



Early man and his culture from Eritrea in Northeast Africa

S.Krishna Rao

Department of Anthropology, Eritrea Institute of Technology, Mai Nefhi, Eritrea.

Email: raokrishna2000@yahoo.co.in

Abstract: The track of human evolution and its cultural remnants set evergreen inquiry in the minds of every modern man. African continent has yielded rich evidences that proved crucial not only in establishing the identity of human ancestors but also the cultural evolutionary trends complementing with the biological evolution. The post-independent era of Eritrea with the prevailing peace became conducive to undertake the present geo-archaeological explorations in different environmental zones such as the Eastern Rift and the Danakil Depression, the central highlands and the western and southwestern lowlands. The explorations made in the Buyya region in Eritrea during 2002, provided rich collections of cultural artifacts including stone tools that marks technically improved the workmanship in tool making. A pastoral rock art examined at Adi Keih depicted the human figures with weapons like spears, shields and arrows, and a few hump-less cattle. The evidences obtained in this study suggest that the cultural ecology of various primitive communities of Eritrea existing today such as Kunama, Nara, Rashaida, Afar, Saho, Bilen, Hidareb, Tigre and Tigrinya can be understandable from the varied cultural paradigms developed over a period of time in response to the then prevailed local environment. Thus, this study adds more evidences to the understandings of early human colonization in relation to the cultural artifacts.

Keywords: Eritrea, Early man, Northeast Africa, culture, human evolution, Stone Age, tools, *Homo sapiens*.

Introduction

Scientific explorations about the temporal and spatial expanse of human ancestors have been the inquisitive source for everyone including anthropologists, biologists, historians and commoners. African continent has yielded evidences and rich data that proved crucial not only in establishing the identity of human ancestors but established cultural evolutionary trends associated with human ancestors. An attempt has been made here to trace such biological and cultural evolutionary link that has been preserved in

some parts of the State of Eritrea in North East Africa.

Homo erectus, a man walking erect from hominid group is popularly known as our first ancestor. Ever since, many anatomical modifications have occurred in human phylogeny. During the time of evolution of humans, there had been lot of environmental impact on the species. This probably led to the cultural aspects of human species in different climatic periods to develop sequentially from simple type to more complex. It is evident from the stage of *Homo erectus* up to the stage of modern humans, *Homo sapiens sapiens* emphasizing the cultural evolution corresponding to biological evolution.

As to the origin of humans there are many interpretations. It is known fact that Africa continent is the cradle of humankind. The evolutionary trends from 3 mill. year old early hominid species, *Australopithecus afarensis* (Lucy-culturally un-established) of Ethiopia to the stage of modern humans reveal the physical and cultural changes of the species. In fact, important human stages of transition as explained by Lemonick and Dorfman (1999) are as follows: Earlier to Lucy, the development of bipedalism is the first turning point for the separation of humans from the great apes around 6 to 4 mill. years ago. The second major shift around 2.5 mill. years ago can be ascribed to the development of meat eating and tool making capacity as evident from the descendants of Lucy. These descendants are close to the genus *Homo*, although the other known variants such as *Australopithecus africanus* and *Australopithecus aethiopicus* do not show affiliation. The dramatic development of the brain led to the emergence of our first ancestors from Africa around 2 to 1 mill. years ago. Many believe that *Homo erectus* is the direct ancestor of our own species. It is also believed that *Homo erectus* is the first hominid to emigrate from Africa around 1.8 mill. years ago to China and Indonesia. At some point, its lineage diverged with one branch leading to Neanderthals around 200, 000 years ago, and another to modern humans around 100, 000 years ago.

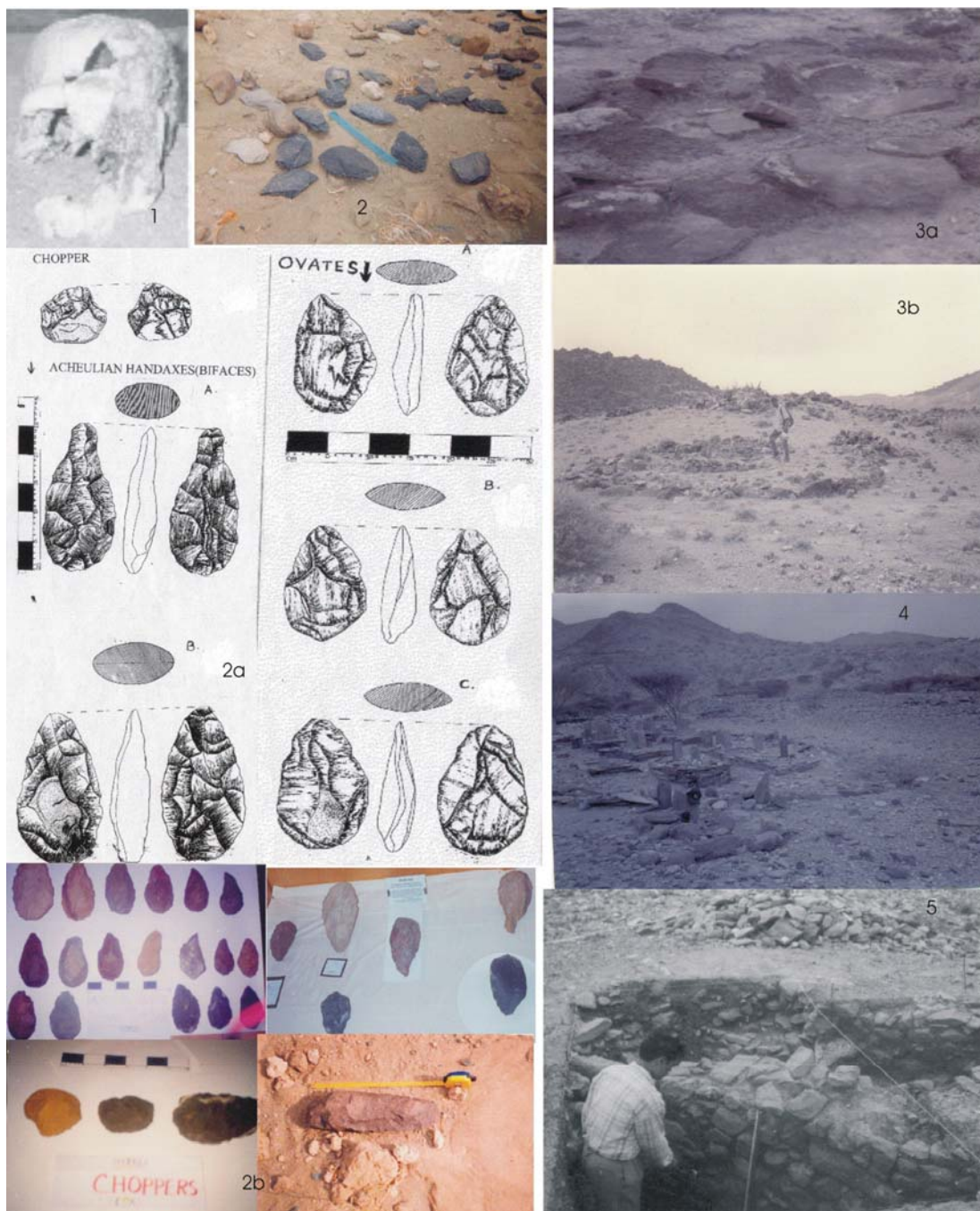


Fig. (1-4 Danakil Depression) 1. Buyya Man (*Homo erectus*); Fig.2. Acheulian Bifaces spread on the surface of the site; Fig-2 a (Drawings): Lower Paleolithic tools; Fig-2 b (Photo) Lower Paleolithic tools; Acheulian Hand axe; Fig.3 a,b. Megalithic stone circles; Fig.4. Saho Stone Circle in the Buyya Village; Fig.5. Pre-Axumite (8th Century BC) Site Excavation from Sambal Kushet (Central highlands).

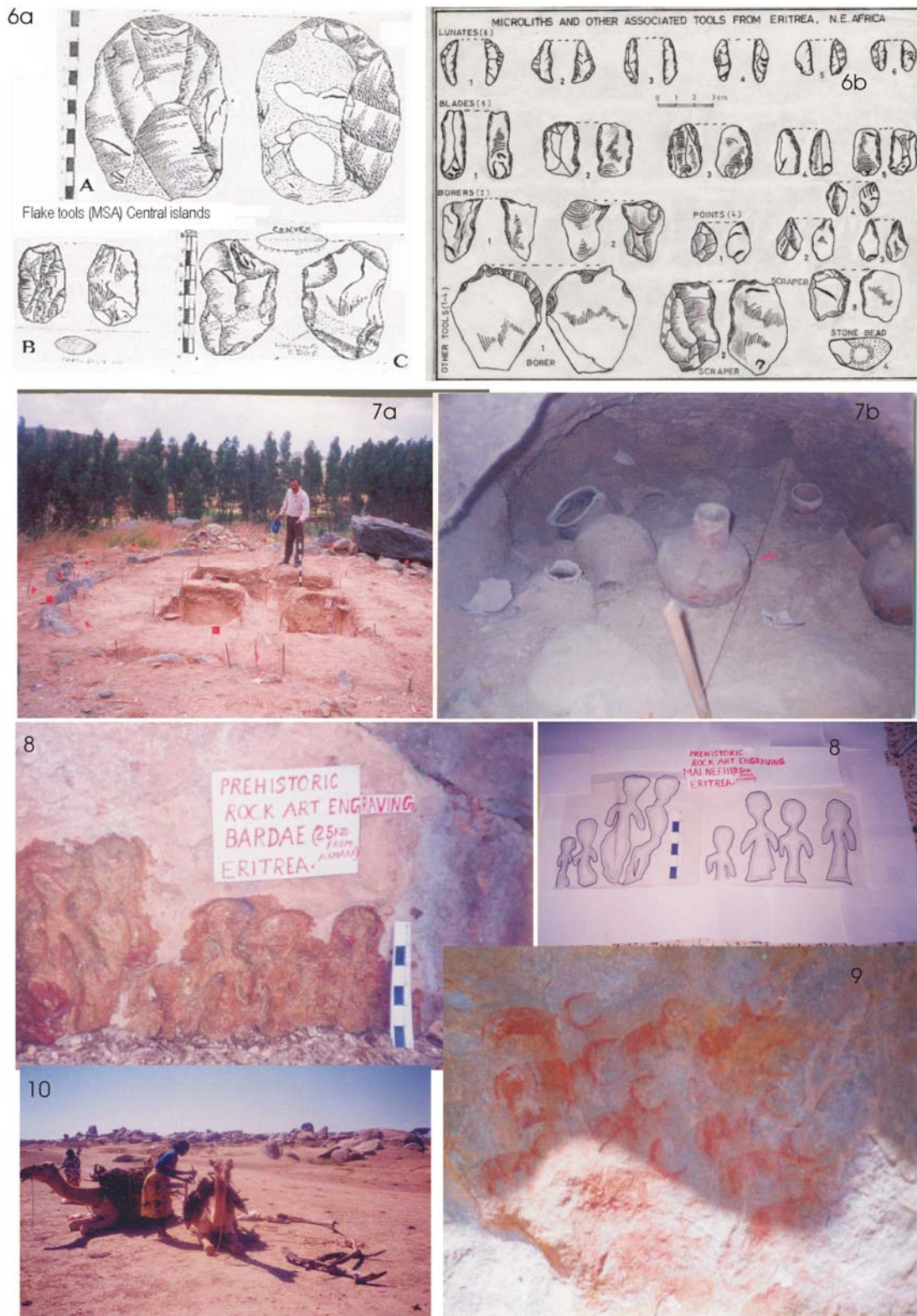


Fig.6 a (A, B & C). Scrapers on Flakes from Michoit; Fig.6 b. Tools belonging to MSA and LSA, Eritrea; Fig.7 a. Megalithic Circle from Emba Derho (Central highlands); Fig.7 b. Megalithic Pottery from Excavation from Emba Derho; Fig. 8. Mai Nefhi Rock Art (engraving) and drawing; Fig.9. Pastoral Rock Paintings from Hesmele (Adi keih) Central highlands; Fig. 10. Barentu (Kunama Habitat) Neolithic Site Southwestern lowlands



For the past five decades, more attention had been paid to prehistoric cultural and fossil fauna and hominid evidence in the East African Rift valley. The evidence of hominid fossils of 4.5 mill. old from Ethiopia and Kenya, the footprints of hominid of 3.5 mill. years old from Laetoli, Tanzania, the parietal skeleton of Lucy of 3.2 mill. years old, and also 2.3 mill. years old genus *Homo* with stone tools from Hadar, Ethiopia are some of the important findings from the Rift valley. Eritrea might equally harbour evolutionary evidences in comparison with other parts of the African continent. Having located in the northern most end of the Eastern Rift, there is lot of possibility to record more prehistoric sites of human habitation in Eritrea. Since the Independence of Eritrea, more investigations began in this part. Geo-archaeological explorations have been conducted in different environmental zones such as the Eastern Rift and the Danakil Depression, the central highlands and the western and southwestern lowlands in order to investigate early human colonization. Spatial and chronological distribution of cultural evidences is presented below.

The Eastern Rift and the Danakil Depression: Geographically, the Great East African Rift valley is extended from the north across the Red Sea to the Gulf of Zula in the Eritrean coast and down to Ethiopia until it reaches Mozambique in its extreme south. Danakil is considered as a large depression into which an arm of the Red Sea once extended. Active volcanic activity along the coast separated the previous gulf from the Red Sea converting it into an inland lake. Subsequently, it is dried, leaving shallow remnants of the salt flats. Evidently, this salt plain is located between the escarpment in the west and the Danakil Alps in the east. It is more than 100 m below sea level. The frequent number of volcanic cones were responsible for the rising the low, flat and monotonous uniformity of the land surface to 1000 or 1500 m above sea level (Woldmariam, 1972:47). Further, the above studies revealed that the geology of the coastal belt is spread over by quaternary marine or lacustrine sediment. Old marine sediment (sandstone, limestone) is extended into the southeastern part. The lithosphere extension of the Danakil formation called Red series at the intersection of the Red Sea, the Gulf of Aden and the East African Rift systems consists mainly of siliciclastic continental deposits with intercalations of lava flows and tuff beds at

different levels of the age ranging from Miocene to Pleistocene (Bannert, 1970).

It was the Department of Earth Sciences from the University of Florence, Italy, in collaboration with the Department of mines, discovered the 1 mill. year old human cranium (Fig.1) in association with other faunal remains in the year 1995 near Buyya village of the Danakil Depression (Abbate *et al.*, 1998: 459). It includes a human skull with two pelvic fragments and two permanent lower incisors. It reveals the combination of prominent features of *Homo erectus* and certain traits of *Homo sapiens*. The cranial capacity is estimated to be in between 750 and 800 cubic cm. The remains were found in a succession of Fluvio-deltaic and lacustrine deposits associated with typical African savanna mammalian fauna of the early to early-middle Pleistocene times.

All along the Buyya section, fresh water gastropod and fish remains, a large amount of fossil bones and five mammal-rich levels have been examined. A rich vertebrate fauna from the same homo-bearing layer of the Buyya section which exposed in several outcrops has been reported (Abbate, 1998:459) to have different species such as *Eliphas recki*, *Hipparian sp.*, *Equus sp.*, *Ceratotherium simum*, *Rhinocerotidae sp.*, *Pelorovis sp.*, *Kobus ellipsiprymnus*, *Bovidae indet.*, *Kolpochoorus cf.k.majus*, cf (advanced form), *Hippopotamus gorgops*, *Hexa protodon karumensis*, *Hyaenidae indet.*, *Chelonia* and *Crocodylia sp.*

Earlier survey by the authors in the Buyya had yielded stone implements (Fig.2) such as pebble choppers and acheulian hand axes (Krishna Rao, 2003:657) that might have been prepared and used by the advanced *Homo erectus*. Some of the tools were found to be huge and massive. Such stone implements may have been used for smashing huge bone to eat marrow, and also chopping of flesh from bones. Some of the pointed hand axes were analyzed to have been used normally for grubbing up edible roots of plants. These implements have been found spread in the spots of butchering animals in the Buyya area. Fossilized bones of huge animals such as Hipparian species (?) also bore cut marks revealing the use of stone axes or bifaces. These tools are culturally advanced as evident from improved workmanship shown on tool preparation. Small flakes are removed all over the surface including butt of a large pebble usually of an oblong shape. The other end of



the tool has sharp end and regular cutting edge as shown in one example that measures 35 x 11.5 x 6.5 cm and the second biface being 28 x 12.5 x 6.5 cm. A few specimen are described as follows:

Specimen-1: Chopper: The length and width of the chopper are 11.5 cm and 10 cm respectively. It is quadrilateral in shape made on quartzite rock. Both surfaces of the tool are flaked. The functional end is achieved by removing flakes on both edges of one end. Its upper cortical surface is retailed. Removal of flakes is limited to half of its surface. Further, there is a continuous row of flake-scars parallel to the functional end. On the ventral surface three large flake scars and four small flakes are examined. Application of the hard hammer technique is evident. The working edge is sharp though irregular. The tool may have been used for chopping flesh and skin.

Specimen-2: Pick-end biface: the tip end of the acheulian hand axe is appeared to have been purposefully manufactured for the function of the grubbing up the edible roots of plants. The maximum length, width and thickness of the tool are 25.5 x 11.9 x 6.3 cm respectively. Large size flakes are removed from both surfaces of the elongated pebble. Stone hammer technique would have applied. The tip and which looks like a pick-head has been sharpened. Regularity in cutting edge shows an improvement of workmanship.

Specimen-3: Spear-Head Biface: this is the heavy tool which is weathered. The measurements are 26 x 14.75 x 7.1 cm respectively. The working edge is regular.

Specimen-4: Ovate: the measurements of this specimen are 17 x 10.8 x 3.7 cm respectively. The shape of the tool is oval and the cutting edge is regular. The raw material used is quartzite.

Specimen-5 Amygdaloid: These types of tools are light in weight compared to the previous heavy tools. The pointed end is resulted by tapering sides of a pebble at the proximal end. The posterior end of the tool would have been tied to a bamboo to use in various subsistence activities. The measurements of the tool are 19.1 x 9.9 x 5.2 cm respectively. One of the specimen of this type (C) is a symmetric reniform comparable to those of the final acheulian form Bir-Sahara (Fred Wendorf and Romuald Schild 1980: 42-BS-14 site-Fig.2.28-b).

Specimen-6: Pear Shape Bi-face. (A) There is a tapering in flaking from center to the anterior end on right side. Such working on an oblong

pebble might have resulted in pear shape. Its cutting is regular. The measurements are 20.7 x 11.3 x 4.4 cm respectively.

Middle-Upper Pleistocene Cultural phase: Flake tools and blade tools represent Middle Stone Age. Walter *et al.* (2000:67) reported Flake and blade tools from the lower shell zone of Abdur Reef Limestone site in the Danakil Depression. These artifacts may have been used for skinning or cutting the animal flesh. Surprisingly, these tools were reported to have been associated with bifaces of its previous cultural phase. Such association is usual in the case of Mousterian culture of Europe, if not in Africa. Flake tools and blade tools, made from quartz and other igneous and metamorphic rocks, were also found scattered in some archaeological sites of central highlands. The tools include scrapers and points. But the antiquity of the tools is unknown. The early modern humans who colonized the Red Sea coast for marine food resources exit during the Riss-Wurm interglacial period around 125,000 years ago (Walter *et al.*, 2000). Their exit via the Red Sea coast assumed to have taken place second time on some later date as the initial dispersal of early modern humans out of Africa from southern route is also expected (James & Petraglia, 2005: 19).

Holocene cultural phase: On the boulder gravel surface exposures on the left bank of the river Dandero, some microlithic tools made on obsidian rock are found spread all over. Modern man in the new environment must have introduced a new technology to manufacture tiny tools called microliths like points, blades, knives that fit to exploit available new resources.

Megalithic monuments: Huge stone complexes called megaliths are found on the west bank of the River Dandero. These are ceremonially arranged in memory of the dead. They are also known as stone circles (Fig.3) in some cases, a stone circle encircles one or more inner circles with rectangular stone slabs arranged face to face at the center. In the plains of Mount Alid too, such stone circles did exist. Since they are burial places, there is possibility for the occurrence of human remains and grave goods that would be uncovered only after excavation.

Near Buyya area such megalithic sites are found in association with obsidian microlithic blades. Particularly on the bank of the river 'Aba', megalithic stone circles can be seen. It is also interesting to observe the



mortuary practices of the **Saho** pastoral community of **Afar** origin (Yohannes Gheryesus, 2001). They arrange stone circles and slabs in memory of the dead (Fig.4). Saho in the Mount Alid area construct "Ghablas", small clay pits of large bowl shape (each pit has the diameter of maximum one meter) are constructed to store water drawn from the hot springs. They are used for drinking water purpose for goat and sheep.

Central highlands: Archaeological investigations have been conducted mainly in Greater Asmara and Adi Keih areas. The Department of Anthropology and Archaeology, University of Asmara and the National Museum of Eritrea have surveyed many sites in and around the areas mentioned above.

Greater Asmara area: The archaeological sites that were explored by a team from Asmara University include Sembal Kushet, Kahawta, Emba Derho, Mai Chait, Daro Paulos, Akriya, Adha Wusha, Dekemhare, Himbarti etc. Some more sites like Barentu, Mai Nefhi and Adi Ghebray are also found to be pertinent for archaeological evidence as investigated by the author. The material culture that was yielded during survey and excavation of various sites cited above belongs to Pre-Axumite cultural phase. Archaeological sample from the excavation (Fig.5) at Sambel kushet has been dated to 8th century B.C. Further analysis through the extension of archaeological survey and excavation suggests that the communities around Asmara were indigenous (Schmidt & Curtis, 2001:857). Thus the cultural development may also be ascribed to indigenous development but not being influenced by **Sabeans**. A significant aspect is that the cultural continuity can be observed right from the Middle Stone Age up to the historical present. They are represented by flake scrapers (Fig.6), blade points and burins (also made of blades) and other microliths including geometric blades. These tools are found either independently or in mixed condition with Pre-Axumite stratigraphy. The Pre-Axumite settlement structures (1st millennium B.C.) along with the other flake scrapers, microliths and red ware pottery are found to reveal the potential use of various artifacts on one hand and the cultural continuum on the other. An evidence of megalithic burial (Krishna Rao and Yosief, 2004) at Emba Derho is an excellent example of cultural continuum. It is a secondary megalithic burial dated to Axumite times

(Fig.7). Polished axes, grindstones and red ware pottery were found from Kahawta site. Occurrence of similar assemblages in several sites of the Greater Asmara area indicates the wide spread distribution of several groups of the same population nurtured during the Pre-Axumite times. Rock art engravings indicating some ceremonial gathering of some family in Mai Nefhi River valley can be attributed to be an interesting cultural development of pre-Axumite to Axumite population (Fig.8 and Drawing).

Adi Keih area: Most of the sites in and around Adi Keih area appear to have served as both habitational and ceremonial centers as evident from the rock art. The pastoral rock art (Fig.9) is examined from Hesmele (Krishna Rao & Mathew Curtis, 2007), Iyago and Saro sites are all belong to Qohaito locality. Another reference of a group of figures engraved on a stone slab is situated on a hillock near Mea' leway. The rock art site appears to be representing the defense. Human figures with weapons like spears, shields and arrows, and a few hump-less cattle were depicted. An ethnographic enquiry in relation to the engravings (Dawit, 2000) from the adjacent village revealed that their ancestors practiced art and the defence diagrams according to their oral tradition. The atmosphere of warfare and success is represented in the form of engraving. Compared to the Qohaito rock art, the Mea' leway rock art seems to be related to later period. That means it is not contemporaneous to Qohaito rock art.

The significant feature is that these rock art sites have been known for ceremonial gathering of community people to reassure solidarity and integrity with reference to their respective economic pursuits such as hunting - gathering, pastoral, horticulture and agriculture. Also, several rock art sites in Nakfa and Karora have been identified from northern plains.

Western and Southwestern lowlands: Agriculture for the first time seems to have been introduced by the Nilo-Saharan linguistic group- the **Kunama** (Fig.10) in this region. The Kunama is known to have migrated from the Nile belt around 3000 B.C. (Murdock, 1959:170). Gash- Barka River valley is fertile for agricultural production and hence the lowlands are harnessed for the production of various crops. Agordat, Barentu, and other localities around the river valley have been found potential for prehistoric Neolithic farming



communities who were known to have begun agriculture. Neolithic cultural materials such as polished tools and grindstones were identified from Agordat (Arkell, 1954) and Barentu (Krishna Rao, 2000). Having trained in cultivation in the Nile Valley, the ancestors of the Kunama must have introduced agriculture and ground stone industry along with pottery to facilitate the subsistence and storage in the southwestern lowlands. Perhaps, environment, drainage and soils appeared to be congenial as that of the present day for crop production in these lowlands.

Thus, from the evidence obtained from various archaeological sites of Eritrea (Fig.11) it can be understood that the origins, distribution, adaptation, migration and extinction are different stages of human history bearing the biological and cultural evolution shoulder to shoulder. Early humans had undergone all these stages either in one time or the other, or so also in one part of the world or more. For instance,, by examining the potential *Homo erectus* sites of Africa viz. Ternifine, Melka Kuntur. Omo River, Nairokotome, Koobi Fora, Chesovanja, Olergesaile, Olduvai Gorge and Swartkarans, probably one could come to a conclusion that the extension of the species in Africa was not there for long time span. Their dispersal out of Africa is approximated to be occurring at the maximum before 1.4 mill. ago. Multiple dispersals of early modern humans appear to be around 125,000 years ago. The southern route as well as the Red Sea coastal route in Eritrea of northeast Africa could have served as exit points. What were the causes for the migration of *Homo erectus* or even early modern humans to other continents? It remains mysterious! Particularly, early *Homo sapiens* have been found extraneously nourished with cultural development. Later, their cousins, *Homo sapiens sapiens* had colonized Europe with lot of typo-technological advancements of culture including belief systems.

Global change in climate and environments after late Pleistocene probably brought about several cultural variations among humans toward further sophistication and development. As a result, sedentism and village settlements, farming communities, town ship and urbanism have been gradually occupied a prominent place in human adventures. Expansion of brain and the development of cranial capacity is one of the

major aspects of push factor of the threshold of human cultural development in Eritrea in response to the environment. Cultural ecology of various primitive communities of Eritrea such as Kunama, Nara, Rashaida, Afar, Saho, Bilen, Hidareb, Tigre and Tigrinya can be understandable from the varied cultural paradigms developed in response to the local environment. Present is the replica of the past.

Acknowledgements

The author sincerely thanks Wolde-Ab-Yisak, President and Asmorom Kidane, Dean of the University of Asmara for their continuous encouragement in academic research. I am also thankful to the reviewers- Razane and Prof.R.K.Choudhary, Department of Anthropology and Sociology for their constructive comments. Finally my thanks are due to Dr.Suresh Kumar, Political Science and Prof.Natarajan Gajendran for their continuous technical assistance extended.

Refecences

1. Abbate E, Albianelli A, Azzaroli A, Benvenuti M, Tesfamariam B, Bruni P, Cipriani N, Clarke RJ, Ficarelli G, Macchiarelli R, Napoleone G, Papini M, Rook L, Sagri M, Tecle TM, Torre D and Villa I. (1998) A One-million year old homo cranium from the Danakil (Afar) Depression of Eritrea. *Nature* 393, 458-460.
2. Yohannes Ghebreyesus (2001) The material culture of Saho', A senior thesis submitted to *the Deptt. of Archiology*, Univ. of Asmara, Eritrea.
3. Arkel AJ (1954) Four occupational sites at Agordat. *Kush* 2, 33-62.
4. Bannert P, Kading BJ, Knetsch KC, Kursten G, Mayrhofer H (1970) Zur Geologie der Danakil-Senke (Nördliches Afar-Gebiet, NE-äthiopien). *Geol. Rundsch.*, 59, 409-443.
5. Dawit O (2000) Rock art sites of the Adi keih plateau., Senior Essay submitted to the University of Asmara, Eritrea. pp: 1-24.
6. James, HVA and Michael D (2005) Petraglia: *Cur. Anthropol.* 46, 3-27.
7. Krishna Rao S and Mathew C (2007) Hesmele- A rock art site. **Encyclopaedia Aethiopica**, Vol.3 (in press), Prof. S.Uhlig (ed.), University of Hamburg, Germany.
8. Krishna Rao S and Yosief L (2004) A Megalithic Circle from Emba Derho: Some Significant Aspects of Culture. *Aethiopica*, 7, 1-189.

9. Krishna Rao, S (2000) Ancient Histories of Eritrea: Against All Odds of Ecological variations. A paper presented in the International Conference (11-17 Jan, 2000), *Against All Odds, University of Asmara*, Eritrea, N.E.Africa.
10. Krishna Rao, S (2003) Buyya- A *Homo erectus* site. *Encyclopaedia Aethiopica.*, Vol. 1, Prof. Siegbert Uhlig (Ed.), Univ. of Hamburg, Germany (Weisbaden).
11. Lemonick, MD and Dorfman A (1999) Up from the apes (Paleontology). *Time*. August 23.
12. Murdock GP (1959) *Africa: Its people and their culture history*. McGraw-Hill Book Company, New York.
13. Schmidt PR and Mathew C (2001) Urban precursors in the Horn: early 1st - millennium BC communities in Eritrea *Antiquity*. 75,849-859.
14. Walter RC *et al.* (2000) Early human occupation of Red Sea coast of Eritrea during the last interglacial. *Nature* 405, p-65.
15. Woldmariam, M (1972) An Introductory Geography of Ethiopia. *Berhanena Selam*, HIS Printing Press, Addis Abeba.

Reviewer's view

1. Prof. R.K. Choudhary, Dept. of Sociology, EIT, Mai nefhi; Former Chairman, Dept. of Sociology and Social Anthropology, Panjabi University, Patiala, India.
e-mail: choudhary_pbi_univ@yahoo.co.in

The paper “early man and his culture from Eritrea in North East Africa” makes a serious and extensive attempt to examine the development of cultural streams of early human ancestors in the northern regions of African continent. Excavations by the researchers have yielded rich data of human cultural activities in the region. These cultural evidences will add to the already existing sources about early humans and the research will pave the way for further explorations in the field.

2. **Review** Razane (Archaeologist), Deptt. of Anthropology, EIT, Mai Nefhi.
 - i) Both the Neanderthals and the Cro-magnon were the descendents of *Homo erectus*. Both lived side by side until 45,000 years ago in Central Europe when the Neanderthals reached their dead end.
 - ii) Geographically speaking the Great East African Rift valley is extended from the north across the Red Sea to the Gulf of Zula in the Eritrean coast and down to Ethiopia until it reaches Mozambique in its extreme south.
 - ii) *Homo erectus* is the direct ancestor of *Homo sapiens sapiens*. If so, why one still considers *Homo sapiens* as lateral collateral cousins of *Homo erectus*. It requires further research in this direction.

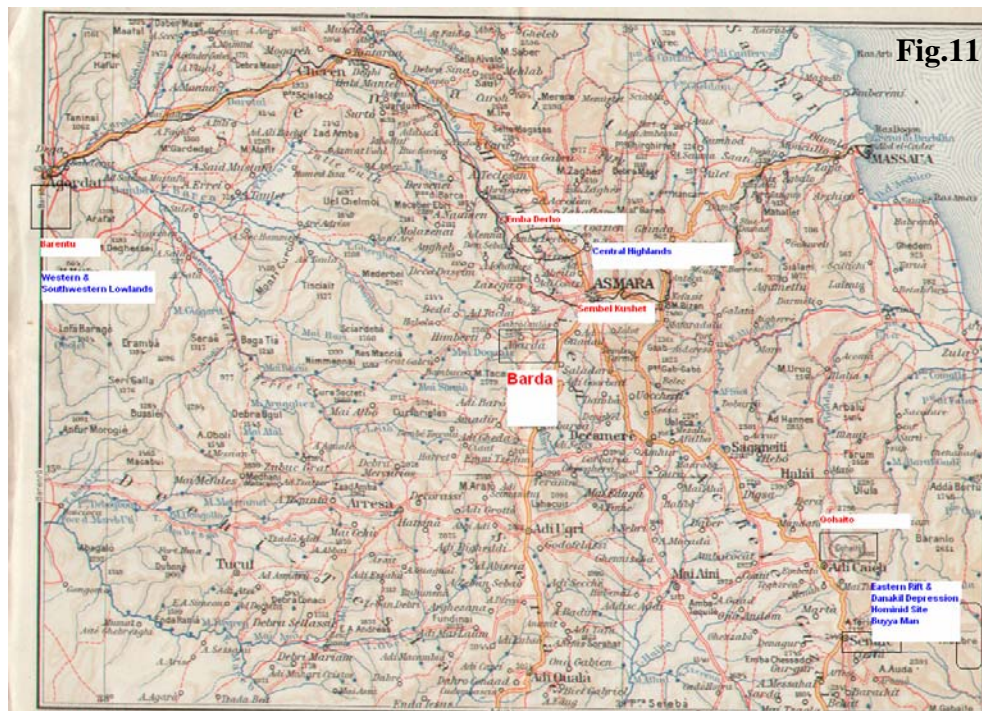


Fig.11