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The Restoration of Kidane Mehret Church in Sen'afe

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Abstract

The Church of Kidane Mehret stands at 2,450 m above sea level, close to the village of Sen'afe, on the border between Ethiopia and Eritrea. Probably built in the fifteenth or sixteenth century, the church gradually became a ruin in the middle of the last century. Following the intervention of the monks of this church, a restoration program was set up in 2006. With the agreement of the National Museum in Asmara and the World Monuments Fund, funding was collected together by the German Embassy, the French Embassy, and the Alliance Française of Asmara, which made it possible to restore the church, between 2006 and 2008. Teams of workmen and women were created to this end. Only traditional techniques were employed for the masonry of the walls, the wooden roofing, the plastering, and the interior paintwork. This project, which conforms to the Charter of Venice, could serve as an example for similar restorations in the region and as a model for professional training. Finally, a trilingual article (English, German, and Tigrinya) was published in the Collection "Cultures et Patrimoines d'Erythrée", 2009.

Keywords

Eritrea, church, wooden architecture, restoration, Orthodox Church

The town of Sen'afe lies at an altitude of 2,450 m, close to the border of Eritrea and Ethiopia, in the historical province of Tigray. Converted to the Catholic faith in the fourth century AD, this region has more than 200 churches, some are built of stone and wood while others are rock-hewn following an age-old tradition.

The Church of Kidane Mehret is located south of the village of Sen'afe, close to the main road linking Adigrat and AdiKayeh. It was built on a rocky sandstone spur dominating a small plain on which stand the ancient ruins of Matarà, excavated by a French archaeologist, Francis Anfray, in the sixties (Anfray 1963; Anfray 1967).

HISTORICAL BACKGROUND

"From the 7th to the 11th centuries, Tigray witnessed the creation of a series of magnificent churches hollowed out of rock… This is evidence of a very specific architectural flowering linked to the blossoming of a Christianity supported by powerful political forces, since these are funerary edifices" (Lepage and Mercier 2005: 32).

In the village of Sen'afe, for example, there are numerous rock cavities and caves, some of which have been turned into places of worship; one such is on the flanks of the cliff of Amba Matarà[1]. About 12 kilometers to the south of Sen'afe, in Bihat, the

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Church of Enda Tsakan is also largely rock-cut.

In Tigray,

> Architecture, stone carving, the creation of monolithic rock-hewn churches, decorative sculpture, half timbering and carpentry, sculpture in wood, all go to make up the main areas of this vast array of skills. Some of the monuments which have survived bear testimony to the degree of perfection attained when all these arts were brought into play together. (Lepage and Mercier 2005: 32)

Most of the built churches constructed during the fifteenth to seventeenth centuries are rectangular buildings. The sanctuary is generally at the east end, set in such a way that on three of its sides there is a passage, and, on the fourth, to the west, there is a vast room intended for the chanters and the faithful. The walls are generally of half-timbered construction.

The invasion of Tigray in 1530 by a Muslim ruler of Harar, Ahmad ibn Ibrahim, put an end to a very long period of prosperity. The built churches were pillaged and burnt. Towards the end of the sixteenth century, Tigray was again attacked, this time by the Turks, and some of its churches were once again set on fire.

During the eighteenth century, Tigrean power emerged on the national political stage. The rulers of Tigray began promoting an architectural type already prevalent in Amharic countries—a circular building around a central square sanctuary. The origin of round churches remains uncertain, but the oldest surviving examples appear to the fifteenth century. This kind of a church is divided into three concentric zones. The square Maqdas is at the center, its outer wall is usually covered with paintings. It is surrounded by a circular wall forming an ambulatory: This area, the Qeddest, is traditionally reserved for non-officiating priests. Around the Qeddest is another ambulatory, the Qene Mellet (= chanting place) in which stand the dabteras[2]. Such churches were built around Gondar and Lake Tana, in Gojjam and in Wöllo.

Given that the layout of the Kidane Mehret Church is rectangular, it is thought to be earlier than the seventeenth century. It is difficult to give a more accurate date for this church in the absence of dedicatory construction plaques and of paintings bearing either a dater or the name of the artist. The same could be said for the Monastery of Dabra Sîgê, to the south-east of Mendafarâ, which was built on a plan very similar to that of Kidane Mehret, and which seems to be dated to around the sixteenth century.

Kidane Mehret is one of the few remaining churches built using a traditional wooden framework[3], and so it should be considered a significant part of the national heritage of Tigray.

CONCEPT AND HISTORY OF THE PROJECT

The church was probably built between the fifteenth and the seventeenth century. As far as we know, it became partly ruined in the late 1960s. Unable to restore it, some of the priests decided to build a new church some 20 m away, of stone, iron, and concrete. But, two of the oldest monks, who were still in charge of the old church, were deeply attached to it.

In 2000, these monks approached the municipality of Sen'afe, the Eritrean Orthodox Tewahdo Church[4], and the National Museum of Eritrea, in the capital, Asmara with the idea of restoring the old church. The Director of the National Museum, Dr. Yosief Libsekal, in turn, managed to convince some foreign embassies and international organizations (such as UNESCO, ICCROM[5], etc.) to participate in the project. French archaeologists and conservators working at Matarà were invited to visit and to draw up a preliminary study of the church. In 2005, the architect Tristan Schebat produced a detailed study of the church and an overview of the damage. The cost of the restoration program was estimated and submitted to the donors. After some months of discussion, the French and German Embassies in Eritrea accepted to fund the project. International organizations were also involved: ICOMOS[6] and World Monument Fund[7].

The key idea was to employ only local craftsmen, not foreign technicians. The researchers insisted that the restoration should be made in the traditional way. As it was nearly impossible to find such people, the researchers managed to organize training sessions on the site. About a dozen craftsmen were trained to build walls of wood and mud, and some carpenters were trained to cut logs and to produce wooden assemblages.

The restoration program had three main aims:

(1) Restoring the church using traditional techniques and materials;

(2) Capacity-building in terms of training for local workers;

(3) Transmitting this knowledge to the younger generation.

FUNDRAISING

Discussions for raising the necessary funds for the project were carried out in a very friendly atmosphere, under the supervision of the National Museum in Asmara.

The following agreement was finally reached:

(1) The French and German Embassies agreed to share equally the cost of the architectural and technical studies, the salary of the French architect, and to buy the equipment;

(2) The National Museum in Asmara agreed to pay the salaries of the local workers and to provide the wood for the ceilings;

(3) The Alliance Française of Asmara agreed to prepare an article, translate it into French, German, and Tigrinya, to print it and ensure its worldwide distribution (Libsekal and Schebat 2007);

(4) Tristan Schebat was appointed architect-in-chief and Jean-François Breton, director of the project.

THE ARCHITECTURE

The Sen'afe church, like all medieval churches in the region (Breton 2009), is divided into three major sections:

(1) The church is generally entered from its west side. The main door opens on a large room, called the Qene Mahlet (in the Amharic language, meaning narthex in English), into which worshippers and chanters can enter. However, most of the time, the faithful stay outside the church, bowing against its walls and reading the Bible;

(2) The second hall is known as the Qeddest[8]. This area is traditionally reserved for non-officiating priests and for those who receive the sacrament. This is a wide corridor where priests usually walk around the central part (the Maqdas) during the offices;

(3) The central sanctuary is the Maqdas, which only the priests may enter. It is generally closed by red curtains, which are very occasionally opened during parts of the offices. It contains the altar and liturgical materials ("tabots" or altar tablets, crosses, incense burners, Holy Books, chalices, etc.).

WOODEN ARCHITECTURE

The walls of the church are built around a wooden framework. Long horizontal beams are laid parallel to the inner and outer faces of the walls. Cross-beams link these beams with clamps, and their heads (or extremities) protrude outside; there are no posts (i.e. vertical beams) in the walls.

> Wood was used extensively for strengthening the building. Horizontal beams provide a framework held together by the door- and window-frames and by horizontal ties extending through the thickness of the walls and projecting either on both sides or on the exterior only. These projections, seen as resting on or jointed into the upper surfaces of the horizontal beams, are a characteristic feature of Sabaean[9] and later Aksumite architecture, locally named as "monkey-heads"[10].

Small stones fill the gaps inside this wooden framework. There are generally flat stones of schist laid in rows and bound with mud mortar. Horizontal

lines of protruding slates protect the walls from the rain. It is interesting to note that this wooden building technique goes back to antiquity in Tigray (both in Ethiopia and Eritrea). Its earliest attested use is in the Grat Beal Gebri Palace (or administrative building) in Yeha, under excavation by a German archaeological team, and probably dates to around the eighth century BC (Schnelle 2013).

A number of pre-Islamic inscriptions attest to the use of wood in antique buildings in South Arabia, but unfortunately, ancient Ethiopian inscriptions are scarce. Sometimes, they bear witness to the fact that this now woodless region was once able to supply a variety of timber for the "normal" demands of construction. However, as trees were probably never very abundant, the use of wood in building may have represented some degree of free choice between alternative construction materials. As its use became more frequent over time, mainly during the second to sixth centuries AD in South Arabia and in Ethiopia (Tigray), it might also reflect ethnic or cultural connections of the builders (Breton 2015: 228).

Wood is also used to make doors and windows. Doors are generally wooden masterpieces. They are composed of a series of recessed vertical posts, and recessed beams for the thresholds and lintels.

The door frames consist of three recessed "steps" on all four sides (horizontal as well as vertical), with the actual door-opening in its depth. This is the design of doors in medieval Ethiopian churches. In the corners, the projecting ends of cross-beams laid at right angles to the line of the wall were set in order to strengthen the wall and also, in some cases, to provide anchoring for internal structures.

CEILINGS

As in many churches of Tigray, the ceilings of Kidane Mehret are made of flat paneled woods, and the Maqdas is covered by an imitation of wooden coffering. In the Church of Tcherqos Agobo, northeast of Atsbi, "the wooden ceilings are of flat paneled construction throughout, that in the central sanctuary resting on beams set across the corners in a manner reminiscent of lantern ceilings elsewhere" (Phillipson 2009: 72).

At the Church of Medhane Alem Addi Qesho, north of Wuqro, the south-eastern chamber is covered by an "elaborate wooden coffering" (Phillipson 2009: 100, 143).

THE RESTORATION PROGRAM

By May 2005, the church was no longer in use. Water was pouring down from the ceiling into the Qene Mahlet and even the Maqdas. Cracks had appeared everywhere in the walls and the eastern corner of the church was about to collapse. Most of the walls of the Maqdas were completely destroyed. The ceilings were in bad condition and the majority of the planks were rotten or had fallen down. The wall between the Qeddest and Qene Mahlet had collapsed.

The first restoration campaign aimed to consolidate the external walls of the building.

Firstly, a team of local experts had to be gathered. The researchers asked Girmay Gebremeskel, a skilled project manager, to form a team, which was no easy matter. There were weeks of negotiations and hard days of recruiting workers. Work finally began in November 2006.

Rebuilding the stone walls was carried out according to traditional techniques using mainly mud mortar. Neither reinforcing steel bars nor cement were used. The faces of the external walls of the church were made of rough stones and ashlars smoothly cut by local stonemasons. They then filled the space between the wall faces with small stones, carefully bonded with mud mortar. The mud mortar is made simply by mixing mud, straw, and water together for a few hours.

The north-east corner was being the most heavily

damaged part of the building, the researchers had to dismantle most of the walls as well as take away all the rotten beams and planks that they supported. During this phase, the researchers were obliged to take down most of the beams: the long beams and the cross pieces in the walls and the rotten planks of the ceilings. The three remaining corners of the building and the upper part of the walls of the Maqdas were also consolidated in the same way.

PROTECTION AGAINST THE RAIN

Climatic conditions in the region dictated part of the program. It must be remembered that the rainy season extends from July to September, followed by a dry season from October to March. In three months, rainfall may reach 400 to 600 millimeters[11]. Thus, it was necessary to create a shelter over the church for a while. A private donation from World Monument Fund allowed a temporary roof of corrugated iron sheets to be built.

Work was resumed in March 2007. In order to rebuild the roof and the ceilings, a large quantity of wood was required. The Ministry of Agriculture of Eritrea made a significant contribution to these requirements. It selected 17 common junipers (Juniperus oxycedrus) that grow only on the Amba Soeira (or Amba Soira) Mountains, which reach an altitude of 3,018 meters, and are about 12 km away from Sen'afe.

These trees were cut using only hand-axes (not with electric saws), trimmed with a billhook and then cut into logs two meters long. It took nearly two hours to carry them by hand to the nearest road, from where they were taken by truck to Sen'afe.

The logs were squared with two-edged adzes and then cut into beams and planks. Specialized carpenters from Sen'afe prepared long and short planks for the ceiling using traditional adzes. The ceilings over the Maqdas, which had been partly destroyed, were entirely restored. Two new coffers over the Qeddest were set in the traditional way following the design of the existing coffers; all these wooden pieces were then coated with oil.

To ensure that the roof would be waterproof, traditional techniques were also used rather than the modern technique of a cemented roof. Not a single piece of plastic or asphalt sheeting was employed, because these new, totally waterproof, materials would have produced internal condensation and, withina few years, the wooden elements would start to be affected by humidity.

The first layer consists of bark from the soap-wood used in the ceilings. Next, a 20-cm-thick layer of earth, specially chosen by local workers in a specific place, was laid. The researchers created regular slopes flowing down to gutters that drain away the rainfall. The researchers did not know how these gutters were arranged in ancient times, so, they built special openings with flat schist plates at regular intervals inside the upper masonry of the walls.

As in traditional buildings, the tops of the walls were carefully built some 30 cm higher than the level of the roof. Their tops were covered by small schist slabs cemented in place by a strong mud and chalk mortar in order to prevent any infiltration that might create cracks in the walls.

NEW MUD PLASTERING INSIDE THE CHURCH

The first step was to scratch away the existing plastering. Everything was done by hand by women who used only water and brushes. They then made new plaster from goat droppings mixed with clay. It took weeks for these women to cover all the walls with the new plaster and to smooth it with their hands. Once it was all dry, they painted the walls with two layers of whitewash. Contrasting with the dark brown wood of the ceilings, this gave the interior of the church a clean and slightly shiny aspect.

Figure 1. The Church After Restoration (Photo: J.-F. Breton, 2009).

THE ASSESSMENT

The restoration program finished at the end of 2007.

The project was brought to a successful conclusion thanks to the good will of the partners in all the institutions involved. The stone cutters, carpenters, painters, etc. must be congratulated, and it should be noted that the working women played a very important role during the main phases of the restoration.

All work was done according to the Venice Charter Text of 1964:

> The process of restoration is a highly specialized operation. Its aim is to preserve and reveal the aesthetic and historic value of the monument and is based on respect for original material and authentic documents. It must stop at the point where conjecture begins, and in this case moreover any extra work which is indispensable must be distinct from the architectural composition and must bear a contemporary stamp. The restoration in any case must be preceded and followed by an archaeological and historical study of the monument. (Article 9)

The researchers carried out the restoration project using the same traditional materials and the same building techniques as had been used originally[12]. The researchers respected the completeness of the building to the best of their ability. Any modern mechanical systems, such as injections of cement or clamps in the cracks, were discarded. Asphalt and plastic sheets were not used for the roofing. The use of these modern materials would have distorted the aspect of the building from both an esthetic and a technical point of view (see Figure 1).

One of the main goals was to restore the collective

memory of traditional construction techniques. These techniques, which are much more economical than the use of cement or breeze blocks, have the advantage participating in local development by making this know-how contemporary once again. It could provide an example for many restoration projects in Africa.

Finally, in accordance with the 1964 Venice Charter Text, the church was given back to the priests, and worship was resumed there the following year.

> The conservation of monuments is always facilitated by making use of them for some socially useful purpose. Such use is therefore desirable but it must not change the lay-out or decoration of the building. It is within these limits only that modifications demanded by a change of function should be envisaged and may be permitted. (Venice Charter Text, Art. 5)

CONCLUSIONS

In conclusion, the researchers must emphasize the professional, educational, and religious implications of this project. Professional firstly, for this site mobilized several teams of men and women, who worked together harmoniously for several months. Educational next, because it was necessary to find professional workers (masons, carpenters, painters) so that they could then form teams and in their turn transmit their knowledge and skills. Religious implications finally, because once this project, initiated by the priests, was completed, the church could be returned to its original Orthodox worshippers. The church was finally inaugurated in 2008.

Notes

1. See Africa Orientale Italiana. Climbing Amba Matarà Hill culminating at 2,724 meters: "sigiunge in c. min. 30 a unachiesetta, alcuni m. sopra la quale, entrocavitàdellaroccia, stannoavanzi di cadaveri, chesidicono di Santidetti di Rom" (1938: 296).
2. Youths or men who are not ordained and who fill the role of cantor or scribe.
3. One similar church is Dabra Sîgê or Enda Abu Yonas A'elay Monastery in the Mendafarâ district. The walls of the "Qeddest" are built with wooden frames. See Breton (2009: 19) about the Dabra Sîgê or Endâ Yonas Â'elay Church.
4. Or EOTC. Please note that the Ethiopian Orthodox Tewahdo Church has the same acronym: EOTC. "Tewahdo" or "Tewahedo", adjective in the Ge'ez language, defines the position of the Church within the Christological debate. The meaning of this adjective oscillates between the notion of the "union" of the natures of the Christ and that of "unity" of the Church.
5. ICCROM: International Center for the Study of the Preservation and Restoration of the Cultural Property.
6. ICOMOS: International Council on Monuments and Sites.
7. World Monuments Fund is a private nonprofit organization founded in 1965 by individuals concerned about the accelerating destruction of important artistic treasures throughout the world.
8. Literally "holy", this is the principal division of an Ethiopian church.
9. Sabaean refers to the earlier kingdom of Saba that existed during the eighth-sixth centuries BC in South Arabia. See Breton (1999). During the eighth century BC, some Sabaeans left Mâ'rib and the Highlands of Yemen to settle in Tigray around Matarà and Yeha. See also Breton (2015: 228-231).
10. Buxton and Matthews (1974). See also Littmann and Krencker (1913: 7, 9). "Schema alt-aksumitischer Holzbauweise". "Affenkopf-Architektur".
11. Seleshi and Zanke (2004: 977). Consider Mekele, the nearest city to the south of Sen'afe.
12. See Bausi and Lusini (1994): a major contribution to the study of Orthodox churches.

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