

The Rock Art of Iringa Region in the Southern Highlands of Tanzania

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Abstract

Archaeological potentialities of Iringa region, specifically on rock paintings, were not well-known until very recently, when the Iringa Archaeological Project (IRAP) was launched by Canadian and Tanzanian scientists. They reported the existence of rock-shelters with paintings, but they didn't undertake detailed investigation on them. In due regard, we organized an archaeological survey in August 2012 to record and document in detail the magnitude and authenticity of rock art sites in Iringa. We re-examined two sites that were reported in 2006 and studied other two rock-shelters with paintings. The study reveals that, the rock art of Iringa belongs to two rock art traditions: Hunter-forager and Bantu-speaking art traditions. The former is dominated by naturalistic animal and human figures, executed in dark and red pigments, while the latter consists of schematic animal and human figures, as well as geometric designs executed in dirty-white pigment. The majority of studied paintings share some artistic traditions with the rock art of central and North central Tanzania, such as stylistic motifs, aspects, techniques of executions, subject matter and depicted color.

Background Information

Geographically, Iringa is located in the southern highlands of Tanzania, lying between 7° 46' 12" S and 35° 41' 24" E, and covering an area of about 58,936 square kilometers (Figure 1). The region is surrounded by three major mountain ranges, namely; Kipengere and Livingstone Mountains to the South and the Udzungwa Mountains in the North-East. Most of the region is composed of highlands and escarpments, ranging from 1200 m to 2700 m, though there are a few lowland areas ranging between 900 m and 1200 m above sea level (Bushozi, 2011). Highlands and escarpments are mainly composed of Precambrian migmatites, granite and Konse group outcrops that form most of rock-shelters and overhangs

(Biittner 2011; Harpum, 1970; Harris, 1981). These rock-shelters and overhangs served as prehistoric human settlements, as they accommodated humans during the glaciations phases of the Middle and Upper Pleistocene, the period in which most of tropical Africa was characterized by prolonged series of dry and harsh environmental conditions (Bushozi 2011; Willoughby 2007).

Shelters with paintings occur mainly in highlands surrounded by dry forests, bush savannah and occasionally, grassy plains. Most of the depicted animals such elephant, giraffe, antelope, crocodiles, ostrich are locally abundant in the National Parks at Ruaha and Udzungwa National Parks. The artists probably selected mountainous landscapes for art expressions because the paintings can continue to exist for a long time because the geomorphology of the landscape discourages and limits unnecessary people, including kids, to access to them.

With the exception of Isimila Acheulian site, dated to about 270, 000 BP (Cole and Kleindienst, 1974; Hansen and Keller, 1971; Bushozi, 2014) the archaeology of Iringa region was not very well known until very recently. Initiatives that led to the discoveries of new sites began in 2006, by the Iringa Regional Archaeological Project (IRAP). Since then, IRAP has revealed substantial information for the post-Acheulian sites, in particular, the MSA and LSA occurrences including human remains at Magubike and Mlambalasi (Biittner 2011, Bushozi 2011, 2012; Willoughby 2012; Miller and Willoughby 2014). These two rock-shelters have shaped our current knowledge about the Middle and upper Pleistocene human's subsistence economy, ecological adaptation, mobility systems and socio-economic (Biittner 2011; Bushozi 2011, 2012; Willoughby 2012). Available evidence suggests that Iringa served as a refuge, where people got potential subsistence requirements during unfriendly environmental conditions, like the one that characterized the world for the most of Middle and Upper Pleistocene, the period in which most of sub-Saharan Africa experienced unreliable environmental conditions characterized by prolonged series of arid and dry episodes, and short hysterical bursts of rainfall (Scholz et al. 2007; Willoughby 2012).

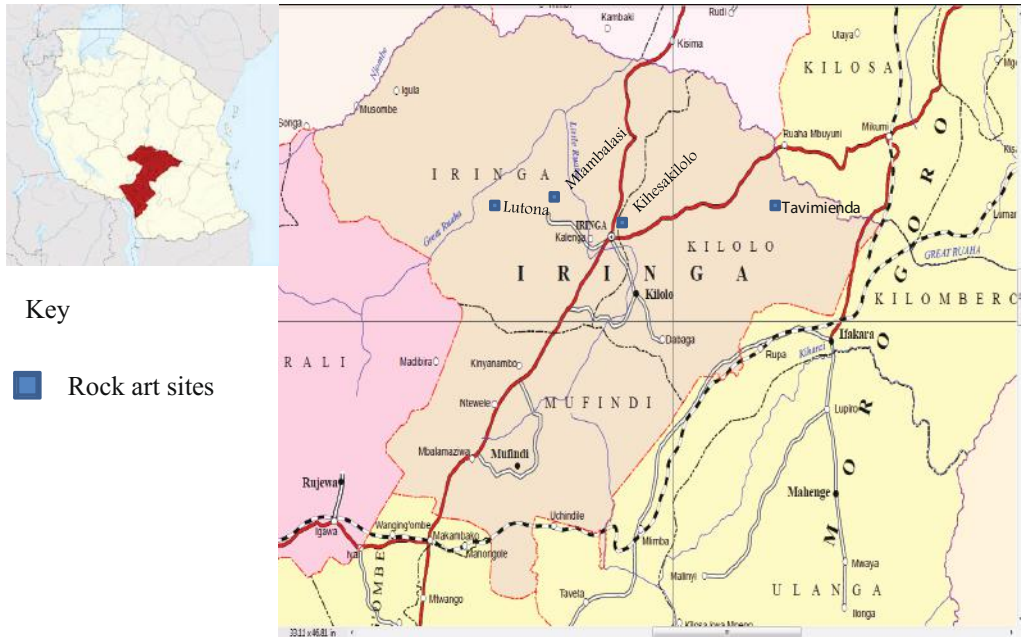


Figure 1: Map of Iringa Region Showing the location of Rock Art Sites

Methodological Approach

This research intended to identify, document and describe the existing and new rock painting sites. Based on time and financial constraints, it was impossible to survey the entire region. Instead, we sampled few areas based on natural landscape, whereby all Precambrian rock boulders and outcrops with prospective shelters and overhangs were purposely sampled. Accessible rock-shelters, overhangs, and caves were examined in detail, so as to find rock paintings. The rock paintings found were traced, described and classified according to their subject matters, stylistic characteristics, composition, action, aspect, and techniques of execution. In some cases, ethnographic enquires were conducted to attain additional information about current use of rock-shelters and their understanding of the rock-paintings. It was revealed that painted rock-shelters are emotionally attached to cultural belief systems of the indigenous people. Sometimes, indigenous people use rock-shelters with paintings for sacrifices, rituals and offerings. For instance, we were informed that the local community of Ikula Village occasionally use the rock-shelter with paintings for religious

practices, in particular, rain-making rituals, blessings, and forgiveness or appeasing gods and/or ancestors. A similar trend of using rock-shelters with paintings for rituals and religious aspects was recently recorded among the Warangi of Kondoa (Bwasiri 2011). In addition, the floor and surrounding areas of the rock-shelters we found composed of dense surface scatters of archaeological and historic materials, suggesting that they were centre for human occupation and served as workshops or manufacturing industries by Stone Age people, iron smelters, and blacksmiths. Ethnographic evidence indicates that they are occasionally used for overnight sleep during rainy season and sometimes they were used for rituals and other religious aspects.

Recording and Documentation

Recording involved the identification of site names and its geographical location, photographing, categorizing the form and type of the rock-shelter, and the current usage of the site. We also tried to count the number of painted figures, subject matter and types or stylistic representation of the paintings i.e., naturalistic vis-a-vis stylized. All data concerning the paintings and site were documented based on the documentation scheme developed by Audax Z.P Mabulla (2005). The geographical location of a rock art site was documented using a hand held Global Positioning System (GPS) device. A *Sony* digital camera was used in taking photographs. We adopted the Vinnicombe (1976) Rock Paintings Analysis Scheme for our study because it is widely used in northern and north-central Tanzania, and it offers a unique opportunity for qualitative and quantitative analysis of rock art. Paintings were also traced using transparent tracing papers (Figure 2). At least four sites with rock paintings were identified and documented in Iringa and Kilolo districts. These include Mlambalasi, Kihesakilolo, Lutona and Tavimienda (Figure 1). Furthermore, paintings were evaluated and analyzed in detail to determine the state of preservation and the sources of potential threats to their integrity and survival, as well as to ascertain their suitability for public display. This approach was part of a conservation and sustainable management strategy aimed at saving this priceless cultural heritage asset (Deacon 2007; Mabulla, 2005; Mabulla and Gidna 2014).

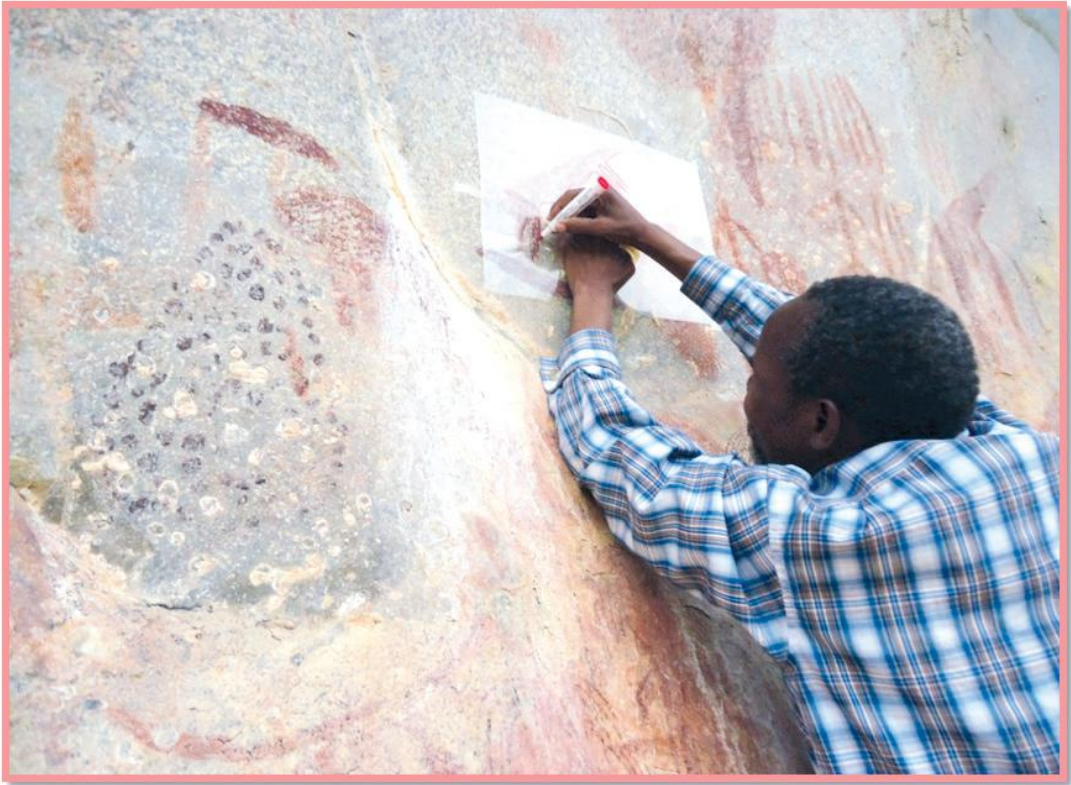


Figure 2: Saidi Kilindo Tracing the Paintings in Kihessakilolo Rock-shelter

Mlambalasi Hill (7° 43' 7" S and 35° 42' 6" E)

Mlambalasi Hill is a very famous site for archaeological and historical information of Iringa. This is a place where chief Mkwawa, a former leader of Hehe people killed himself rather than surrendering to German colonialists (Biittner 2011; Bushozi 2011, 2014; Willoughby 2012). After the long lasted anti-colonial warfare, he killed himself in 1894, his head was cut off and taken to the Bremen Anthropological Museum in German, but the rest of the body was buried at Mlambalasi Village (Bushozi 2014). His skull was returned to his family in Tanzania in 1954, and now rests in the Chief Mkwawa Memorial Museum at Kalenga, along with other personal belongings and items representing the culture and economic activities of Hehe people (Biittner 2011). In addition, the hill of Mlambalasi is surrounded by a number of rock-shelters, with LSA, Iron Age archaeological artifacts and prehistoric human burials (Sawchuk and Willoughby in press). Human remains and dense

LSA artifacts were exposed in the main rock-shelters that were excavated in 2006 and 2010 respectively. The archaeology of Mlambalasi is characterized by lithic artifacts, bones, ostrich eggshell beads and other symbolic revealing artifacts, including ochre. It was radiocarbon dated to between $14,115 \pm 55$ (OXA 27621) and $16,690 \pm 65$ (OXA 27624) (Willoughby 2012; Bushozi 2014).

About five rock-shelters with paintings, referred as Mlambalasi 1 to 5, were documented across the landscape that surrounds the hill. However, most of the paintings are faded because of rock weathering. Only one rock-shelter (Mlamabalsi 2) was found to have few identifiable anthropomorphic and zoomorphic figures, particularly in the eastern wall. Figures are depicted in red lines and strips that are very hard to interpret. One of the figures is a very long segmented body, with short radiating lines, probably representing a millipede (Figure 3).



Figure 3: Red-geometric line painted in red color at Mlambalasi 2

Lutona rock-shelter (7° 46' 7" S and 35 °26' 2" E)

Lutona is a large circular rock-shelter found in Kitwiru area, about 12 km West of Magubike Village. It is surrounded by forests and numerous kopjes of Precambrian era. It is located adjacent to the Kitwiru ephemeral river that may have served as a source of water for artists. The shelter has dense scatter of archaeological artifacts, in particular, potsherds, slag, bones and lithic artifacts. On the other hand, the rock-shelter of Lutona is greatly vandalized. Vandals were possibly iron-smelters and/or treasure hunters. One of the vandalism signs left is a big hole in the North-western corner of the shelter. Depicted art include Late-White geometric figures, executed on the roof. Majority of them are faded due to anthropogenic factors and/or natural weathering (Figure 4).



Figure 4: Late White Paintings at Lutona Rock-shelter

Tavimienda Rock-shelter (7° 36' 13" S and 36° 30' 26" E)

This site is located in Kilolo District, about 198.4 km from Iringa town. The rock-shelter with paintings is located on the peak of Udzungwa Mountains. Due to the mountainous nature of the site, depicted paintings are in good state of preservation. We were informed by the local people that there are many rock-shelters with paintings in Udzungwa Mountains, but we failed to access them because of uneven terrain, as survey was carried out during rainy season. Only one shelter with paintings was recorded, mapped and documented at Udzungwa. Paintings are depicted on the roof of the shelter and are characterized by dusky white geometric arts (Figure 5). Majority of them are in good state of preservation and some of them are superimposed, suggesting that overlaid figures were painted earlier than others. Majority of the paintings represent humans and local animals and/or insects, but sometimes, there is symbolic signs, representing cultural expectations of artists. All the paintings in Tavimienda rock-shelter are depicted in white pigments and cover an area of about 108.1 m².

Represented figures include letter-like signs and amorphous or abstract figures (Figure 5). These include circles and concentric circles with all-round, externally radiating lines which dominate. Animals are dominated by reptilians such as alligator, lizard and crocodile. Human figures are stylized, their bodies are expressed in perpendicularly or horizontal orders, and sometimes kneeling down, with stretched hands and legs. Nonetheless, most of the schematic human figure designs have faded colors; suggesting that they are older than the others, representing the first phase of painting. Circles, bolded white-dots, concentric circles, geometric squares and triangles, depicted in dusky white may represent a second phase of paintings (Figure 5). A good number of the paintings are well persevered and visible, making the rock-shelter of Tavimienda one of appropriate sites for public display or of archaeo-tourism attraction.



Figure 5: Dusky white geometric paintings at Tavimienda rock-shelter

Kihessakilolo rock-shelter (7° 43' 32" S and 35° 30' 22" E)

This rock-shelter is located on the peak of Igeleke Hill, at an elevation of 1556 m about 100 m West of Igeleke Primary School. The site is surrounded by many granite-kopjes and *euphorbiacandelabrum* (candelabra) trees. The surrounding landscape is scattered with LSA artifacts, slag and pottery. The painted shelter's wall covers an area of about 7.31 m². We recorded over 50 figures, most of which represents naturalistic animals and stylized humans. Animals represented include giraffes, antelopes and elephants. Animals are depicted in a naturalistic style and some of them are placed over others (Figure 6). Other depicted figures include candelabra trees (*Euphorbia candelabrum*), parallel lines, and whites and black dots, concentric circles and two head-dresses. White dots extended up to 4 m high from the ground, suggesting that scaffolding was used in the process of execution.

Majority of the paintings are executed red, but few of them are in black color (Figure 6). Although the rock-shelter of Kihessakilo is located in the outskirts of Iringa town, most of the painted figures are in a good state of preservation.



Figure 6: Animals and naturalistic human figures at Kihessakilolo rock-shelter

Description of the Paintings, Subject Matters and Styles

The subject matters of paintings were both representational and non-representational. The former is represented by naturalistic and semi-naturalistic animals, semi-naturalistic humans, and semi-realistic inanimate figures. The latter depicts schematic, geometric and amorphous (SGA) signs. In this study, only monochrome paintings in red, white, black and yellow colors were encountered. Neither bichrome nor polychrome styles were used for painting in Iringa. Red pigment dominated the paintings and dusky-red (stale and fresh) is the apparent leading color. Over 50 individual painted images at Kihessakilolo

were painted with dusky red pigments, followed by white (16 images) and about 3 images were painted using black pigment. At Lutona rock-shelter, at least four faded figures were in white pigment, while two faded figures were depicted in yellowish pigment.

Variations in colors, i.e. red (stale and fresh), dusky white and white, white and yellow, may be due to fading and weathering of pigment through time or ingredients used to process coloring (Namono 2010; Rasolandrainy 2011). Weathering and deterioration might have altered the pigments at Lutona rock-shelter from white to yellowish color (Figure 4). As noted earlier, ingredients used to process the pigments are one of the leading factors for the variation in colors among of the identified rock paintings. For instance, red pigments could have been made from soft rocks containing oxidized iron, such as hematite or ochre, since they are in abundance in the vicinity, while black color was much more likely made from charcoal, and white was probably made from gypsum or lime (Masao 2007; Itambu 2013). The liquids used to make the binder were not clearly understood, but water was likely used since many paints were powdery (Vinnicombe 1976: 130). Also, since all the rock art sites in Iringa are located at a stream-side or along the water sources, water could have been used as a binder by mixing it with other materials such as latex or glue. Interestingly, we found a figure of Candelabra tree (*euphorbia candelabrum*) at Kihessakilolo, trees paintings are not common in Tanzania. However, Candelabra trees have utilitarian function in some of the local communities. For instance, among the Wanyaturu of Singida, liquid from Candelabra tree makes latex for binding broken utensils (Itambu 2013). It is likely that in the past, latex from Candelabra trees was mixed with other ingredients such as ochre to produce coloring and/or binding materials.

Order of Superimposition

Oder of superimposition was mainly represented at Kihessakilolo, Lutona and Tavimienda rock-shelters (Figures 4, 5 and 6). At Kihessakilolo, at least three phases of superimposition were identified: in the first phase, red are overlaid by black paintings. The black are also superimposed by white paintings. This order of superimposition shows the genealogy of three cultural sequences. At Lutona

rock-shelter, white pigment was found overlaid by yellow pigment, meaning that white pigment was painted much earlier than others. A similar trend of superimposition also appears at Tavimienda, suggesting that these rock-shelters were somehow occupied on seasonal or periodical basis by different cultural groups, alternatively, it may represent the genealogy of artistic traditions.

Traditions and Styles

Two cultural traditions are apparent in the rock paintings of Iringa. These include hunter-foragers and Bantu traditions. The Hunter-Forager (HF) paintings are clear, simple and their edges are well refined, suggesting that they may have been painted with fine brushes. Mabulla (2005) and Mabulla and Gidna (2014), subdivide this art tradition into two broad categories: the Hunter Forager Figurative Fine Line (HF-FFL) and the Hunter Forager Red Geometric (HF-RG). In most cases, the HF-FFL and HF-RG arts occur simultaneously, but HF-RG are always placed on top of HF-FFL paintings, suggesting that the latter are relatively older. This HF-FFL art represents mainly wild animals in naturalistic and semi-naturalistic styles or humans in stylized forms (Mabulla and Gidna, 2014). Other subject matters include executions of birds, vegetation, handprints and anthropomorphic, therianthropic and shamanistic figures, expressing the dynamics of local environment and the essential needs for foraging communities (Mabulla and Gidna 2014). Humans are depicted engaged in activities including hunting, singing and dancing (Mabulla and Gidna 2014).

Naturalistic animals are characterized by wild animals such as giraffes, elephants, antelopes and lions. At Kihessakilolo, like other places of central and North-central Tanzania, giraffes are the most dominant and they are executed in such a way that they are easy to identify (Figure 6). The dominance of giraffe species in the recorded rock art sites may suggest that they played a certain cultural role, or they were the most available animal species. In modern context, giraffes are sometimes associated with either religious or ritual activities. For instance, in some societies, like the Wanyaturu people of central Tanzania, giraffes symbolize beauty, loveliness and/or calmness (Itambu 2013). Among the San community in Kalahari Desert in Botswana, giraffe is considered to be a potent animal and it plays an important role in ritual and folklore (Bisele 1993; Bendera 2011;

Bwasiri 2011). At Kihessakilolo another animal widely depicted are antelopes, in particular, elands and wildebeests, followed by elephants. They are painted with well elaborated body parts that make them easy to identify. Most of elephants miss ears and tusks while the tails are well elaborated (Figure 6).

Stylized humans were documented among the hunter-gatherers communities at Kihessakilolo, as well as among of the farming communities art at Tavimienda (Figures 5 & 6). Stylized red human figures have longer arms and legs than a trunk. These schematic human figures have square/box-like trunk in open line, sometimes with stylized legs, while others have a thinned-lined trunk or schematized tails. Human figures represent males and females, but males predominate. Males can be easily identified by their slender and upright bodies, contrary to females, who are represented by reverse articulation of legs, exaggerated lordosis of the spine and frequent breast attached to the thorax (Eastwood and Blundell 1999; Bendera 2011). In this study, women bodies were represented in reverse articulation of legs and exaggerated lordosis of the spine, but had no breasts attached to the thorax (Figure 6). However, some female figures recorded at Kihessakilolo are executed in various sheds of red color, including the head-dresses and plumes (Figure 6).

The last hunter-gatherers category is the HF-RG arts, characterized by geometric designs such as concentric circles; parallel, horizontal, and ladder-like lines; and scaffolding, millipede or snake-like lines representing the later phase of hunter-gatherer traditions (Mabulla 2005; Mabulla and Gidna 2014). In most cases, figures of this group appear in association with other figures, including humans and animals. They are painted with various sheds of red, especially light, reddish brown and dark red colors. In Iringa, such paintings appear at Kihessakilolo and Mlambalasi rock-shelters. Elsewhere in Tanzania, the HFRG art tradition is widely represented in Dodoma, Singida, Manyara, and Lake Victoria Basin (Leakey 1983; Mturi and Bushozi 2002; Masao 1979, Mahudi 2008; Mabulla 2005; Mabulla and Gidna 2014).

The Bantu art tradition or Late White art, is attributed to Iron working or farming communities. The paintings appear crude and the tradition is dominated by geometric designs including dots, lines, circles, squares and smears (Mabulla and

Gidna 2014). Also present are schematic depictions of anthropomorphic figures such as spread-eagle, stylized humans, and stylized animals such as reptiles and insects (Mabulla 2005). Depicted animals include crocodiles, alligators, lizards and insect like figures. In some cases, reptiles, birds and insects are painted in light and dark red colors, while all reptiles were painted in dirty white color (Figure 5 and 6). However, there is a sub-tradition under this category, known as art Script/letter-like designs, characterized by geometric, script like designs (letters, numbers, signs or symbols) and non-representational paintings or abstract arts (Chami 2008)

Non-representational paintings or script like designs look like alphabetic and numerical signs, widely represented in the Bantu art tradition. They represent alphabetic, syllabic, or ideographic characters, in particular, those from ancient writing systems of early African civilizations. Also, others resembled numerical patterns that are similar to nowadays numbering systems (Chami 2008 and Rasolandrainy 2011). This category includes vertical lines, parallel vertical lines, parallel horizontal lines, cross, X signs, X barred on top, V sign, Chinese hat sign or upside down V, arrow sign, Square open at the base, Inverted U, Up-side down E, H signs, B signs, line and dots sign, Y-like sign, numerical signs like 9, cobra-like signs, cow's head-like signs, pottery/gourd vessel-like sign (Figure 7).

IRINGA	Ancient Libyan script characters	Proto-Egyptian linear signs	Cretan and Aegean linear signs	Proto-sinaitic script characters	Meroitic cursive script characters	Punic Iberian script characters	Early Phoenician script characters	Tifinagh script characters
	 [ts]	 Nqd. [m]		 [daleth = d]	 [d]	 [ko/ro] [u]		
	 [f]	 Nqd. [a]			 [no]	 [pe/be]		 [p/ph] [g]
	 [k]	 Nqd. [k]	 [t]			 [p/b] or [u]		
	 [z]	 [z]		 [Heh = h]	 [i]	 [z] but also [o]	 [zayin = z]	 [z]
	 [t,d]	 Kabun		 [sin = s]		 [to/do]	 [he = h]	 [t, d]
	 [t]	 [t]	 [kb]	 [taw = t]		 [ta/da]		 [t]
	 [o]	 [t]			 [o]	 [pa/bo]		 [o]
	 [k]	 [k]				 [ta/da]	 [taw = t]	 [t]

IRINGA	Ancient Berber script characters	Proto-Egyptian linear signs	Cretan and Aegean linear signs	Proto-sinaitic script characters	Meroitic cursive script characters	Punic Iberian script characters	Phoenician script characters	Tifinagh script characters
	 [r]	 [o]	 [o]			 [e]	 [ayin =]	 [r]
		 Naqada	 [ph]	 [ayin =]				 [b]
	 [rt]	 [th]	 [th; ka]				 [t]	 [rt]
	 [h]	 [solar disc]	 [o]					 [s]
	 [s]	 [m]	 [sb]	 [res = r]	 [n]	 [s]	 [sin = s]	 [s]
	 [nt]	 Abydos		 [he = h]; [taw = t]				 [nt]
		 Naqada		 [qoph = q]				
		 [z]	 [z]	 [nun = n]	 [u]	 [n]	 [nun = n]	 [nun = n]

Figure 7: Alphabet-like signs from Iringa compared to some Ancient Script Alphabets from other parts of the world (Re-drawn after Evans 1897: 384, 386; modified from Rasolondrainy 2011 and www.ancientscripts.com. Phonetic value of the letter is not included.

These script/letter-like signs/patterns, signs or symbols were also compared with ethnographic signs painted on ceremonial gourd of the Wanyaturu people of central Tanzania (Figure 8). Among Wanyaturu signs, engraved or painted on ceremonial gourds, have symbolic meaning. For instance, cattle figures symbolize wealth; parallel and curved lines symbolize peace, bridal and fertility (Itambu 2013). Such signs and patterns are widely depicted at Tavimienda, and are comparable to the ethnographic objects of the Nyaturu of central Tanzania, probably representing signs for the inherited cultural traits (Figure 8).

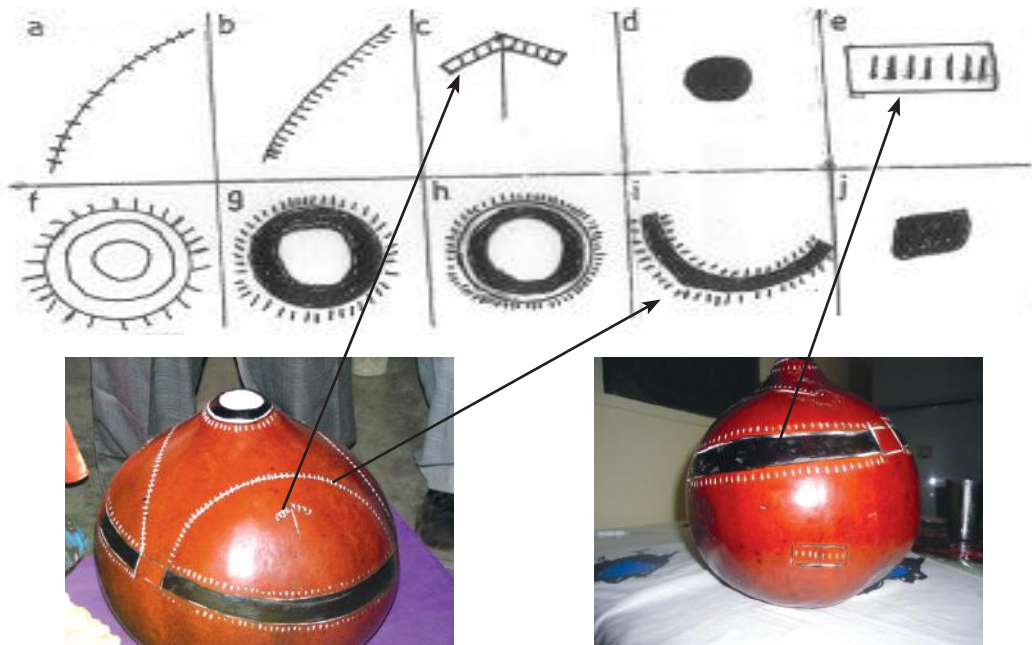


Figure 8: Paintings from Tavimienda rock-shelter in comparison with signs engraved on Wanyaturu ceremonial gourds

Conclusion

The southern highlands of Tanzania comprise complex rock paintings, indicating the work of skilled artisans. Stylistically, documented rock paintings represent the hunter foragers and Bantu speaking people traditions. Hunter-foragers traditions, widely represented at Kihessakilolo and Mlambalasi are executed in lines of various shades of red figures, depicting mostly naturalised and

semi-naturalised animals and stylized human figures. The subject matter is various, including depiction of humans, wild animals, geometric and amorphous signs and vegetation. At Kihessakilolo, the Hunter-Foragers traditions are overlaid by the Bantu speaking people paintings, which is widely depicted at Tavimenda and Lutona. They are represented by geometric designs, including dots, lines, circles, squares, smears, schematic depictions like spread-angle, distended human figures and stylized animals. Other painted figures are of reptiles and lizards.

Although detail analysis is under way, it is important to note that this study has contributed a lot to our current understanding about the spatial distribution of rock art sites in Tanzania. Depicted paintings are very similar to that of well known central, North - central and inter-lacustrine regions in style, colours and subject matters. Practically, the trend and artistic representation of the rock art of Iringa suggest that communities with closely related cultures inhabited the northern and southern Tanzania landscape from the Upper Pleistocene to historic period. The trend of stylistic and cultural domains suggests that the inhabitants of these regions had commonalities in most of their cultural traits, experiences and religious ideologies. Preliminary results show potential evidence to list the southern highlands of Tanzania among the prominent regions in the study of rock art. More studies are highly encouraged in order to come up with meaningful assertion about the genealogical and cultural connections of the eastern and southern African regions in the development of cognitive thought in human history.

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