



Discoveries of Paleolithic and Neolithic artefacts in and around Karachi, Pakistan

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Abstract : Discoveries of flint outcrops in Ongar, Jhimpir, Thano Bula Khan and Gadani led the exploration of Stone Age culture in these areas and Karachi. The traces of upper Paleolithic and Neolithic assemblages were first identified in this region in 1930s. Discoveries of Palaeolithic stone implements in Ongar was a landmark for researchers to understand the development of early prehistoric culture in this region. Exploration of Neolithic artefacts in the Khadeji a, Malir River Valley and along the coast of Karachi provide evidences (of) that how the Neolithic farmers and fishermen lived in the region and technologically advance in making stone implements.

Keywords: Paleolithic, Neolithic, flint, implements, artefacts

1. INTRODUCTION

Discovery of Paleolithic artefacts in Rohri hills in 1867 by Dickinson and in 1886 by Burgess provided rudimentary evidence that early hominids most probably homo erectus also inhabited in Sindh (Cousins, 1929, Evens, 1986, Biagi, 1988). Rohri hills are located in the northern Sindh districts of Sukkur and Khairpur. These hills are composed of limestone and shale beds, geologically belong to Eocene age. These hills have large deposits of flints formed in nodules of limestone rocks. The first systematic study of Palaeolithic assemblages in Rohri hills was done by de Terra and Paterson in 1939 (Terra and Paterson, 1939). In 1970s British archeologist Allchin B. and in 1980s Italian archeologist P.Biagi excavated several sites of lower, middle and upper Palaeolithic age and found flint tools including Acheulian hand axes of lower Palaeolithic age (Allchin, 1976 and Biagi, 1988). Biagi believed that Rohri hills flints were used for making tools up to Harappan period.

In the lower Sindh earliest flint artefacts pertain to upper Palaeolithic, Mesolithic and Neolithic culture were reported by Mujamdar in 1930s in Karchat and Thano Bulla Khan, located about 120 kms from Karachi City. It was also reported that flint blades and scrapers were also found over the conglomerate terrace at Aero-club, NIPA along the Karachi university road (Khan, 1963). During the period of 1967 to 1979 Khan A.R. discovered several Palaeolithic sites in Ongar and Rehri and Neolithic sites in Malir Valley, Mulri Hill and Sonari (Khan, 1979). In the period of 2004 to 2013 Biagi discovered some new prehistoric sites of upper Paleolithic age in Jamshoro and Jhimpir (Biagi, 2010).

2. MATERIAL AND METHOD

The present study is an overview of the discoveries of Palaeolithic and Neolithic artefacts in Karachi and its surrounding areas. The study is based upon field surveys and investigation of different prehistoric sites which the authors conducted during the periods 1996 to 2002 along with Khan A.R., 2004 to 2008 along with the students of geography department, Karachi University and in 2013 associated with Paolo Biaji and Nisbet R. Topographical maps of 1:50,000 scale and satellite images of Google earth were used to locate the prehistoric sites of the study areas. Stone implements and pieces of ceramics found on the surface of the discovered sites were collected. These stone implements and pieces of potteries were identified and classified on the basis of different prehistoric culture periods like lower Palaeolithic, middle Palaeolithic, upper Palaeolithic, Mesolithic, early Neolithic etc. Photographs of sites and assemblages were taken. Sketches of assemblages were drawn and measurements were taken.

3. RESULT AND DISCUSSION

The study areas consist of prehistoric sites located in Karachi Division and neighbouring district of Thatta which lie just above the tropical zone, between latitudes 24 degree 52 minutes North to 25 degree 10 minutes North and longitudes 65 degree 40 minutes East to 68 degree 13 minutes East. The region is extended in the east up to Ongar, just along the Indus River and in the west up to Gadani, along the Makran coast of Balochistan. Geologically the region is dominated by marine origin sedimentary outcrops mostly lime stone and shale belong to tertiary geological period. In

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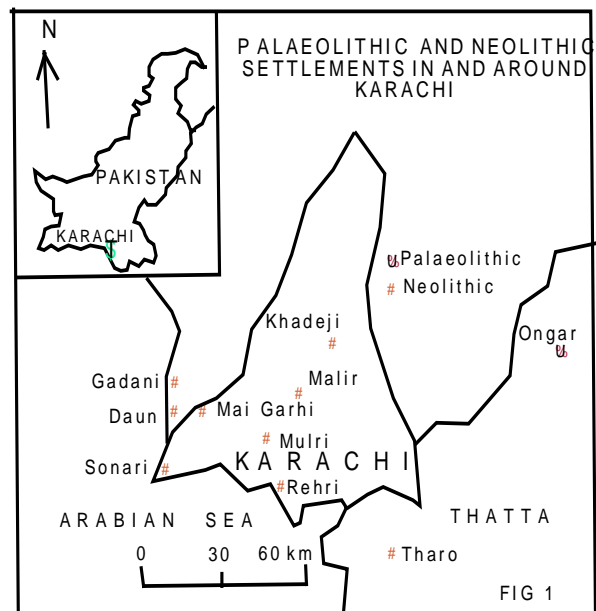
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Karchat, Thano Bula Khan, Ongar and Jhimpir nodules of flint pertain to Ranikot and Lakhi formation are found in the Eocene outcrops of limestone (Blandford, 1880). In the Gadani coast outcrops of limestone pertain to par formation of cretaceous age exist where red-light grey nodules of flints are found. The existence of flint outcrops in the region support this idea that stone artifacts used by prehistoric people in this region were made from these sources of rocks. Along the mouth of the Hub River in Rati Hill ophiolites of Cambrian rocks and along the coast of Gadani and Daun isolated igneous outcrops exist pertain to cretaceous and Jurassic geological age (Khan, 1980).

The Pleistocene and early Holocene geology of the region is important particularly in view of this fact that rise of prehistoric culture took place in these two epochs. Many prehistoric settlements in the region were found on the conglomerate terraces and loess deposited surface. The palaeo-climatic studies reveal that the Pleistocene epoch faced several glacial and interglacial as well as stadial and inter-stadial phases. During the glacial ice age global sea level dropped to 300 meters deep and present shoreline receded up to 400 meters towards sea. As a result continental shelf exposed and fine materials like silt and clay were picked up by strong south-west winds and deposited over the land like blanket. The process lasted at the end of Pleistocene and beginning of Holocene when last glacial phase ended. These loess deposits were suitable places for the development of Mesolithic and Neolithic Culture because after rain loess deposited areas were covered with grass and appropriate for farming. The impact of glacial and interglacial phases can also be seen in form of conglomerate deposits which formed terraces with the change of base level of local streams and diversion of streams. These conglomerate terraces and loess deposited river valleys were likely places of prehistoric settlements. The arid climatic characteristics of the region is favourable for the exploration of prehistoric sites because the prehistoric artefacts are exposed on the barren surface (Fig 1).

Palaeolithic Culture

Archaeologists believe that East Africa was the birth place of early hominids and first tool makers who inhabited there about 2 million years ago. The Palaeolithic culture started from the beginning of Pleistocene epoch when homo-habilis first used cobbles as chopping tools and made sharp edge chipped tools, later homo-erectus were specialized in making flaked hand axes. It ended up to the end of Pleistocene when early hunters entered into the new experience of farming. The Palaeolithic culture is broadly divided into three phases. **These are, first,** the lower Palaeolithic when early hunters popularly called homo erectus,



inhabited Africa, Southern Europe, Arabian Peninsula, India, China, Indonesia etc., made chopping tools, flaked and core tools like hand axes, cleavers etc. ended roughly about 200,000 years ago. **Second,** the middle Palaeolithic hunters popularly called Neanderthal were more advance in making flaked hand-axes, scrappers, spear-heads etc. They inhabited up to 40,000 years ago. **Third,** the upper Palaeolithic hunters popularly called homo-sapiens or modern human beings had developed special skills of making microlith tools which include small scrappers, arrow-heads, blades etc.

Discoveries of early Palaeolithic artefacts along the coast of Arabian Peninsula, Rohri hills in Sindh, Pakistan and Gujrat, India paved this idea that during first glacial period early Paleolithic hunters entered in the coastal areas of Arabian Peninsula through Bab-al Mandleb. They approached in the Makran Coast of Balochistan through strait of Hurmuz. On the way of their migration towards northern Sindh and Indian Gujrat, they also inhabited Karachi and its surrounding areas where flint outcrops exist, used for making stone artefacts (Khan, 1979 and Biaji, 2004).

The trace of finding Palaeolithic culture in Karachi region was earliest reported in Thano Bula Khan and conglomerate terrace at Aero-club, Karachi (Mujamdar, 1934 and Khan, 1963). The credit of systematic exploration of prehistoric settlements in Karachi goes to Khan A.R. who started his field exploration in 1960s in and around Karachi. In Late 1960s he explored early Palaeolithic assemblages over the top of Ongar hill. In 1972 he collected a chopping artifact in the conglomerate terrace, called *Nilapahar*. It is a limestone cobble pertain to Kirthar formation (Photo 1).



Photo 1: Oldest flaked flint tool and a cobble chopping tool collected by Khan in 1976 in Ongar and NilaPahar.

Ongar Industry

In the exploration of Palaeolithic assemblages from lower Palaeolithic to upper Palaeolithic Ongar hill industry is as important in lower Sindh as Rohri hill industry in Upper Sindh. Ongar is located at latitude 25 degree 10 minutes North and 68 degree 14 minutes East about 120 kilometers distance from Karachi City, along the Karachi-Hyderabad National Highway . It is a broad mesa, composed of shale and limestone. Blandford(1880) was first who identified that about 10 kilometers away from Jhirak and 3 kilometers south-west of Jhuga Pir a ridge capped by Eocene limestone of Kirthar formation named Ongar Hill. On the scarp of the Ongar Hill he found pieces of flints and flint nodules in the eroded beds of shale (Photo 1).

In the late 1960 during his field visits Khan A.R found a quarry workplace at the Ongar Hill. Light gray flint nodules formed in lime stone were chipped and transported to Karachi City for manufacturing decoration pieces. At the top of hill which is flat he found huge pieces of flint artefacts, scattered all over the ridge.

In 1973 he conducted a detail study and classified flint artefacts into five industries. For example Khaskheli (a Sindhi tribe lived in the area) industry was dominated by chopping tools. Similarly Ongar(name of entire hill) industry comprises Acheulian hand axes, cleavers and large core hand-axes. The Khaskheli and Ongar industries comprise lower Paleolithic assemblage. The third industry Miharo(name of village) and the fourth industry consist of Palaeolithic Levallois flakes and points, spear heads, arrow heads, scrapers and Mousterian artifacts. The fifth industry represents Upper Paleolithic tools like blades, scrapers, burin etc (Khan,1979b)(Photos 2&3).

In 1976 Allchin B. visited the area and reported it with the name of Milestone 101. She reported that on the top of horseshoe-shaped hill flint assemblages were present. Two years later she also surveyed the area and

recorded wide range of Middle and Upper Palaeolithic artefacts.

In the period of 2005 to 2008 Italian archaeologist Paolo Biaji who already worked in Rohri Hill in the period 1984 to 1998) conducted several detail surveys of the Ongar Hill and nearby Daphro Hill and Jhampir Hill. He reported early Palaeolithic workshops in between Ongar and Daphro Hill. He collected corticated flakes, Levallois core, scrapers, Levallois flakelets represented Middle Palaeolithic artifacts. He also found Upper Palaeolithic assemblage like blades, sub conical blade like cores (Biaji P, 2006).



Photos 2: Middle and Upper Palaeolithic artifacts collected from Ongar.



Photo 3: Lower Paleolithic hand axes collected by A.R.Khan in 1974 from Ongar.

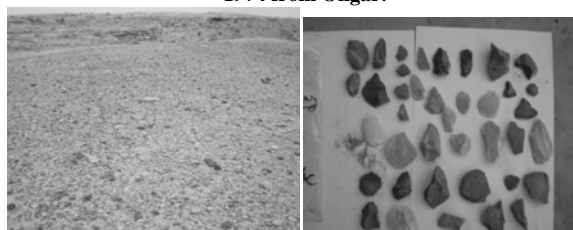


Photo 4: Ongar hill



Photo5: Flint artifacts of Middle Palaeolithic at Ongar hill, collected by Authors in 2013

In August, 2013 a short field survey of Ongar and Jhampir was conducted by the authors along with Paolo Biaji and Nisbet R. , found Middle and Upper Palaeolithic assemblage scattered over the top of Ongar hill as well as in the eroded scraps of mesa. No artefacts

of Lower Palaeolithic were found at the site. At the top of mesa scrapers, cores and flaked artifacts were shining because of reddish and dark brown color patina (Photos 4&5). The original colors of flints found in Ongar and Jhimpir hills are light brown, light grey, peach and off-white. Because of the resemblance of colors of flint artefacts it can be said that artefacts belong to Mesolithic, Neolithic and Chalcolithic cultural phases explored in Tharro, Khadeji, Mulri, Rehri and Malir pertain either from this source of outcrops or from Thano- Bula Khan because both sources have same characteristics of flints and belong to Eocene formation.

A part from the Ongar and Jhimpir, Khan A.R. reported collection of late upper Paleolithic flint implements like blades, points, bores, scrapers etc in Piara Hill, Rehri Hill, Mulri Hill, Konkar, Mol Gorge and Khadeji areas.(Khan, 1979a). The site Mulri Hill has been completely destroyed due to construction works of Gulistan Jauhar Housing Scheme. During the visit in 1989 the authors found remnants of dry spring and sites where few pieces of flint cores and broken blades were collected. Similarly in the Rehri area which is a coastal fishing village called Rehri Goth few flint implements were found during 1997 field visit. In 2012,

during field visit the authors collected flint microliths in the beautiful valley of Langheji.

Mesolithic and Neolithic Culture

The last glacial phase ended with the end of Pleistocene. The beginning of Holocene phase started with the change of climate. The loess deposit surface and river flood plains and valleys like in the region were suitable for new cultural development of farming. The Mesolithic stage is the transitional stage between upper Paleolithic and Neolithic phase which probably took place about 10000 to 8000B.C. The microlithic artefacts were more refined and dominated by lunates, micro blades, burin and micro burin. The Neolithic culture in the region is attributed with red burnished handmade and wheel made pieces of pottery and flint artifacts like sickle blades, burin, lunates, scraper and small polished hand axe. Number of Neolithic settlements have been identified in and around Karachi. Tharro, Mulri, Sonari, Khadeji, Malir, Mai Gadani and Daun are important Neolithic settlements. Flint implements like lunate, micro burin, burin, numerous types of blades, sickles, scrapers, polished hand axe and other artefacts of Neolithic culture have been excavated (**Table 1**).

Table 1: Palaeolithic and Neolithic Sites in and around Karachi

Pre-Historic Sites	Type	Location	Artefacts
1.Ongar	Palaeolithic	Lat: 24 degree 58 minutes E Long : 68 degree 15 minutes E	Hand axes, cleavers . scrapers. Microlith tools, cores
2.Tharo	Neolithic	Lat: 24 degree 43 minutes N Long: 67 degree 44 minutes E	Sickle blades , denticulate blades, scraper burin, cores
3.Mulri Hill	Neolithic	Lat: 24 degree 46 minutes E Long : 67 degree 05 minutes E	Sickle blades, scrapers, lunates Bores , micro burin , Pieces of pottery, sinkers
3 Sonari	Neolithic	Lat: 24 degree 09 minutes E Long : 67 degree 02 minutes E	Lunates , scrapers , bores, polished hand axe, pottery
5. Malir	Neolithic	Lat: 24 degree 48 minutes E Long : 67 degree 34 minutes E	Core tools Pieces of pottery
6. Khadeji	Neolithic	Lat: 24 degree 48 minutes E Long : 67 degree 34 minutes E	Sickle blades, Pottery
7. Langheji	Neolithic	Lat: 24 degree 48 minutes E Long : 67 degree 34 minutes E	Bores , lunates
8 Mai Garhi	Neolithic	Lat: 24 degree 48 minutes E Long : 67 degree 34 minutes E	Bores, scapers cores
9. Rehri	Upper Palaeolithic (In the map Rehri is shown as Neolithic)	Lat: 24 degree 47 minutes E Long : 67 degree 32 minutes E	Bores, scrapers , pieces of pottery , Bores , scraper, cores , pieces of pottery
10 Gadani	Neolithic	Lat: 24 degree 1 minutes E Long : 67 degree 24 minutes E	Blades , bores , cores
11. Daun	Neolithic	Lat: 24 degree 06 minutes E Long : 67 degree 25 minutes E	
	<u>Neolithic (??)</u>		

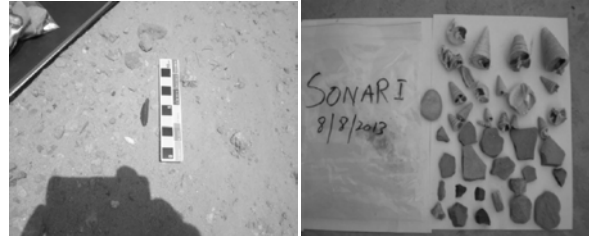
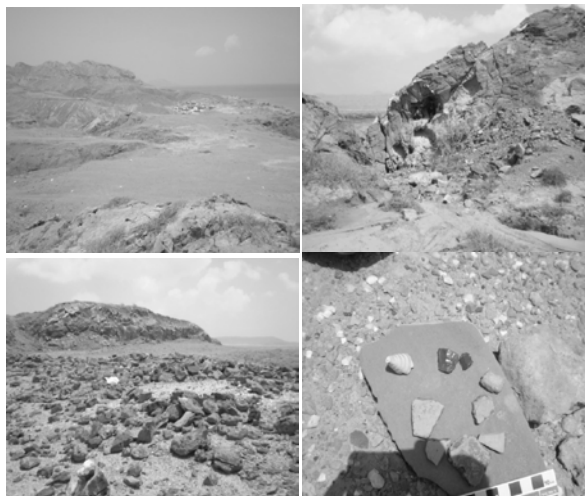
Sources: Field excavations and Museum of Prehistoric Culture, Geography Department, Karachi University

Mulri Hill and University Campus

Mulri Hill is presently located in Gulistan-e-Jauhar. It is a remnant part of Kund anticline which starts from north of Gadap and parts of Drig Road hill, Hill Park and Gizri Hill. Mulri Hill is composed of yellow limestone and shale of Guj formation pertain to Miocene age. In front of Mulri Hill, Karachi University is located. During 1968 to 1976, Khan A.R found 18 Mesolithic and Neolithic sites in different parts of hill from top of mesa to the foot hill and scarp. Similarly in the University Campus areas near Central Mosques a large number of flint assemblages were found (Khan,1979).

Sonari

Along the coast and the mouth of the Hub River an eroded hillock is located in between ridges of Oligocene-Eocene outcrops. This place is locally called Sonari which was the name of fisher woman who lived nearby fishing village. The site of Sonari is located over this flat hillock. It was first identified by Khan A.R in 1980 as a Neolithic fishing settlement. During field visits .in 1997, 1999, 2004 and 2013 remnants of stone structure, red potteries, flint artefacts and marine and mangrove shell middens were excavated. The flint artefacts like lunates, bores, pieces of retouched blades, sinkers as well as red burnished and light colored pieces of pottery were collected within the remnants of stone structure settlement and outside of it. The color of flint chipped tools were red and light brown. They were likely taken from Gadani outcrops which is about 20 km from Sonari. Marine and mangrove shell middens were found within the settlement and outside of it. The shell middens were carbon dated and they were found about 4900 to 5300 B.P. It can be said that the Sonari was originally a Neolithic fishing settlement and it continued a fishing settlement in pre-Harappan period. Near the settlement a small embankment was found constructed in the Neolithic period to store rain water runoff (Photo 6).



Photos 6: The prehistoric site of Sonari and excavated artifacts.

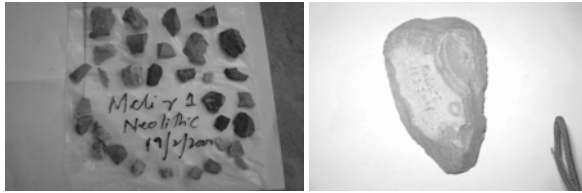
Malir, Langheji and Khadeji

At the confluence of Khadeji and Mol River near Goth Bachal two Neolithic sites Khadeji 2&3 were found on the conglomerate terraces during field visits in January 2014. Number of flint assemblages and pottery were collected over the terraces along the Khadeji River. Earlier in 2013 one Neolithic site Khadeji 1 was found over the conglomerate terrace in the interfluves of Khadeji River and Mol River (Photo 7). The site was located near to a poultry farm. The site was to 5300 B.P.

Along the Superhighway in the Malir Valley and Khadeji River valley several Neolithic sites were identified by .Khan A.R.(Khan,1979). Along the Jorando River a Neolithic site was found over a loess deposited conglomerate terrace. In 1998 when the site was revisited by author along with Khan A.R.several pieces of sickle blades, bores and pieces of red- burnish pottery were found. The most important flint tool was found a Neolithic polished hand axe in loess deposits (Photo 8). The color of flint was off-white and light brown. The source of material was probably belong to Eocene flint outcrops in Thana-Bula- Karchat region which is about 80 kilometers away from the site. Similarly flint blades, bores and cores were found from Malir 2 and Langheji (Photo 9)



Photo7 : Neolithic sites and flint assemblage in Khadeji,2013.



Photos 8: Malir 1 and Malir 2 Neolithic artifacts and polish hand axe.



Photo 9: Neolithic artifacts of Malir 2 and Langheji.

Megalith tombs and Menhir

In the interfluvies of Khadeji and Mol River during field visits in 1999 and 2012 flint assemblages and pieces of red burnished pottery were collected. Similarly in the upper course of the Lyari River near Goth Ismail Khan, over a terrace megalith graves and three standing rocky slabs like Menhir were found most probably pertain to Neolithic pre- Harappan periods. (Photo 10). Menhir first identified in Northern France and Britain.

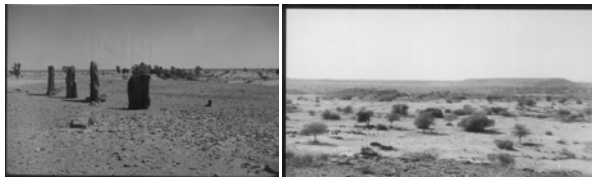


Photo 10: Menhir and Megalith graves in Khadeji and Layari.

4. CONCLUSION

Discovery of flint outcrops and Palaeolithic and Neolithic assemblages in and around Karachi region provided evidences that the region had been inhabited by early hominids most probably Homo erectus and Neanderthal. The Pleistocene environment of the region because of its tropical dry climate was appropriate for dwelling of these early hunters who hypothetically migrated from East Africa through the coast of Arabian Peninsula and Balochistan. They did not live in caves. They survived in open spaces, used fire to protect themselves from cold and wild animals and got shelters under rocks and trees during hot summer. Ongar was the core of Palaeolithic culture in the region. (Question: Ongar is an outlier in terms of spatial distribution on the map) It worked as source of materials for making artefacts and manufacturing centre not only for Paleolithic but also for post Paleolithic culture most probably up to Harappa.

Gadani (Qn. Same comment as above regarding Ongar) was another centre of manufacturing flint artefacts for prehistoric inhabitants of the region.

Discoveries of Mesolithic and Neolithic artefacts in the loess and alluvium deposited surface, conglomerate terraces and abandoned channels of ephemeral streams proved that the cultural development of the region continued in the Neolithic period.

REFERENCES:

- Allchin B. (1976), New discoveries of Palaeolithic sites in the plains of Sind and their Geographical implications, *The Geographical Journal* Vol. 23. No.2. 7840-7852.
- Biagi P. and M. Cremaschi (1988), The early Palaeolithic sites of the Rohri hills (Sindh, Pakistan) and their environmental significance, *World Archeology*, Vol.19, 421-433. *Ancient Sindh*, Vol. 4. 19-30.
- Biagi P. (2010), Archaeological Surveys in Lower Sindh: preliminary results of the 2009 season, *Journal of Asian Civilizations*, Vol.32, No.2.16-22.
- Biagi P. and R. Nisbet (2010), The prehistoric flint mines at Jhimpir in lower Sindh (Pakistan), *Antiquity Gallery*, Vol. 84. 83-96.
- Biagi P. (2012). The shell middens of the bay of Daun: Environmental changes and human impact along the coast of Las Bella (Balochistan, Pakistan) between the 8th and the 5th millennium BP., *Eurasian history*, Vol.9, Nos.1&2. 29-49.
- Blandford W.T. (1880), *The geology of Western Sindh*, The Geological Survey of India, Calcutta.
- Cousins H. (1929), *The antiquities of Sind*, Mem. Arch. Surv. India, Vol 15 No.6, Imperial series, 29 Calcutta.
- Dennell R.W, H. Rendell and A. Hallwood, (1988), Early tool making in Asia: Two million –year old artefacts in Pakistan, *Antiquity*, Vol. 62. 113-1132.
- Evans J. (1986), *Paleolithic tools in India*, Geol, Mag, Vol. 3 No. 64. 94-98.
- Fairservis W. A. (1975), *The Roots of Ancient India*, the University of Chicago Press, Chicago.
- Khan, F, (1963), *Ancient Settlements in Karachi*, Geographia, Vol2, No. 1. 654-666.
- Khan A. R. (1979a) *Ancient settlement in Karachi region*, Grassroots, Vol.3. NO.2 1-24.
- Khan A. R. (1979b), *Paleolithic sites discovered in the Lower Sindh and their significance in the prehistory of the country*, Grassroots, Vol 3, No.2. 81-86.
- Khan A. R. (1980c), *Geology of Gadani*, Geological Survey of Pakistan.
- Mujumdar N. C. (1934), *Exploration in Sindh*, Mem. Arch. Survey, India NO. 48, Delhi.
- Piggott S. (1950), *Prehistoric India to 1000 B.C.*, Penguin Books, Harmondsworth.
- Terra H. and de. Paterson, (1939), *Studies on the ice age of India and associated human cultures*, Carnegie Inst. Publ.