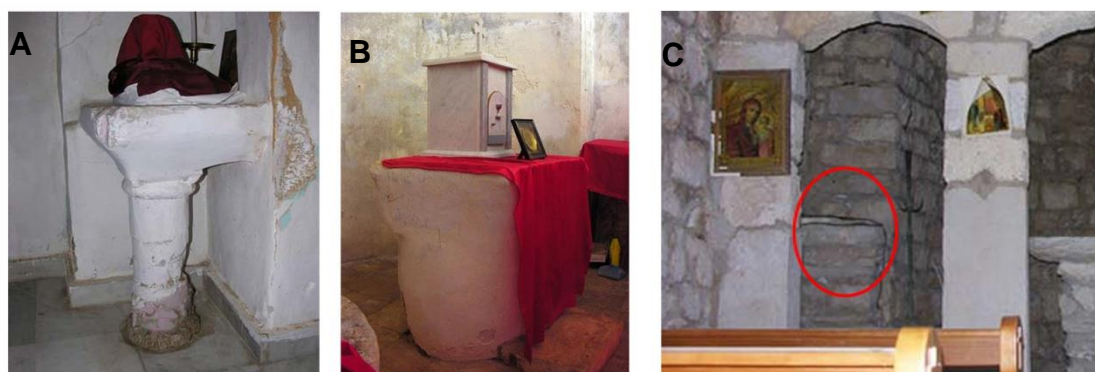
Figure 16. Different forms of Prothesises, (A) Koura-Bkeftine-Our Lady of the Dormition & St George, (B) Koura-Deddeh-St Anthony, and (C) Byblos-Gharzouz-40 Martyrs.

The initial outer stone steps

In many churches, we can see some projecting stones series of steps from the wall that are supported within the wall and stand out to form a stair shape. Unfortunately, most of them are now in very bad condition (Byblos - Moncef al-St George); it is shown in Figure 17.

In some churches of Byblos, there is a distinctive form of steps, where they start from the ground and continue upwards to the roof of the porch then to the roof of the temple, such churches are:

- Edde- Prophet Lichaa (Figure 17).
- Bahdidat-St. Nicholas & Our Lady of Bzez.
- Bahdidat-St. Theodoros Stratilatis.

In the church of Byblos-Maad-St. Charbel the Martyr, the stairs are located in the northwest corner of the narthex as it was shown previously in Figure 4. In the church of Koura-Amioun-St. George Al Dahliz, the stairs are located in the northwest corner of the exonarthex (Figure 17).
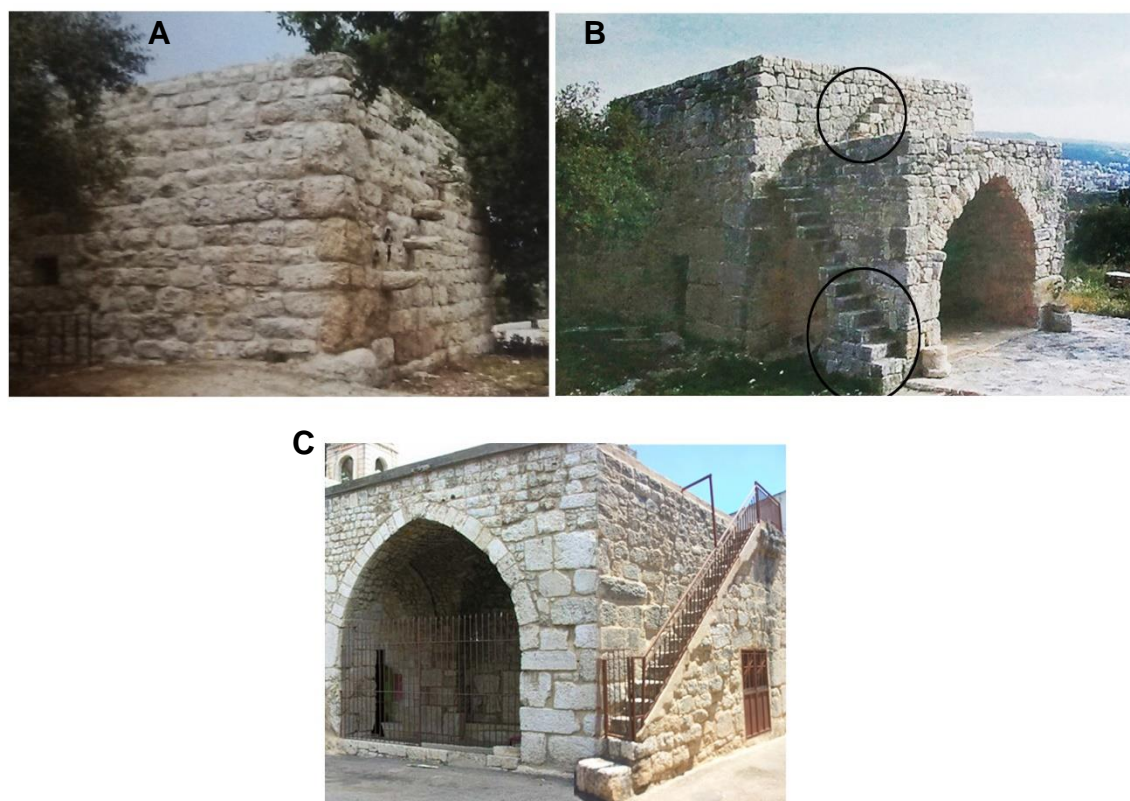
Figure 17. Initial outer stone steps, (A) Byblos-Moncef al-St George, (B) Byblos-Edde-Prophet Lichaa, and (C) Koura-Amioun-St George Al Dahliz.

The initial belfry (bell tower)

The belfry is the architectural part of the temple that houses the church bells. It wasn't known before the Crusader period and therefore it doesn't exist at all in the local temples. There are only two initial bell towers in two Crusader churches in Koura, which are:

- Koura-Qolhat - Our Lady of Balamand, on the southeast side (Figure 18).
- Koura-Enfeh-Our Lady of the Natour (the lower part only) on the southwest side (Figure 18).

Figure 18. The two initial bell towers, (A) Koura-Qolhat-Our Lady of Balamand, and (B) Koura-Enfeh-Our Lady of the Natour.

These two bell towers are approximately similar. They are incorporated into the main church building and they have a square form with a central arched opening on each side. The last part is a hemispherical dome without a drum that is supported by four corner piers. The transition to the dome is done through four pendentives, which are curved triangles of vaulting formed by the intersection of a dome with its supporting elements. Unfortunately, this hemispherical dome has been destroyed in the Church of Enfeh-Our Lady of the Natour. Two stone cornices turn around it, the first protrudes from the base of the dome and the second protrudes from the base of the central arch. Although, some churches have ancient distinctive bell towers, but they have been built at different times, as later additions.

Tables of historic churches grouped by regions and observations

The total number of churches, which I have examined, is 128 churches. They constitute the vast majority of old churches in the selected regions during the required period and represent all the studied forms:
- 36 churches in Koura; they are shown in Table 1.
- 33 churches in Batroun; they are shown in Table 2.
- 59 churches in the Byblos; they are shown in Table 3.

I will consider that the following four churches as being eight, because each one of them is composed of two independent churches, which are built at different times. It is observed that later connection openings were created within these churches. They are:
1- Koura - Enfeh - St. Simon & Archangel Michael
2- Batroun - Rachkida-St. Korkis (St. George)
3- Batroun - Tannourine Tahta (lower) - Our Lady & St. Anthony
4- Byblos – Bahdidat - St. Nicholas & Our Lady of Bzez (breast)

The purpose of these tables is to display the architectural parts of the ancient churches sorted by locations. Therefore, they are tabulated in three tables 1, 2 & 3.

Table 1. Architectural parts of the churches in Koura.

Nº	Region – Name of the Church	Porch	Outer Narthex	Narthex	Initial Belfry	Initial Outer Steps
1.	Ain Ikreen -St. Edna					
2.	Amioun-St. George Al Dahliz		●			●
3.	Amioun-St. Phocas		● Dest.			
4.	Barghoun-St. Barbara					
5.	Bhabboosh-O. L. of Al Rass		●			
6.	Bkeftine-Our Lady of the Dormition & St. George		●			
7.	Bkeftine-St. Elias the River					
8.	Bsarma-O. L. of the Wilderness					
9.	Btaaboura-St. Romanos					
10.	Bziza-Our Lady of the River					
11.	Bziza-St. Elias					
12.	Dar Bishtar-O. L. of Dar Bishtar					
13.	Deddeh-St. Anthony					
14.	Enfeh-Our Lady of the Natour				●	
15.	Enfeh-Our Lady of the Wind			● Op.		
16.	Enfeh-Saint John the Baptist					
17.	Enfeh-St. Catherine					
18 α	Enfeh - St. Simon & Arch. Michael		● Dest.			
18 β	Enfeh - St. Simon &Arch. Michael					
19.	Ijd Ibreen-O. L. of Marghala					●
20.	Kaftoun-O. L. of the Dormition			●Op. Cont.		
21.	Kaftoun-St. Sergius & St. Bacchus			●Op.		
22.	Kfar Aaqa-St. George					●
23.	Kfar Aaqa-St. Nohra (St. Light)	●				●
24.	Kfar Hazir-Our Lady of the Dormition			●Op.		
25.	Kfar Hazir-St. George & St. Theodoros					
26.	Kfar Qahel-St. Elias the River					
27.	Kousba-O. L. of Hamatoura			●Op.		
28.	Kousba-O. L. of the Nativity			●Op. Cont.		

Nº	Region – Name of the Church	Porch	Outer Narthex	Narthex	Initial Belfry	Initial Outer Steps
29.	Kousba-St. Barbara					●
30.	Kousba-St. Dimitrios & St. Nicholas			●Op.		
31.	Kousba-St. Joseph					
32.	Qalamoun-St. Marina	Cavernous Temple				
33.	Qolhat-Our Lady of Balamand				●	
34.	Rishdibbeen-St. Domitian					●
35.	Rishdibbeen-St. Jacob	●				
36.	Zakroun-St. Sergius & St. Bacchus					●

Op.: Open-Narthex / Dest.: Destroyed / Cont.: Contemporary.

Table 2. Architectural parts of the churches in Batroun.

Nº	Region – Name of the Church	Porch	Outer Narthex	Narthex	Initial Belfry	Initial Outer Steps
1.	Abrine-kfarkhollos-St. Sassine	●				
2.	Abrine-St. Charbel the Martyr					
3.	Asya-Our Lady of the Castel					●
4.	Bchaaleh-St. Domitian		● Dest.			
5.	Bqosmaya-Our Lady of Bzez (breast) & St. Simon					
6.	Douma-St. Challita					
7.	Douma-St. Domitian					
8.	Douma-St. John the Baptist & Our Lady of the Nativity					
9.	Douma-St. Nohra (St. Light)					
10.	Edde-St. Mammes		●			
11.	Edde-St. Sava		●			●
12.	Hamat-O. L. of Al Nouriyeh			● Op.		
13.	Hardine-St. Challita & St. Nohra	Cavernous Temple				
14.	Hardine-St Estephan (Stephen)	Stone Carved Temple				
15.	Hardine-St. George & St. Edna					
16.	Hardine-St Phocas & St. George					
17.	Hardine-St. Theodoros					
18.	Kfar Chleymane-O. L. of Naya	Cavernous Temple				
19.	Kfar Hay-Our Lady of Kfar Hay or Najat					●
20.	Kfar Hay-St. Sava		●			
21.	Kfar Hilda-O. L. of Al Kharayeb					
22.	Kfar Hilda-St. Peter					
23.	Kfifan-Our Lady of Ramat					

Nº	Region – Name of the Church	Porch	Outer Narthex	Narthex	Initial Belfry	Initial Outer Steps
24.	Koubba-St. Savior					
25	Mrah Chdid-Deir Chouah- St. Sergius & St. Bacchus					●
26 α	Rachkida-St. Korkis (St. George) The first church		●			●
26 β	Rachkida-St. Korkis (St. George) The second church					
27.	Sghar-Archangel Michael					
28.	Sghar-St. Sophia & St. Stephen					●
29.	Smar Jbeil-O. L. of the Help	●				
30.	Smar Jbeil-Sts Basilios & Nohra		●			●
31.	Tannourine Fawqa(upper)- St. Challita & St. George					
32 α	Tannourine Tahta(lower) - Our Lady & St. Anthony					
32 β	Tannourine Tahta(lower) - Our Lady & St. Anthony					
33.	Tannourine-Ain al Raha Fawqa (upper) - St. George					

Op.: Open-Narthex / Dest.: Destroyed / Cont.: Contemporary.

Table 3. Architectural parts of the churches in Byblos.

Nº	Region – Name of the Church	Porch	Outer Narthex	Narthex	Initial Belfry	Initial Outer Steps
1	Abadat-kfour-Saqiet el Khayt-Bouwali valley-St. Simon Stylites	Cavernous Temple				
2	Abadat-Our Lady of Wataya					
3	Ain al Dilbi-O. L. of al Midan					
4	Ain Kfaa-St. Simon & St. Abdas	●				
5	Amchit-Kfarsala-St. John the Baptist					
6	Amchit-Our Lady of Naya					●
7	Amchit-St. Zakhia					●
8	Annaya-Kfarbaal-St. Joachim and St. Anne					
9	Aqora al-St. Edna					
10 α	Bahdidat - St. Nicholas & Our Lady of Bzez (breast)	●				●

Nº	Region – Name of the Church	Porch	Outer Narthex	Narthex	Initial Belfry	Initial Outer Steps
10 β	Bahdidat - St. Nicholas & Our Lady of Bzez (breast)					
11	Bahdidat-St. Theodoros Stratilatis	●				●
12	Bejji-Our Lady of al Mazraa	●				
13	Bekhaaz-St. George					
14	Bentael-St. Mammes					
15	Barbara al-St. John					
16	Barbara al-St. Sergius					●
17	Blat al-Mdamit-St. Domitian					
18	Blat al-St. Elias					
19	Bshalli- St. George					
20	Chamat-St Thecla & St. Stephen		● Dest.			
21	Chikhane-St. Simon Stylites					●
22	Chikhane-St. Thecla					●
23	Chmout-St. Phocas					
24	Dmalsa-St. Nohra & St. Sophia					
25	Edde-St. Elias	●				
26	Edde-St. George					●
27	Edde-Pr. Lichaa	●				●
28	Edde-St. Theodoros & St. John	● Dest.				
29	Edde-the Archangels Michael & Gabriel					
30	Fdar al Tahta-Beshtlide-Our Lady of the Help					
31	Fidar al-St. Zakhia					
32	Gharzouz-40 Martyrs	●				●
33	Habil-Our Lady of Habil	●Dest.				●
34	Habil-St. George					
35	Habil-St. Sergius and St. Bacchus					
36	Hakel-Our Lady of Hakel					
37	Hisrail-Kawr al Hawa-St. Theodoros					
38	Jbeil Town-Mehrin-St. Marina					
39	Jbeil Town-Our Lady of Najat					
40	Jbeil Town-O. L. of the Gate					
41	Jbeil Town-Poor Mother					
42	Jbeil Town-St. John Marcus					
43	Jbeil Town-St. Nohra (St. Light)					
44	Jbeil Town-St. Simon Stylites	●				
45	Jbeil Town-Zgheib -St. Aquilina					
46	Kafer al-St. George					
47	Maad-St. Charbel the Martyr			●		●

Nº	Region – Name of the Church	Porch	Outer Narthex	Narthex	Initial Belfry	Initial Outer Steps
48	Mastita-St. Sava					
49	Mayfouk-al Qattara-St. Moura					
50	Mayfouk-Bernassa-St. George					
51	Mayfouk-Bernassa-St. Sava					
52	Mayfouk-Our Lady of Elige		● Dest.			
53	Mayfouk-St. John					
54	Michhlan-St. Edna	●Dest.				
55	Moncef al-St. George					●
56	Moncef al-St. Mammes					
57	Qassuba Hill-O. L. of Qassuba					
58	Rihane al-St. Theodoros					●
59	Tartij-St. George					

Op.: Open-Narthex / Dest.: Destroyed / Cont.: Contemporary.

As a consequence, we can conclude these following observations:

In Koura:
- Churches with porch are two.
- Churches with outer-narthex are five.
Two outer-narthexes are in ruins.
- Churches with narthex are seven.
All narthexes are open.
Two narthexes are contemporary.
- Two churches have initial belfry.
- Seven churches have initial outer steps.

In Batroun:
- Churches with porch are two.
- Churches with outer-narthex are six.
One outer-narthex is in ruins.
- Only one church is with narthex.
The narthex is open.
- Seven churches have initial outer steps.

In Byblos:
- Churches with porch are eleven.
Three porches are in ruins.
- Churches with outer-narthex are two.
The two outer-narthexes are in ruins.
- Only one church is with narthex.
- Fourteen churches have initial outer steps.

It is observed that:
In Byblos, there are most churches with porches and with initial outer steps.
In Batroun, there are most churches with outer-narthex
In Koura, there are most churches with open-narthex.

The original bell towers are located only in Koura

CONCLUSION

The widespreadness of Christianity in Lebanon led to the existence of a large number of churches, which played an important role in the history of Christian architecture that deserves to be analyzed. Even if most local temples are poor, they are important because they give us the opportunity to study the early architecture of Christianity in relation to their function and history.

As a result of our study, we consider that the influence of Greco-Roman architecture is essential in different parts of the Byzantine Church, which was the basis of the old Lebanese architecture. Consequently, many architectural ecclesiastical elements, which originate from the ancient world; were used and modified by the Byzantines with some additions, then implemented in many churches of the Byzantine Empire, Including Lebanon as we have seen in this article.

In this study, we explored the distinguished values of the existing ancient churches in Lebanon that carry constructed features of the old period. Historical monumental temples, which are strongly related to the local socio-politico-cultural situation of time and location, are one of the most important parts of our heritage because they reflect the history of humankind and retrace the period of culture. This rich ecclesiastical architecture makes us proud because we are the heirs of the great ancestors, who left us a precious legacy that is a treasure of culture, art, history and faith.

In cultural heritage preservation, it is vital to determine the current conditions of these churches to be documented. These findings can lead to a more informed assessment of the safety of churches. Preservation and restoration of historical monumental structures require careful systematic studies to accomplish accurate results, in order to preserve these buildings in their original situation and to develop suitable restoration projects. That is why it is important to study them, hoping that the competent authorities will take action to repair the damages of these churches.

ACKNOWLEDGMENTS

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