

Explorations of Three Rock Art Sites in Northwestern Tigray, Ethiopia

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Abstract

This article presents the result of archaeological reconnaissance carried in 2001 and 2004 with the support of the Authority for Research and Conservation of Cultural Heritage in the districts of Tselemti and Tahtay Koraro in North western Tigray Administrative Zone. The objective of the research was to explore and document foot prints of ancient humans in the northern western periphery of Ethiopia. The study resulted with the discovery of three rock-art sites dating between 5000 BP and 2000 BP. The paintings of these rock art sites portray domestication scenes of cattle, sheep and goat. Thus, they can be categorized under the two phases of Dahthami and Surre-Hanakiya of the Ethio-Arabian Styles. They furnish an evidence of contacts between the populations of Ancient Sudan, South Sudan, Egypt and those of the Northern Horn in the aforementioned period.

Keywords: rock art, domestication, Ethiopian-Arabian style

DOI: <https://dx.doi.org/10.4314/ejossah.v15i2.5>

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Introduction

This article deals with the archaeological investigations carried out by the author in North Western Tigray Administrative Zone in three different rock art sites known as Bea'ti Shilum, Bea'ti Gae'wa and Mai Lemin. The sites of Bea'ati Gae'wa and Mai Lemin are located to the south of the town of Endaslassie across the River Takaze in the district of Tselemiti while the site of Be'ati Shilum is found 10.7 km to the west of the town of Endaslassie in Tahtay Koraro district. All of them are found in geographically and geologically suitable places for ancient human settlement and executing rock art. The site of Mai Lemin is found at the edge of a valley that drains to the River Tekeze inside a cave closer to a modern church of St. Gebriel where there is water that attracts ancient settlement. The sites of Be'ati Shilum and Be'ati Ga'ewa, on the other hand, are located where there are granite boulders that are suitable for ancient human shelters and for executing rock arts.

This article presents the result of the archaeological surveys sponsored by the Authority for Research and Conservation of Cultural Heritage (ARCCH), Ministry of Culture and Tourism of the Federal Democratic Republic of Ethiopia (MoCT). The preliminary report of the same inventories was published in Amharic language in 2004 in Kirs, a bilingual magazine (Amharic and English) of the Authority for Research and Conservation of Cultural Heritage (ARCCH). The distribution of this local magazine was only confined to Addis Ababa and was limited to very few federal ministry offices at the time. Taking into consideration the limited numbers of its distribution, this article is presented to disseminate knowledge to the wider scientific communities in Ethiopia and abroad with additional updated information acquired from literature and field work including new rock art and the current state of preservation of some of the paintings with new interpretations to bridge the missing gap in our understanding about the neglected fragile archaeological resources (rock arts) in the periphery of the North western Tigray Administrative Zone.

It seems appropriate to give an overview about the history of the rock art researches in Tigray region in the forthcoming section before presenting the three rock art sites of north western Tigray.

An overview of rock art researches in Tigray regional state

Rock art research in Tigray region began in the 1940s by Graziosi (1964) who studied the cave paintings of Amba Faqada located to the north of the town of Addigrat in Goulo Mekeda district in the Mountains of Faqada. Other scholars including Moredeni and Drew have also studied the same paintings before the 1960s (Farina, 1999).

These Italian researchers showed that the schematic paintings at Amba Faqada exhibit cultivation scene: a plough being dragged by a pair of long-horned humpless oxen (Bard et al., 2000). The person who is exhibited in the same painting while holding the plough has a long neck and possibly long hair and a straight chin. Furthermore, the paintings of the same site also show hunting scene (Graziosi, 1964; Getachew, 2006; Farina, 1999). Thus, it seems safe to categorize this style into the Dahthami Phase of the Ethiopian-Arabian Style (Farina, 1999).

In the late 1990s, Agazi Negash (1997) discovered many rock art sites in Central Tigray around the town of Tembien and in eastern Tigray administrative zones. He published his findings in Nyame Akuma in 1997. The sites that he reported in the same publication are described below.

The site of Anza (Bea'ti Barud) is a limestone cave situated at 1579515 N, 0564336.5 E and at an elevation of 2635 m asl at about 30 km to the east of the town of Edaga Hamus, in the edge of the Eastern Escarpment. The cave faces to the east towards the Shinto Valley that drains to the Afar lowlands (Tekle, 2011). The paintings are found in a shelter that is 30 m by 40 m in length, 3.5 m in width and 3.85 m in depth (Tekle, 2011). In addition, the author visited the site on March, 2001 and saw at least 30 cattle, 3 men, some geometric figures and fat-tailed sheep, long-horned cattle and milking scene depicted in the same paintings. The author measured the sizes of some of the paintings. Accordingly, the paintings of some of the cattle measured 0.28 cm by 12 cm and 24 cm by 13 cm.

The paintings also show two humans riding beasts of burden which look like horses or donkeys, and carrying what appear to be spears and shields. The schematic paintings that portray men riding horse like animals carrying what appear to be shields and spears are executed in red. Cattle are executed in black while the others are painted in reddish brown. All of the paintings except one are flat washed. These paintings are displayed in 5 panels. The same paintings seem to have similar style and theme with those of Be'ati Shilum (North Western Tigray) and Ziban Ona Likanos in Eritrea (Agazi, 1997; Tekle, 2011).

The style of the art is categorized into the Surre-Hanakiya and Dahthami phases of the Ethiopian-Arabian style (Agazi, 1997).

The site of Mihdar Abur, found along the foothills around the town of Abiy Addi in Tembien district is the second rock art reported by Agazi (Agazi 1997). It is a large shelter about 60 m wide and faces to the southeast. A single naturalistic representation of humpless cow and stylized bovid including geometric figures are displayed in the same rock shelter (Agazi, 1997). The style of this art seems to belong to the earliest and the second phases of the Ethiopian-Arabian Style.

Tekle Hagos

The site of Tselim Be'ati which is located around the town of Abiy Addi in Tembien district is the third rock art site reported by Agazi (1997). Ostriches, humped cattle, dog and humans (two of them riding horses, donkeys, mules?) are depicted in the same shelter according to Agazi. It portrays two stylistic groupings. Small numbers of naturalistic paintings are executed in black. These paintings are superimposed by another style of paintings executed in tan pigment. The earliest naturalistic and the superimposed ones are categorized into the Surre-Hanakiya and Dahthami stages of the Ethiopian-Arabian style, respectively (Agazi, 1997).

The site of Dabo Zellelow, situated in the foothills around the town of Abiy Addi was discovered by Agazi Negash in the 1990s (Agazi, 1997). It is a large cave, 4.6 m wide at its entrance. It contains both engravings and paintings. The engravings are located on the entrance of the gate of the cave, which faces to the north. The western side of the entrance displays geometric figures while the eastern side shows engravings of cattle and geometric figures. Two-outline depictions of cattle are displayed on the wall inside the cave. Long-horned humpless cattle, human and geometric figures are represented in this shelter (Agazi, 2001).

The engraved humans were carried out in "hour-glass" style similar to those of Addi Qanza in Eritrea (Graziosi, 1964). They are executed in white. The engravings representing long-horned humpless cattle and the paintings can be grouped to the earliest and the 2nd phases of the Ethiopian-Arabian Style, respectively.

Since 2000, more researches have been undertaken on the rock arts of Tigray. The researchers were foreign scholars and Ethiopian experts from the Authority for Research and Conservation of Cultural Heritage and by post graduate archaeology students from the universities of Addis Ababa and Aksum.

Gigar Tesfay from the Authority for Research and Conservation of Cultural Heritage reported several rock sites in eastern Tigray Administrative zone in 2000 as discussed below. The *Bubula Mibla'e Anbesa* cave is one of the sites reported by Gigar. It portrays naturalistic paintings of seven lions. The paintings are shown to have been executed in white. The average height and length of the paintings is 4 cm and 5 cm, respectively (Gigar, 2000).

The site of Gazen, located at about 45 km to the east of the town of Edaga Hamus on the way to Tsa'eda Emba is the second rock art site reported by Gigar. It is a site in a cave and in a hill. It has 6 paintings of cattle. The schematic paintings of cattle are executed in black, red and white. The average height and length of the paintings is 13 cm by 21 cm (Gigar, 2000).

Mai Gono is the third rock art site reported by the same researcher. It can be reached after 15 minute walk to the east of Gazen and is found on the edge of a cliff. The engravings are found in a flat monumental stone. It preserves schematic engravings of long-horned humpless cattle that belong to the Dahthami Style (Gigar, 2000).

Getachew Meressa from the Department of Archaeology and Heritage Management of the Addis Ababa University (Getachew, 2006) discovered many rock art sites in north eastern and southern Tigray administrative zones in a survey he conducted for his MA Thesis in 2006. The rock shelter of Enda Azab'e, found in Saesi Tsa'eda Emba about 10 km to the east of the town of Addigrat at 1578470 northing, 0555993 easting and at an elevation of 2326 m asl, is the first rock art site reported by Getachew. He reported a long-horned humped cattle and humans depicted in the same site. These paintings belong to the Surre-Hanakiya and Dahthami phases of the Ethiopian-Arabian Styles (Getachew, 2006). The rock art site of Enda Aba Shillemun (Tsa'eda Be'ati) located to the east of the Church of Adila'ado at 1578945 northing, 0557405 easting and at an elevation of 2581m asl is the second site reported by Getachew. He reported schematic paintings of long-horned humped cattle, humans, horse and camel portrayed in the same site. The paintings are semi naturalistic and schematic and belong to the early and late Dahthami stages of the Ethiopian Arabian styles according to the same researcher.

Getachew reported a third site: the rock art site of Amokti located about 10 km to the southwest of Gra Aras Aba Samuel Church in Hawzien at 1547346 northing at 0554178 easting and at an elevation of 2304 m asl. He presents humans, humped and humpless cattle, hunting scene of felines, ostrich, and a woman riding on camel escorted by two men; swords and spears exhibited in the same shelter. The style of the same painting belongs to the Surre-Hanakiya stage of the Ethiopian-Arabian Style.

The site of Enda Hargets located about 11 km to the east of the town of Hawzien is the other rock art site reported by the same researcher. Nine paintings including humans riding horses and camels are portrayed in the paintings. The styles of this art seem to belong to the later Dahthami Phase of the Ethiopian-Arabian style.

Foki is a rock shelter situated about 12 km to the east of the town of Hawzien reported by Getachew. It exhibits one naturalistic painting of long-horned humpless cattle that belongs to the Surre-Hanakiya Phase of Ethiopian-Arabian style. Getachew (2006) also reported a rock shelter of Kuhat that contain rock art located about 10 km to the east of the town of Hawzien. Horses, sheep, long-horned humpless cattle, a horseman, and a circle like square are portrayed in

naturalistic and schematic styles on three panels. The paintings in the same site show all features of the Ethiopian-Arabian style.

The last site reported by Getachew is Netabi Geggeya found in Southern Tigray Administrative Zone at 1449183 northing and at 0577584 easting at an elevation of 1751m asl at the locality of Gonkua in Hintalo Wajerat. It consists of two caves. The first cave shows hunting scene, cattle, camel, humans and wild animals. The second one exhibits pastoral and hunting scenes of elephants, wild animals, and two human riding camels. The paintings can be categorized into the Surre-Hanakiya and the late Dahthami phases of the Ethiopian-Arabian Style according to the same researcher. Getachew (2006) argues that the tradition of hunting has continued up to the recent times in southern Tigray and recommends documenting the history of hunting in the same area to get clues as to who were the artists of the rock art.

The Authority for Research and Conservation of Cultural Heritage under the direction of the author documented several rock art sites in 2007 in eastern Tigray that are discussed in what follows. The first rock art site documented by this team is Mai Ambio found on top of the Eastern Escarpment to the southeast of the village of Edaga Rob'e at the junction of two rivers known as Mai Ketin and Mai Mhmas, at Gazen in Hawille at 1572296 northing and at 0576304 easting at an altitude of 2851 m above sea level. The Inventory Team of the ARCCH designated the site as **Et-32** (Tekle, 2014).

The site exhibits engravings of humans, cattle, sheep and dogs. They are engraved on a panel, 3.5 m high and 3.6 m wide. Such figures are portrayed on a vertical boulder, which faces to the west. There is a steep cliff to the east of this boulder where the figures are depicted. At least 112 figures are depicted on this site. The cattle are long-horned with humps. The size of one of the humped cattle measures 0.30 m in length and 0.13 m in width. A single fatty tailed sheep is also depicted (Tekle, 2014). Moreover, there are also circular figures that are difficult to interpret (Tekle, 2011). The style of the painting is very poor which makes the figures difficult to distinguish cattle from humans. The figures are engraved in a style that appears to be a pectiniform (comb style) in a pecking technique (Tekle, 2014). The engravers seem to have used sharp stones (burins) to incise these figures. The style of the same art can be categorized into the later and early Dahthami stage of the Ethiopian-Arabian style (Godet, 1977; Tekle, 2011).

The second rock art site reported in 12 February 2007 by the same team is Mai Fengil located in Ganta Afeshum district at Sasun Kebele (Tabiya), at the locality of Heliafambet at 0553581 (E), 157527 (N) at an elevation of 2527 m above sea level. It is found to the north of Abuna Samuel Church on the slope of

Ziban Heli where there is a holy water of the Orthodox Christians. The team designated the same site as **Sas-mfg-019**.

This shelter which faces towards south is very near to the site of the holy water of the former Aba Samuel church. The paintings are sketched in red and brown. The oldest paintings appear to have been painted in red while the brown ones are superimposed on the red ones. The paintings have been eroded by the collapse of the shelter and are too difficult to decipher them. Some of the figures appear to be long-horned humped cattle. Furthermore, there are also some figures that appear to be humans. In addition, humans are depicted dragging what appears to be a goat or sheep in the same art (Tekle, 2011).

These paintings are executed in Ethio-Arabian Style. The cattle are executed in body profile position. From the nature of the style of the painting and the types of the species of the cattle depicted, the painting seems to date to the beginning of the first millennium AD, to the later Dahthami Style according to the author.

Addi Qolaqul is the other site discovered by the same team, situated in Hawzien district at Hayelom Kebele at the locality of Mezabir at 0552733 (E), 1549797 (N) and at an elevation of 2250 meters above sea level. It is found about half a kilometer to the north of the road leading from the town of Hawzein to the town of Fireweini. It was designated as **Hay-Adq-026** by the Inventory Team of ARCCCH in 2007. It is located on a sedimentary rock shelter that faces towards south to the plain (and cultivated land).

The paintings are found in two different panels on the ceiling of the shelter. The first panel located to the west of the first one is executed in black. This panel measures 0.67 m by 2.20 m. The paintings are highly eroded and destroyed by human activities such as chiseling (cheeping). Although it is difficult to identify the animals depicted, they are executed in a profile position and appear to be long-horned humpless cattle according to the observation of the same Inventory Team. The second groups of paintings located to the east are executed in red. The first group of paintings that are located to the west shows what appear to be large dots or finger prints or brush marks. The second group located to the eastern side exhibits animals and dots or finger prints or brush marks and humans.

A man is depicted following what appears to be a goat. A long-horned animal with long tail is also exhibited behind a man. Some of the long-horned wild animals appear to be Walia Ibex which is found only in Ethiopia. A painting that appears to be a long-horned humpless cow followed by a calf is depicted. Thus, it is possible to understand that these paintings show domesticated and non-domesticated scenes.

Tekle Hagos

In addition, graffiti is superimposed on the painting of the site. The pictures are executed in Ethio-Arabian Style both in the Surre-Hanakiya and Dahthami phases.

The other rock art site reported in 2007 by the ARCCH Team is Be'ah Wiqro found in Hawzein district at Gra Ersa Kebele at the locality of Samuel at 0554091(E), 1547127 (N) and at an elevation of 2283 meters above sea level. It is a cave formed from sedimentary rock, situated to the north of Addi Melabi, in front of a shallow depression. It is designated as **Gra-Btw-027** by the same team.

This rock shelter that faces to the south depicts at least 52 visible paintings on its wall and ceiling. On its eastern side, there are at least 25 paintings executed in red and brown. The panel is large measuring 4.30 m (width) by 2.90 (height). The painting exhibits humans riding on horses and throwing what appears to be spears. This group of paintings partly exhibit fighting scenes. There is also a depiction of what appears to be a camel with a man riding it.

The second groups of paintings to the west portray at least 27 paintings located in a higher elevation than the first group. They are depicted on the wall of the shelter. The paintings are sketched in brown. Most of them are long-horned humped cattle with plowing scenes (cattle dragged by humans). The figures are drawn in a profile position and appear to be moving from west to east. Most of the paintings are adversely affected by human intervention. Humans are depicted holding what appears to be a stick. But, one of them puts his hand on his waist. One painting shows two dogs. One of the dogs is exhibited while barking and the other one is tied with what appears to be a rope (rug). Another man is depicted chasing what appears to a (barking) dog. The humans portrayed are both female and male as it can be seen from the style of their dressing. One of the women seems to carry something. Indeed, the painting falls to the 2nd phase of the Ethio-Arabian Style and is characterized by variable styles. Most of the paintings in this site that are located very close to the ground surface are deteriorating due to weather, erosion and human intervention and require urgent protection measures.

The Goulo Mekeda Research Project under the direction of Catherine D'Andrea from the University of Simon Fraser of Canada is currently conducting archaeological and rock art researches and discovered many rock art sites in Goulo Mekeda district to the north of the town of Addigrat. She discovered many rock art sites that await future publication (D'Andrea & Habtamu personal communication, 2018). One of the rock art site discovered by the same project is Amba Faqada II located at the foothills of Amba Faqada at 059449 N, 0541468 E and at an elevation of 2492 m above sea level. It is reported that the same site

portrays long-horned humpless cattle and long-horned humped cattle which seem to belong to the Dahthami Phase of the Ethiopian Arabian Style (Getachew, 2006).

Finally, Negasi Awatey (2016), a post graduate student in archaeology from the Department of Archaeology of Aksum University, discovered a single rock art site of Emba Tsegurom in 2016 near the Pre-Aksumite site of Yeha in the district of Adwa in a survey he conducted for his MA Thesis. The site is a shelter located on top of the hill of Emba Tsegurom containing paintings of humans, cattle and a snake among others. This site portrays domestication and fighting scenes.

As summarized above the inventory works on the rock art of Tigray were almost confined in eastern Tigray administrative zone. This is due to problem of accessibility, lack of interest, finance, logistics and poor heritage management systems at all levels of the cultural heritage sector both in the region and the Federal.

For the same reasons, scholars have previously emphasized on the Pre-Aksumite and Aksumite history of northern Ethiopia. These investigations have been carried out on major Pre-Aksumite and Aksumite sites near to the main roads, such as Yeha and Aksum and their surroundings focusing on monumental elite structures (Tekle, 1997). Because of such a constraint, our knowledge about the distribution and location of the rock art sites in Tigray is to a large extent limited.

Organized multidisciplinary archaeological and heritage management researches aimed at documenting settlements from the Late Stone Age, Pre-Aksumite, Aksumite and Medieval in what is now the north western Tigray Administrative Zone in general and in the districts of Tselemti and Tahtay Koraro in particular have never been previously carried out. Archaeological surveys were carried out in the same places to address the limitation of our understanding about the archaeology of this part of Ethiopia.

Objectives and methods

The objectives of the archaeological surveys that were carried out by the ARCCH Archaeology Inventory Team in Tigray's North Western Administrative Zone in the districts of Tselemti and Tahtay Koraro in 2001 and 2004 was to explore and document the unknown archaeological resources, to inspire further research and to promote archaeological tourism in this archaeologically neglected periphery of north western tip of the Federal Democratic Republic of Ethiopia, adjoining the rich natural resources of the western lowlands and near the Natural World Heritage Site of the Semien Mountains.

The archaeological reconnaissance carried out by the same team in North Western Tigray Administrative Zone was conducted on foot and by vehicle with

the help of local guides and elders for one month each in 2001 and 2004 in areas considered as potentially conducive for ancient settlements that preserve the foot prints of human activities from the remotest to the recent past.

The sites were documented with the help of GPS (undertaken with measuring tapes) during the surveys. Photographic documentation was undertaken in red and color slides and in black and white. Most of the paintings were traced on tracing papers in the field and later their sizes were reduced by photocopy machine into A4 paper in the office. These photographs and slides are currently found at photographic section of the Authority for Research and Conservation of Cultural Heritage which is located at the National Museum of Ethiopia opposite to the Addis Ababa University Institute of Technology.

No datable archaeological artifacts such as stone tools and pottery were found on the surface of the three rock art sites. In addition, test excavations were not undertaken in the same sites due to time, financial and logistic constraints. For the same reasons mentioned above, the chronology of these rock art sites was determined based on stylist comparison with the arts of the Sudan, Eritrea and with some of the known rock art sites of Northern, Southern and Eastern Ethiopia (Clarck, 1976, 1977; Cervicek, 1971, 1976; Brandt & Carder, 1987).

Presenting the rock arts sites

Different types of archaeological sites such as settlements, cemeteries, religious and rock arts were documented by the Archaeology Inventory Team of the ARCCH during the 2001 and 2004 surveys in North Western Tigray Administrative Zone. However, only three rock art sites, namely Mai Lemin, Be'ati Gae'wa and Be'ati Shilum are selected in this article because they are currently on the verge of vanishing due to natural causes and human interventions. Hence, there is the need to study them. The rock art sites of Mai Lemin and Be'ati Gae'wa are located in the district of Tselemti across the River Tekeze while the rock art site of Be'ati Shilum is found in the district of Tahtay Koraro (fig.1). The significance of each rock art site is discussed in the forthcoming paragraphs.

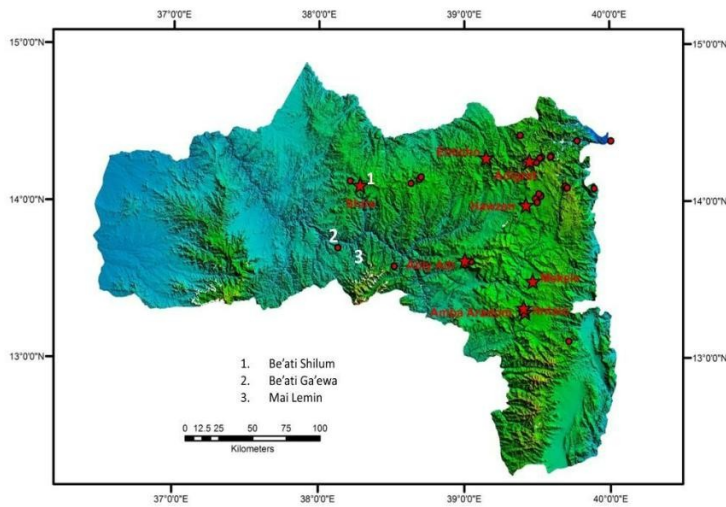


Figure 1: Location of the study area

The paintings of Mai Lemin-Gebriel

Mai Lemin is one of the rock arts site documented by the Archaeology Inventory Team of ARCCH in 2004. This rock art site is located across the River Tekeze in North western Tigray Administrative Zone, in Tselemti district (fig.1). It is accessible by four wheel drive vehicle from the town of Mai Tsemri via the road to the towns of Dima and Fiyelwuha to the east of the same town. It is found 15 km to the east of Sokota, a village situated 52 km to the east of the town of Mai Tsemri. This site is situated in a semi-built up cave in a river valley in the church of St. Gebriel near to the road that leads from the town of Mai Tsemri to the town of Dima on the edge of the River of Mai Lemin, at $13^{\circ}58'8''N$, $38^{\circ}33'34''E$ and at an elevation of 1487 m above sea level. This site was discovered in 2004 by the writer and was designated as *TSM9* in the same time. The paintings of the same site are found on the wall and ceiling of the cave inside and outside the semi- built up Church of St. Gebriel within a cave.



Figure 2: Schematic paintings of humans and other figures at Mai Lemin (photo by the author)



Figure 3: Paintings of humans at *Mai Lemin* (Photo by the author)

The paintings are displayed in two separate panels; on the wall and ceiling of the cave that are 3 m by 0.80 m and 3 m by 0.90 m, respectively (Tekle, 2004a). Only 51 were deciphered in both paintings of the panels in the wall and ceilings (Tekle, 2004a; Tekle; 2004b, Tekle, 2005). 24 figures were deciphered from the panel located on the wall of the cave while 27 figures were identified from the panel that is found on the ceiling of the cave.



Figure 4: Schematic paintings of Walia Ibex at Mai Lemin (photo by the author)



Figure 5: Schematic paintings of animals at Mai Lemin (photo by the author)

Furthermore, humans and unknown figures are also displayed in the same paintings. At least seven humans that are executed in two different styles (comb and anthropomorphic) are also depicted in the same site. Some have round, long heads and short necks while others have long neck and slim heads probably executed by different artists in different times as it can be understood from the superimposition and styles of the paintings (figures 2 & 3). Besides, one of the men is exhibited with two hands overstretching. His hands are too long and unproportional to his overall body size (Tekle, 2004a; 2004b; Tekle, 2005b). In addition, there are also two men that are standing. Furthermore, another man is also depicted driving cattle and it indicates an evidence for the domestication of cattle in this part of the country.

Tekle Hagos

Walia Ibexes are dominantly represented in these paintings. Such depictions seem to show the belief systems ideology of the indigenous population of north western Tigray in the first millennium BC (figures 4 & 5) (Finneran, 2007; Manzo, 2009). Ibex is depicted on the roof slabs of the Grand Temple of Yeha dating back to the 8th century BC. The rock-cut tombs of Daero-Mikael at Yeha also yielded bronze seals with ibex models dating to the early first millennium BC. It is assumed that the moon deity, the god of almaqah, of the Yeha period seems to have been associated with the sacred animal of ibex (Finneran, 2007; Manzo, 2009). Furthermore, long-horned humpless cattle are also depicted in the same art showing cattle that do not exist at present in the same place in particular and in Ethiopia in general. Motifs of a cow and a calf are also depicted in the same paintings. The cow is painted in white color. Its whole body is fully decorated (coated) with several four sided rectangles (Tekle, 2004a) while the calf is executed in white.

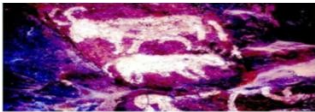


Figure 6: Paintings of cattle at Mai Lemin (photo by the author)

Some of the animals depicted in the same art seem to move towards west while the rest seem to move to the opposite direction. Unknown schematic figures that resemble the Ethiopian alphabet “M” are also depicted in the same panel (Tekle, 2004a).



Figure 7: Schematic paintings at Mai Lemin (photo by the author)

The paintings of the long horned humpless cattle seem to be one of the oldest paintings in Ethiopia. This is because the long horned humpless cattle species are the oldest one so far documented in the arts of the Nile Valley and in the Horn of Africa. In addition the styles of the same paintings of the long horned humpless cattle that belong to the Surre-Hankiya are superimposed by later styles of paintings known as the Dahthami substantiating their greater antiquities. Thus, the painting style of the rock art site of Mai Lemin can be categorized into the two consecutive phases of the Ethiopian-Arabian Styles that are mentioned above. The Surre-Hanakiya phase which is the earliest one dating back to ca. 5000 BP- 3000 BP while its later phase, the Dahthami, is ca. 3000BP- 2000 BP (Brandt & Carder, 1987).

Cattle that were attracted by the salty nature of the cave were adversely affecting the paintings at the time of the survey. This has resulted in the disappearance of some of the fragile paintings from the surface of the rocks. The local people superimposed graffiti using chalk and charcoal on top of the ancient paintings obscuring their authenticity. The inventory team has reported to pertinent authorities to take appropriate measures about the protection of this rock art site in 2004. Most of the paintings that were executed on the wall of the church were destroyed according to some informants who visited the site in 2012 (Dejen Azane, personal communication, 2012).

Be'ati Shilum

The site of Be'ati Shilum is a granite shelter characterized by schematic paintings. In the local Tigrigna language, the name of the site, Be'ati Shilum is equivalent to a decorated cave. This site located in the district of Tahtay Koraro in Lemlem

Tekle Hagos

Peasant Association (Tabiya). It is found at about 200 m to the west of Kidane Mihret Abozet Monastery, which is 10.7 km to the west of the town of Endaslassie (figure 1). It is located at 14° 7' 22" N, 38° 13' 58" E and at an elevation of 1740 m above sea level. There are several granite boulders on the slope of the surrounding chains of hills.



Figure 8: The shelter of Be'ati Shilum (Photo by the author)

The paintings in the shelter, which were discovered by the author in January 2001, are portrayed on the ceiling of the upper boulder, which is found about 4 meters above the ground surface (figure 8). The paintings are executed on a panel that is 3.50 m by 1.90 m in size. The lower boulder seems to have been used as a floor of the shelter as it can be understood from the smoothed nature of its surface. The shelter faces to the south and access to the paintings is through the southwestern direction. At least 20 paintings were depicted in the rock shelter at the time of the survey. Fighting scenes of men mounted on horses carrying what appear to be spears, shields and crosses were displayed on the same rock. The paintings convey almost similar themes with those of Anza (Eastern Tigray) and Ziban Ona Liqanos in Eritrea (Tekle, 2001) and Emba Tsegurom located near to the Pre-Aksumite site of Yeha discovered in 2016 by Negasi Awatey, a post graduate student in Archaeology from the University of Aksum (Negasi, 2016). The author together with the Addis Ababa University Yeha Thematic Research Project Team members also visited this site and carried out detail photographic documentation of the paintings and GPS location of the site in 2016. Detail description of the paintings will be published by Negasi Awatey and by the Yeha Thematic Research Project in the future.



Figure 9: Riding scenes at Emba Tsegurom (photo by the author)

The schematized paintings of Be'ati Shilum are executed in red, gray and light brown. Humans are depicted riding animals that look like horses or mules. The cattle are drawn in body profile. The horns of some of the cattles measures 33 cm by 20 cm while those of the crosses are 28 cm by 14 cm. The men are painted in comb style similar to those of Amba Faqada (Tigray), Ziban Ona Liqanos, Lamdrara and Maji Milhesse (Eritrea). The comb style of paintings also occurs in the rock art paintings of Eastern Ethiopia at Goda Ajewa, Porc-Epic, Laga-Oda, Errer Kimiet and Bhake Kallo (Cervicek, 1976; Tekle, 2001). The paintings of Be'ati Shilum seem to belong to the later Dahthami Phase of the Ethiopian-Arabian Style probably dating to the middle of the first millennium AD (Tekle, 2011).

No traces of artifacts (lithic & pottery) were uncovered on the surfaces that surround the boulders that may provide additional information about the chronology of the site.

The geography and geology around the same rock art site is suitable for the execution of paintings and engravings and thus the surrounding areas require further archaeological surveys to explore and to document additional unknown rock art sites at the chains of hills on the western margins of the north western Tigray lowlands.

Be'ati Gae'wa

According to the local informants of north western Tigray Administrative Zone in general and the district of Tselemti in particular, the word Ga'ewa is defined as wealthy, although, such a name is given to a legendary Ethiopian Queen Gudit of the 9th century AD. The local people who live around the Tekeze River also use the same name for a cave. Be'ati Gae'wa is a granite cave located across the River Tekeze around the town of Emba Madre at Dedebaria, in Mai Aini Peasant Association (Tabiya), in the district of Tselemti in North Western Tigray Administrative Zone (Figure 1). It can be reached after driving a kilo meter from the same town towards the Gondar-Addis Ababa road and then turning to the west and driving about 3 km up to the modern (Saba Dimensional Stones) granite quarry site.



Figure 10: Paintings of cattle at Be'ati Gae' (photo by the author)

From there, it is half an hour walk towards west. It is located on geographically inaccessible place where there are large and small granite boulders. Its global positioning is 13^o 41' 39'' N, 38^o 07' 8'' E and its altitude is 1290 m above sea level. Thorny bushes and other trees cover its surroundings.

The paintings are displayed in an east west direction on the cave that faces towards north. The paintings are depicted on the ceiling of the cave in a panel that is 5.7 m in length and 1.4 m in height.



Figure 11: Elephant? at Be'ati Gae'wa (traced by Kebede Geleta, Habtamu Mekonen & Tekle Hagos)

At least 13 visible paintings were portrayed in this cave at the time of the survey. Long-horned cattle, short-horned cattle and humped cattle are dominantly represented in the paintings of the same cave. A single calf is drawn besides a cow and its udders. Moreover, two men are also depicted. One of them who seem to carry a stick with his hands is depicted driving or following two oxen (figure 13).



Figure 12: Deformed long-horned humpless cattle at Be'ati Gae'wa (traced by Kebede Geleta, Habtamu Mekonen & Tekle Hagos)

Furthermore, donkeys, goats and sheep are among the domestic animals that are portrayed in the same paintings. In addition, a single ostrich is also depicted separately to the west of the majority of the paintings. Moreover, giraffe, monkeys,

apes, hyenas, lions, foxes and oryx are among the wild animals that are being displayed at Be'ati Gae'wa (Tekle, 2001).

The animal depicted in figure 11 appears to be controversial for interpretation. The anonymous reviewer of this article thinks that the figure can be deciphered as long horned humpless cattle. However, the author does not agree with this interpretation for three reasons. The front face of the figure does not look as cattle. It is more comparable to an elephant trunk. The tail of the same figure, on the other hand, is too long which is common in elephants unlike in cattle. In addition, some elephant species also have hump as shown in the figure and that the elephants that are found around the Takeze River are different species as compared with the elephants found in different parts of Ethiopia. For the same reasons such a figure can be tentatively identified as an elephant. If such interpretation is correct, this painting of an elephant is the first evidence in the rock arts of northern Tigray. On the other hand, Getachew Meressa (2006) has also reported hunting scene of elephants at the site of Netabi Geggeya in Hintalo Wajerat in southern Tigray administrative zone, near to the eastern lowlands, as discussed in the section of review literature of this article. In any event, the discovery of an elephant in the rock art site of Be'ati Gae'wa is very interesting and supports the archaeological evidence so far documented in Aksumite sites.

According to archaeological evidence, ivory was used for domestic craftsmanship and foreign trade by the Aksumites in the first millennium AD. The decorated ivory panel excavated at the World Heritage Site of Aksum by Professor David Phillipson (2000) in the early 1990s at the 4th century AD Tomb of the Brick Arches is one good example to substantiate the Aksumite use of ivory for domestic purpose. Moreover, historical evidence also suggests that elephants were used for transportation and warfare by the Aksumites in the early first millennium AD (Phillipson, 2000; Sergew, 1972). Thus, this new evidence seems to confirm that the same animal used to exist around Tekeze River since prehistoric times up to now. This argument can be supplemented by the presence of African elephant in the Kafta-Sheraro National Park located to the west of the same rock art site.

It is also interesting to see donkeys depicted in the rock site of Be'ati Gae'wa and Be'ati Shilum. The same pack animals are also depicted in the several rock sites located in eastern Tigray as shown in literature review section of this article. Aksumite inscriptions of the first millennium AD mention that donkeys were used for transporting goods. The 4th century AD inscriptions of king Ezana and the 7th century AD inscription of Hatsani Daniel discovered at the World Heritage Site of Aksum mention that donkeys were captured from defeated enemies (Tekle, 2008; Sergew, 1972). It is interesting that rock art evidence from

Be'ati Gae'wa and Bea'ti Shilum and other rock art sites in Tigray confirms such historical sources.

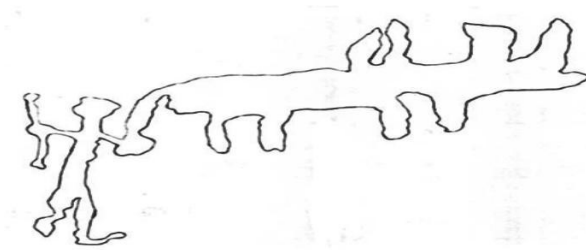


Figure 13: Herding scene of superimposed cattle at Be'ati Ga'ewa (traced by Kebede Geleta, Habtamu Mekonen & Tekle Hagos)

The paintings found at this rock art site are naturalistic representation of humans, wild and domestic animals. All pictures in the site are displayed in a body profile. They are executed in white. The yellow ones are executed on top of the white ones. Udders of cows are carefully depicted in the same paintings indicating the importance of milking. The animals portrayed in the same art seem to move from west to east directions (Tekle, 2001).

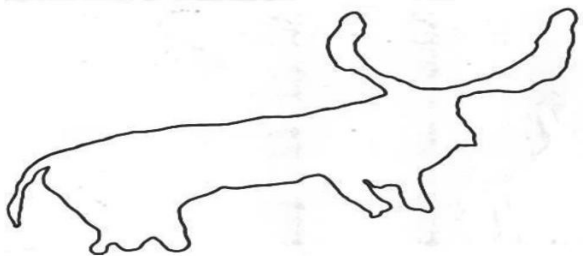


Figure 14: Long-horned humpless cattle at Be'ati Gae'wa (traced by Kebede Geleta, Habtamu Mekonen & Tekle Hagos)

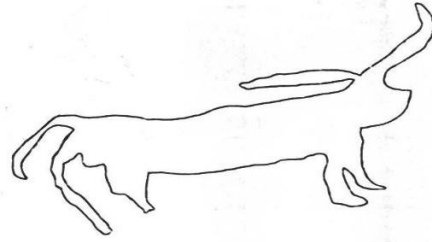


Figure 15: Deformed long horned humpless cattle from Bea'ti Gae'wa (traced by Kebede Geleta, Habtamu Mekonen & Tekle Hagos)

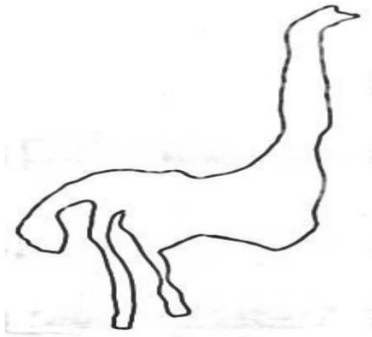


Figure 16: Ostrich from Bea'ti Gae'wa (traced by Kebede Geleta, Habtamu Mekonen & Tekle Hagos)

The paintings of humpless cattle appear to belong to the First Phase of the Ethio- Arabian style (Ca.5000BP -3000 BP) while those of humped cattle seem to be classified into the later Dahthami phase dating to the first millennium AD (Fattovich, 1977). This rock art site was discovered by the Tigray Culture and Tourism Bureau Inventory Team. However, the same team failed to produce a report about the paintings of the same site. For similar reason, the writer of this article studied these paintings in January 2001 and 2004. Due to its inaccessibility,

the paintings are relatively protected from human intervention such as graffiti like the paintings of Be'ati Shilum of Kidane Mihiret Abozet and Mai Lemin.



Figure 17: Humped ox at Be'ati Gae'wa (photo by the author)

Discussion

The present north western Tigray Administrative Zone may have been a gateway for population contacts, movements, cultural interactions between the populations in the Ethiopian highlands and the western lowlands including those in what are now the Sudan and Egypt in particular and the Nile Valley in general beginning from pre-historic times up to modern times (Clark, 1976, 1977).

Archaeological evidence from the Pre-Dynastic Egypt context show that Ethiopian obsidians were probably exported to Egypt through the trade routes that were located in the present day the North Western Tigray Administrative Zone at least at about 4000 BC (Hatke, 2013). Furthermore, Nubian potteries that were retrieved by Fattovich and his colleagues at the locality of Ona Enda Aboy Zewge (Betegiorgis) near to the World Heritage Site of Aksum might have reached to the Aksumite metropolitan via the trade routes located in the North Western Tigray Administrative Zone. This indicates the continuation of trading contacts between the Aksumites and the Kushite/Nubians during the first millennium AD (Hatke, 2013). It follows that the present administrative zone of North Western Tigray might have been an entryway for the introduction of domesticated cattle, sheep and goat from the Nile Valley in general and the

Sudan in particular to Ethiopia between ca. 5000 BP-3000 BP (Clark, 1976,1977; Bard et.al., 2000). This is because of domestications of cattle sheep and goat a phenomenon which has greater antiquity in the Nile Valley particularly in the Sudan and Egypt than in Ethiopia as elaborated shortly (Tekle, 2011).

Egyptian historical evidence shows that domestication of cattle, goats and sheep in the Sudan predates that of Ethiopia. Egyptian historical documents of the early 3rd millennium BC indicate that the same animals were already domesticated in the Sudan at about the same time. The inscription of King Senfru (C. 2720 BC) mentions the capture of 200,000 large and small cattle from Nubia. Furthermore, King Harkhuf (2420 -2250 BC) of Egypt states that the chief of Nubia offered him bulls and small cattle. At about the same time, it is noted that Pepi Nehkit of Egypt brought bulls from Nubia into the royal court of Egypt (Mohammed Ali, 1982).

Archaeological evidence also suggests the domestication of cattle have greater antiquity in the Sudan than in Ethiopia. It has been documented that herding of cattle was the key economic sector for the population of the C-Group of Nubia. Depiction of cattle on the C-Group Pottery and sacrifice of cattle documented from the grave of the same communities show that cattle herding was the dominant sector in the economy of the same population (Mohammed Ali, 1982). Moreover, archaeological excavations carried out at the site of Kadero in the Sudan by the Polish Archaeological Mission confirms that cattle herding had a dominant role in the economy of the then Sudanese population who lived at Kadero at about 5000 BC (Kryzaniak, 1977).

The climatic changes that took place in Africa during the Holocene may have been one of the reasons for the migrations of herdsmen or diffusion of ideas from the Sudan into Ethiopia (Clark, 1976). Hassen (1996) suggests that the climatic changes that took place in Africa during the Holocene may be considered as critical element in cultural change during the late pre-history of Africa. Following this model, the droughts that took place in the same continent during the middle Holocene may have been the key factor for the rise of indigenous cultural developments, population movements, dissemination of ideas and intercultural dynamics in Africa.

The emergences of cattle herding economy in the Sahara and in the Sudan during the middle Holocene seem to have been in response to the droughts that took place in Africa at about the same time. The domestication of cattle in Egyptian Sahara at about 8000 BP may have been in response to the climatic stress of the Holocene. In fact, the draught in the Sahara continued southwards to the Sudan in the middle Holocene (Hassen, 1996). In addition, historical records of the

Nile floods show that an arid climatic condition prevailed in North East Africa during the middle 3rd and late 2nd millennium BC (Bard et al., 2000).

This climatic stress might have resulted in cultural dynamics among the local communities in the Sudan for their greater emphasis on the domestication of animals as well as the expansion of cattle herding rather than depending on the already existing hunting- gathering and fishing economies. For the same reason, the herdsmen in the Sudan might have migrated to Ethiopia between 5000 BP and 3000 BP (Hassen, 1996).

The available evidence suggests that the climatic condition that prevailed in Ethiopia at about the same time was favorable for domestication of cattle, sheep and goats. The present day climatic and rainfall conditions of Ethiopia were established in the 2nd millennium BC as indicated from the historical records of the Nile floods (Bard et al., 2000).

An open vegetation pattern is favorable for grazing cattle. Such a pattern is conducive for the growth of grass, which is the main pasture of cattle, sheep and goats. Grass need open space to absorb sunlight. Besides, grasses do not need much rainfall to grow. Therefore, the open-air vegetation pattern that existed in Ethiopia during the second millennium BC was conducive for cattle grazing. Possibly attracted by these favorable environmental factors, the herders in the Sudan might have had moved into Ethiopia along the routes in north western Tigray.

Conclusion

It can be concluded that domestication of cattle, sheep and goat may have been introduced by pastoralists in the Sudan to Ethiopia (Clark, 1977) through the areas of north western Tigray. This proposition can be substantiated from the recently discovered rock art sites of Be'ati Shilum, Be'ati Gae'wa and Mai Lemin. These sites are found on the routes that lead from the north western lowlands of Ethiopia to the northern highlands towards eastern Tigray via Tembien where there are a large number of distributions of rock art sites.

The rock art sites mentioned above are some examples that indicate the archaeological potentials of north western Tigray Administrative Zone. They can be used as a springboard to encourage scholars to carry out multidisciplinary archaeological researches in the same place to explore the unknown archaeological resources and to acquire knowledge about the archaeology of the north western periphery that have been neglected previously due to lack of interest by researchers, its inaccessibility and hostile environment.

Tekle Hagos

The deformed horns of the cattle (figures, 12, 14, 15 and 17) that are depicted at the rock art site of Be'ati Gae'wa are very interesting and require further research to address what they signify? Are they evidence for an evolution of cattle from humpless to humped ones to adjust and to survive with the then existing hostile environment? Or are they the result of crossbreeding of cattle between the wild and the domesticated ones? Or are they the result of fusions of cattle between the locals and the migrated ones? It is hoped that future archaeological research in the same place will address the queries like those mentioned above and others.

Acknowledgments: The author is very much grateful to the two anonymous reviewers and the editors for their critical comments.

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