

Archaeological Investigations and Conservations at the Mausoleum and the Tomb of False Door, Aksum, Ethiopia

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Abstract:

Archaeological investigations undertaken at the Mausoleum and the Tomb of False Door in 2005 in the Main Stelae Field, in Aksum, yielded two Aksumite metal cramps and an Aksumite main entrance to the Mausoleum. Furthermore, the archaeological clearances that were undertaken on the same structures made possible the conservation of the late fourth century AD Aksumite tombs and the opening of an ambulatory to the sealed Mausoleum.

Keywords: metal cramp, Tomb of False Door and Mausoleum.

Introduction

This article contains the results of archaeological investigations and conservations conducted at the Mausoleum and the Tomb of False Door in the Main Stelae Field in Aksum. The author conducted investigations in October 2005 through the World Bank's fund for the Ethiopian Cultural Heritage Project. The article combines an expanded and modified version of the draft report on the Management Plan of the World Heritage Site of Aksum, which appeared in the monograph entitled 'Archaeological Rescue Excavation at Aksum 2005-2007', published by the Ethiopian Cultural Heritage Project (Tekle 2008); and additional data which have not been previously reported.

Previous Researches

Both the Mausoleum and the Tomb of the False Door are located in the Main Stelae Field, at the foothill of Betegiorghis, in the town of Aksum (Phillipson

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2000; Tekle 1997, 2007). The Main Stelae Field was systematically investigated for the first time by the German Research Expedition in 1906 under the direction of Enno Littman. This team made an accurate plan of the largest decorated and the non-decorated monolithic stelae, located in the Main Stelae Field (Littman et.al.1913; Phillipson 1997).

The largest dressed and decorated Aksumite monolithic stela (Stela-1) that ancient people ever attempted to erect on earth was probably intended as a double tomb marker known as the East Tomb and the Mausoleum (Munro-Hay 1989; Phillipson 2000; Tekle 1997).

The British archaeologist, the late Neville Chittick, discovered the Mausoleum in 1974 (Chittick 1974; Munro-Hay 1989). It was excavated from 1993 to 1995 by the then Cambridge based British archaeologist, Professor David Phillipson (Phillipson 2000; Munro-Hay 1989).

The Mausoleum is a built up fourth century AD Aksumite state tomb. It has two entrances marked by two perfectly carved and dressed granite monumental portals located in the eastern and western courtyards (Phillipson 2003).

After the completion of the same excavations in1996, this structure was sealed by the excavator and remained closed for visitors for more than a decade in spite of a continuous request made by the local authorities and stakeholders to the Authority for Research and Conservation of Cultural Heritage of Ethiopia to be accessible to the public.

On the other hand, the Tomb of False Door was excavated in 1974 by the late Neville Chittick (Chittick 1974; Munro-Hay 1989; Phillipson 2000). So far, cultural heritage management studies have never been carried out at the World Heritage Site of Aksum in general and in the Main Stelae Field in particular. This study, conducted in 2005, is the first endeavor to fill this gap.

Archaeological Investigations and Conservations in 2005: Objectives and Methods

The objective of the archaeological investigations conducted at the Mausoleum was to open an ambulatory (walkway) to the public. Furthermore, conservation works were undertaken to safeguard the Mausoleum and the largest decorated Aksumite Stela from destructions coming from nature and human activities and to ensure safety of visitors. Moreover, archaeological clearances and conservations activities were conducted at the Tomb of False Door to protect the structure from human and natural disturbances and also to attract the attention and interest of the the public towards the site.

The research project hired twenty daily laborers and amateur archaeologists to carry out test excavations and conservation works at the Mausoleum and the Tomb of False Door.

Disturbed structures (backfills) were considered ideal for conducting test excavations at the Mausoleum and the Tomb of False Door to avoid the destruction of original Aksumite structures. Accordingly, many trenches were excavated to open walkway to the Mausoleum and to carry out conservation works at the Tomb of False Door. The first one, found in the Western Courtyard, 5.75 m by 5.40 m was excavated up to the stone lintel located on top of the brick arched gate. The second trench opened in the Eastern Courtyard, 11.50 m long and 2 m wide, was excavated to the maximum depth of 4.7 m below the modern surface ground. Another trench that measured 10.20 m by 10.72 was also excavated to depth of 0.90 m in the Tomb of False Door.

Excavations were undertaken at the Mausoleum and the Tomb of False Door rapidly by using picks, shovels, trowels and brushes. No artifacts were collected as the excavated trenches were previously excavated and recently disturbed.

Measuring tapes were used to measure structures and trenches. Digital recording was undertaken in the courses of excavations and conservation activities at the Mausoleum and the Tomb of False Door. Traditional walling systems were applied to consolidate the Mausoleum and the Tomb of False Door in the course of conservation activities.

The chronology of the excavated structure was established based on pottery typology and by the chronology already established by David Phillipson (2000). The results of these activities undertaken by the author are discussed as follows.

Results of the Excavations and Conservations

The Mausoleum

In September 2005, the Ethiopian Cultural Heritage Project and the Ethiopian Cultural Heritage Authority decided to open the Mausoleum to the public. This was followed by series of discussions among the scholars and consultants of the Ethiopian Cultural Heritage Project, the Authority for Research and Conservation of Cultural Heritage and the Tigray Tourism and Culture Agency to find a solution regarding the route for the public to access the Mausoleum. In October 2005, some scholars from the Ethiopian Cultural Heritage Project suggested the possibility of opening public access to the Mausoleum through the Western Portal. However, all archaeologists, architects of the Ethiopian Cultural Heritage Project and the concerned authorities from cultural heritage offices of both Federal and regional

states finally agreed that the simplest access to the Mausoleum would be via the Eastern Portal.

The Western Courtyard

In fact, opening public access through M6 trench in the Western Portal, which is 5.5 m below the modern ground surface level, would involve too many complex tasks, such as time, labor, techniques and finance. Furthermore, for the same reason, an agreement was reached among the scholars and cultural heritage authorities that it would be too difficult to raise the broken Portal towards the brick arched entrance. Such operation might cause archaeological and structural disturbances in the Western Courtyard and might even lead to the destruction of the following archaeological evidence.

The present conditions of the Western Courtyard and the portal show the history of largest stela (Stela -1) and the effect of its collapse, breaking and displacing from its original position. It seemed; therefore, appropriate to leave the broken and slightly displaced Western Portal as it is, as part of the history of the collapsed Stela- 1. Furthermore, the Western Courtyard also shows the reconstruction of several robber pits that indicate the Mausoleum was continuously robbed in antiquity possibly at Aksumite and post Aksumite times (Phillipson 2000). Such evidence needs protection. Thus, it was not convincing to open public access to the Mausoleum from this direction.

Instead, the M6 trench (Phillipson 2000) was re-excavated in 2005 up to the stone lintel located on top of the brick arches to clear the bulging section to avoid future collapse. The stonewall that was built on top of the lintel and the bricks in the western gate of the Mausoleum that measured 5.40 m was removed and replaced by loose soil to reduce heavy weight on the Mausoleum. Retaining walls were built on all sections of the M6 trench to avoid future collapse. Furthermore, part of the same trench that is 1 m by 1 m with small openings was left open with glass cover so that the public could see the Western Courtyard and its portal from above. This would also help for dry air circulation inside the Mausoleum and to regulate normal temperature.

The Eastern Courtyard

The simplest public access to the Mausoleum would be via the Eastern Portal (Fig. 1). In fact, archaeological excavations also confirmed in 2005 that the main entrance to the Mausoleum was through the Eastern Portal (Tekle Hagos 2008).

Stone steps that appear to be part of the entrance of the same were uncovered in front of the Eastern Portal under the terraced wall that supported Stela- 1. However, it was not possible to excavate in the same direction below the terraced

wall, as it would destabilize Stela -1. But, the excavations undertaken in this complex addressed the major research problem raised by David Phillipson who excavated the Mausoleum in the 1990s to locate the main entrance to it (Phillipson personal communication 2005). It is now confirmed that the main entrance to the Mausoleum was parallel to the East Tomb. It seems that these discovered steps may have been the entrances both to the East Tomb and the Mausoleum (Fig. 3).



Fig.1: The main entrance to the Mausoleum through the Eastern Portal

It was found necessary to open a large space between the Eastern Portal and Stela-1, beginning from the northern end of the Eastern Courtyard up to the terraced wall of Stela- 1 in the southern section. This space which is 9 m long and 2.5 m wide was excavated in two trenches designated as M1 and M3 by Michael Harlow who excavated the Mausoleum from 1993 to 1995 under the direction of David Phillipson. These excavations identified this space as backfills of the excavations of 1974 and 1993 and the landscaping activities of Ras Mengesha Seyoum in the 1960s (who was the then Governor General of the province of Tigray) (Phillipson 2000).

In 2005, archaeological excavations were undertaken in the space mentioned above and its surrounding. In the course of these excavations, a modern wall that was built near the Eastern Portal was completely removed. It was 1.7 m long, 0.60 m wide and 2.80 m high. To the south, adjacent to the same wall, a stone slab measuring 1.2 m in height and 0.70 m in width was discovered 3.20 m deep below the modern ground surface level. Such a slab was placed on top of an Aksumite

wall excavated 3.20 m depth below the modern ground surface level. This wall is 0.8 m wide, 1.60 m long and 1.50 m high. It stretches from north-east to south-west directions. It is built on top of bedrock beginning from the wall of the Mausoleum in the south-west and extending to the northeast towards Stela-1 facing to The East Tomb and did not continue through the backfill of Stela-1 on the same direction (Fig. 2).



Fig.2: Access to the Mausoleum with an Aksumite wall and a slab.

A piece of decorated classical (middle) Aksumite pottery was found on top of the same wall confirming its Aksumite antiquity. It seems that this wall was part of the Eastern Courtyard. This wall is protected from further excavations. Public access to the same structure would be through this wall and modern stairs were built on top of the same structure without destroying it. Between this Aksumite wall in the north and the modern terraced wall of Stela-1 in the south, there was a backfilled space, 5 m long and 1.7 m wide. Such a backfill was excavated up to the maximum depth of 3.2 m below the modern ground surface. The stone fill below this depth seems to indicate an Aksumite wall collapse. It was cleared and is currently used as public passage to the Mausoleum (Fig.2).

A wall that appears to be an Aksumite was also excavated at 5 m distance to the south and parallel to the previous Aksumite wall. However, the modern terraced wall of Stela-1 disturbed it. Its visible width is 0.60 m. It is also protected from further excavations. In reality, the present entrance of the Mausoleum begins from this wall.

There is an evidence of disturbance or wall collapse of the Mausoleum to the south of the Eastern Portal beginning from the newly discovered Aksumite wall in the north extending to the terraced wall of Stela-1 in the south. This disturbance seems to have been the effect of the collapse of Stela -1. The wall destruction on the southern extreme, however, seems to have been the result of the landscaping and terracing activities of the 1960s. A consolidation wall was built against the wall of the Mausoleum to avoid further disturbances. Furthermore, the terracing wall that supported Stela-1 on the western side was also consolidated by traditional walling system from the terraced wall in the south up to the entrance of Stela -1 in the north.

The disturbed floor pavements of the Mausoleum were restored to their original condition by re-fitting the disturbed floor slabs and by filling gaps with gravels and sand.



Fig.3: Steps leading to the Mausoleum (Eastern Courtyard)

At present, the Mausoleum is found in a good condition and is being visited by the public. It has no risk of structural collapse. The three shafts and part of the M6 trench in the Western Portal were left open for lighting and air circulation. However, the Mausoleum still needs more lighting system to visit its central and side chambers.

In addition, the cracks in the massive dressed granite roof slabs of the central and side-chambers must be checked every year. The same cracks in the Eastern and Western Portals of the Mausoleum also require monitoring every year. Such monitoring system will enable to take immediate and appropriate measure to safeguard the Mausoleum. It is also important to note that the East Tomb located opposite the Mausoleum, excavated by David Phillipson in 1993, needs monitoring every year to assess its status of preservation.

The Tomb of False Door

The Tomb of False Door has no structural problem. However, there are very few cracks on its massive dressed granite roof slabs. Ancient robbers disturbed such roof slabs. Although it has been open for visitors, many visitors are not aware of the existence of this tomb (Fig. 4).

Originally, this tomb had two entrances. Both entrances are found in the same direction in front of the erected rectangular granite slab that shows an Aksumite false door. At present, the first entrance that leads to the chamber containing the sarcophagus is used as the main entrance. A modern pier, built with cement and stones in fear of the cracks in the roof lintel, has narrowed the gate way to the tomb. This intervention would also widen the cracks and lead to the collapse of the structure.

The second entrance, which leads to the large underground chamber, is found beside the first entrance on the western direction. It is covered by a huge dressed rectangular granite boulder, which has two circular basins or shallow depressions probably used for ritual sacrifice for the deceased. It is difficult to open this entrance for two reasons: (1) it is too heavy to remove, and (2) it has many cracks, which are thought to have been caused by robbers' attempt to open it in antiquity. For these reasons, access to this large chamber is through the back of the erected slab, where ancient robbers broke a single roof slab. Neville Chittick excavated the same chamber through this entrance. At present, a wooden ladder is used to go down from the roof slabs to the same room (Fig. 9).

Before 2005, the outside roof slabs were covered by modern soil deposit that was 0.90 m thick and by poor quality stone terracing that appear to be walls. A modern wall that had no purpose was built at the back of the erected rectangular granite slab that shows an Aksumite false door. Furthermore, a wooden pole was

placed at the back of the same slab. There were also disturbed granite blocks on top of the same tomb. Particularly, the dressed granite pavements in front of the entrance of the tomb were disturbed. Due to this, they were not impressive for visitors. Moreover, ancient robbers disturbed the stone floor pavements. Two piers were also built with stones and mud to prevent further cracks of the roof slabs. The first one is located on the steps leading to the chamber that contains the sarcophagus. It was unattractive which also narrowed the entrance to the main tomb. The second stone built up pier was found in the backside chamber. It also narrowed the passage.

However, in 2005, the disturbed boulders were re-arranged by the author of this article, to make the tomb more attractive to the public. A large dressed rectangular block of stone that rested on top of one of the dressed stone slabs forming the steps leading to the main chamber was moved and included as part of the pavement. Another slab that obscured the original appearance of the pavement was removed. Furthermore, an additional disturbed granite stone, which was placed on top of the stone pavements of the entrance of the tomb, was also moved from its position. In fact, local tourist guides describe this stone as a measurement unit of the Aksumite since it consists of grooves that appear to be scales to them. However, this monument is a roof lintel.

Moreover, additional rearrangements of displaced stones were made on the pavements of the entrance of the tomb. Furthermore, a metal pole that obscured the original appearance of the same tomb was dismantled.



Fig.4: The Tomb of False Door

The archaeological clearance undertaken at the Tomb of False Door by this author in 2005 established the limit and size of the front courtyard. It is square in plan, each side measuring 15 m with an area of 225 meter square. The outside house form structure, which is delineated by huge boulders, is 12.20 m long and 11.70 m wide with an area of 131.04 m square. It follows that the whole tomb structure measures 356 m square.

Thirteen displaced granite slabs were moved from the backside of the tomb. Eight of them were placed in a row on the eastern edge to delineate the same tomb on this side while the rest were placed on the western side of the tomb on top of the boulders that delineated the tomb in this direction. The undressed faces of these boulders were exposed towards the massive roof slabs while their dressed sides were exposed to the outside (Fig. 9).

These boulders were found above the red soil that rested on the massive granite roof slabs of the tomb, which seem to indicate that robbers displaced them long after the construction of the tomb as it can be understood from the arrangements of disturbed boulders that delineated the Tomb of the False Door. Furthermore, such boulders were removed in 2005 to make the tomb clearer and more attractive and reduce the weight on the roof slabs of the Tomb of False Door.

A large space was excavated to expose the roof slabs of the Tomb of False Door. This space was covered by deposits containing red soil and stone (0.90 m thick). This deposit covered the roof slabs of the tomb from the outside. In the course of the excavations, fifteen roof slabs were exposed. These covering roof slabs were not carefully dressed on their external surfaces. They also show wedge and tool marks on the same sides (Fig. 5).



Fig.5: Excavated and consolidated section of the Tomb of False Door

Furthermore, in the course of clearances, two metal cramps, which were not recorded by Chittick, were discovered in 2005 (Fig. 6 and 8). The first one is found in front of the present main entrance to the tomb (fig. 6). The original cramp was 0.30 m long as it can be understood from the size of the edge of excavated boulders. The Aksumites excavated the edge of two boulders at the depth of 0.4 m meters deep to place the cramp to join them together. It was removed in antiquity. However, part of it is still found attached to the boulder. From this evidence, it appears that the Aksumites used a sticking substance to fix the cramp inside the excavated holes of two boulders. In reality, they first excavated the edges of boulders that were intended to be joined together by metal cramps. The second one is 0.21 m long which is less by 0.8 m to that of Chittick's (Fig. 7). It is found on the edge of the entrance to the back chamber in a good condition Fig. 8).



Fig. 6: Metal cramps partially removed from joined boulders

This cramp joined two boulders together. The edges of the same cramp are very sharp indicating that the Aksumite did not heat the metal when they used it for joining boulders. Instead, it appears that a sticking material may have been used to attach the cramps in the excavated holes in the edges of the boulders. Furthermore, it seems that the Aksumites may have used sharp metal picks to carve or excavate the edges of boulders, as it can be understood from the nature of the holes.



Fig.7: Metal cramp at the Tomb of False Door



Fig.8: Metal cramp excavated from the Tomb of False Door

A modern wall that was built at the back of the erected slab with ‘Aksumite false door’ was removed. The wooden pole was also moved from the same place. Furthermore, the author of this article delineated the eastern edge of the tomb by eight displaced boulders in 2005.

The local guides used to hit with stones the sarcophagus inside the main chamber of the tomb to show visitors its bouncing sound to indicate cavity. Since such actions could eventually damage the sarcophagus, the author of this article provided trainings to local guides on how to manage this cultural heritage properly.

The displaced floor slabs were replaced in their original positions. The pits in the floor of the same tomb were also filled with gravel and mud to ensure the safety of visitors and to consolidate the tomb. Furthermore, the loose soil that covered the floor of the tomb was replaced by gravel.

The walls to the north and eastern directions of the Tomb of False Door were rebuilt to prevent rain-washing into the tomb. Furthermore, the drainage system to the north and eastern directions of the tomb was cleaned and widened. The two piers that have been proved by structural engineer as functionless were also removed.



Fig.9: Outer roof-slabs of the Tomb of False Door

The Tomb of False Door has no structural problem as confirmed by structural engineers and is one of the best to be presented in an excellent fashion to the public at the Main Stelae Field in the World Heritage Site of Aksum.

Conclusion

The archaeological excavations undertaken at the Main Stelae Field, at Aksum in 2005, by the Ethiopian Cultural Heritage Project made possible the opening of an ambulatory of the Mausoleum. This makes it one of the few Aksumite structures to be accessible to the public after 37 years since the discovery of the Dingur elite structure (west of the Old Aksum Town) by the French archaeologist, Francis Anfray.

Furthermore, a site presentation and conservation was undertaken at the Tomb of False Door for the first time to make it more attractive and to keep its architectural continuity and harmony with the surrounding landscape. Such results made the public and other visitors to appreciate the sophisticated nature of the Aksumite civilization that flourished between the first seven centuries AD in what is now northern Ethiopia.

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