

**DISCOVERIES OF NEOLITHIC SETTLEMENTS
IN MALIR RIVER VALLEY, SINDH, PAKISTAN**

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ABSTRACT

In the Karachi region of Sindh Kohistan, flood plains of ephemeral rivers and hill torrents are potential areas of exploring earliest farming settlements in the region. Malir River valley is one the area where several Neolithic settlements were discovered. This paper provides an overview of past exploration and recent discoveries of flint implements and potteries in different sites of the Malir valley which confirms this view that earliest farming settlements not only flourish in the perennial river valleys of Pakistan but also in the rain fed areas and seasonal river valleys of Sindh.

Keywords: Neolithic, Malir Valley, Artifact, Ephemeral River.

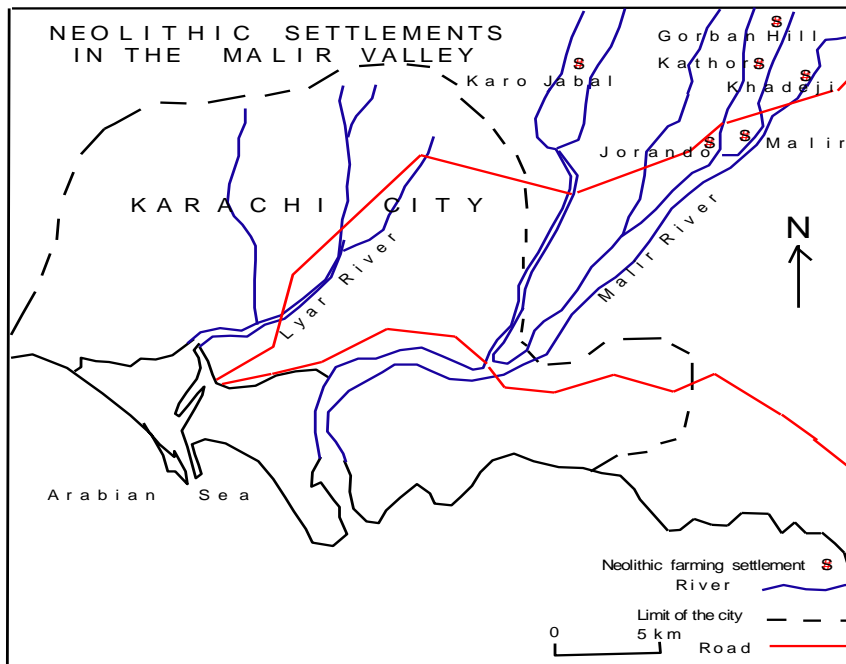
INTRODUCTION

The end of Pleistocene epoch and the beginning of Holocene brought a new cultural change in form of the beginning of agriculture. Knowledge about the domestication of plants and animals already started in the Mesolithic cultural age. The last glacial stage ended with the end of Pleistocene epoch that is about 12,000 to 10,000 years ago (Piggott S., 1950). The beginning of Holocene epoch marked change of climate (rise of temperature and rainfall). The landscape of dry regions like Karachi turned into grazing land attracted human groups to keep livestock because of copious fodder. Hill torrents and ephemeral streams rejuvenated provided sufficient water during rainy season. Earth embankments were constructed which stored surface runoff utilized for drinking and crops farming.

The trace of the beginning of Neolithic settlement in the Karachi region was first reported in 1930s over the conglomerate terrace presently located near NIPA (Khan F., 1963). In 1950s rudimentary evidences were also reported in the flood plains of the Lyari River and hill torrents of Orangi hills (Mujumdar N.C., 1934). The Malir River valley is a vast synclinal broad plain valley which is drained by Malir River and its tributaries. It starts from the confluence

of Khadeji and Mol River located at National Highway near Kathor and ends its journey at Gizri creek. More than half of the Malir River, from Qaidabad to Gizri creek has merged in the urban part of Karachi. The northern parts of the Malir River comprising Darsano Channo, Amilano etc. are still rural and important place of agriculture in Karachi. Discovery of Neolithic artefacts in the Malir valley credited to a geographer Abdur Rauf Khan who collected a few flint sickle blades and pieces of red burnished potteries during his field visits of Malir River valley in 1970s (Khan A.R., 1979). During 1999 to 2010 the authors along with Abdur Rauf Khan conducted several field visits to explore new Neolithic settlements along the Malir River and its tributaries Khadeji, Mol, Jorando and Thaddo. Due to rapid growth of Karachi city and construction works many sites have been destroyed while some are inaccessible due to expansion of cantonments. Therefore it is important to record the areas of Neolithic settlements and artefacts explored in the Malir River valley (Fig-1).

FIGURE-1
NEOLITHIC SETTLEMENTS IN THE MALIR RIVER VALLEY



SOURCE: drawn by authors.

PHYSICAL SETTING

Malir River valley is the main area of rural settlements in Karachi. The flood plain of the Malir River is the main agricultural area. The climate of Karachi is arid. It experiences low annual rainfall i.e. 208 mm and highly variable i.e. average of 7 rainy days in a year, having long spell of drought. The mean monthly temperature of June is 32 degree Celsius while mean monthly January temperature is 18 degree Celsius which is highly variable. The valley is drained by ephemeral streams and hill torrents. The Malir River is the main stream of the valley. Its catchment area is 1205 square kilometer. Khadeji and Mol are its main tributaries which are antecedent streams originate from the Khadeji and Kund anticlinal hilly ranges. Jorando, Langheji and Thaddo are other small tributaries which join Malir River and discharge alluvium on the flood plains of the Malir valley (photo 1).



Photo-1: The dry bed of Malir River (source: taken by authors)

The ridges and hilly ranges of the valley are composed of limestone, clay, shale and sandstone of Miocene age formed in marine environment (Blandford W.T., 1880). The flood plain of the Malir valley is young composed of fluvial and Aeolian deposits of Pleistocene and Holocene age. The palaeo-climate studies reveal that the Pleistocene epoch experienced several phases of glacial and interglacial climatic change phenomenon. It developed cycles of

warm and cool and dry and wet climate characteristics. This also affected the fluvial processes and topography of the Malir River valley. Rejuvenation of streams and change of base level affected the fluvial deposition process. Similarly change of sea-level exposed continental shelf that provided fine sediments which spread over the valleys and plains of Karachi through powerful monsoon winds.

NEOLITHIC CULTURE

The end of Pleistocene and beginning of Holocene brought a new phase of climatic change (Biagi P., 2010). The cool period ended and warm period started. This also affected the rainfall pattern and rejuvenation of streams. The flood plains of tropical and subtropical regions were the good areas where new stone age farming culture emerged. Crops were planted and new techniques of tools making were introduced. Sickle blades, lunates, triangles, scrapers, bores etc. were made. The polished hand-axe was an important tool of Neolithic culture. The Neolithic people developed a new tradition of polishing stone tool. The stone was first brought into the required shape and size by various chipping techniques. Then it was flecked with a pointed stone. Then sharp-cutting edges of the tool were made. Finally, the tool was polished on hide, wood or bark for smooth surface. The types of tools found in the Neolithic period are axes, adzes, long weeding hoes, picks with single or double working ends, chisels, axe-cum hammers, stone harvesters and stone grinders. Polished bone tools like daggers, points, scrapers, chisels, needles and harpoons were also found.

The Neolithic people were given credit for spreading and flourishing farming and pottery making culture which already started in the Mesolithic. Initially handmade sun dried potteries were made than baked potteries were prepared which were commonly red, grey and buff in colour. Use of wheel for making potteries was an important technique developed by Mesolithic and Neolithic people. Large and small bowls, vessels and terracotta heads were made with the help of moving wheel. They were baked and painted.

The Neolithic people were primarily farmers and herders. Agriculture was their main activity, thus transforming from the hunter and food gatherer stage to subsistence farming stage the Mesolithic and Neolithic people experienced stages of learning about plants and animals domestication (Fairservis W.A., 1975). Evidences of wheat, gram, millet etc. were found from the sites of Neolithic settlements.

Similarly bones of domesticated animals like cow, buffalo, goat, camel, horse etc. Presence of the ash of cow dung in the sites of the settlements reveals that Neolithic farmers were cattle rearer.

NEOLITHIC SITES IN THE MALIR VALLEY

Exploration of Neolithic artefacts in the Malir valley area was started in the late 1960s. A. R. Khan, a professor of geography department developed his interest in pre-history culture explored several sites in the Malir valley. In 1998 the authors started field works which continued up to 2013. During this period Neolithic sites explored by A.R.Khan were revisited and many new artefacts were collected. The details of the Neolithic sites are given below (Table 1).

TABLE-1
NEOLITHIC SITES IN THE MALIR VALLEY, KARACHI

Pre-Historic Sites	Location	Artefacts
1. Malir	Lat: 24 degree 09 minutes E Long : 67 degree 02 minutes E	Polished hand axe, sickle blades, denticulate blades, burins, scrapers, Core tools and Pieces of Neolithic potteries, grind stone.
2. Gorban Hill	Lat: 24 degree 48 minutes E Long: 67 degree 34 minutes E	Lunate, Sickle blades, pieces of blades, cores, bores, burins, pieces Neolithic potteries.
3. Khadeji	Lat: 24 degree 47 minutes E Long: 67 degree 30 minutes E	Sickle blades, pieces of blades, cores, bores, burins, pieces Neolithic potteries.
4 Kathor	Lat: 24 degree 45 minutes E Long: 67 degree 33 minutes E	Bores, pieces of blades, cores, bores, burins, pieces Neolithic potteries
5 Jorando	Lat: 24 degree 44 minutes E Long: 67 degree 32 minutes E	Bores, pieces of blades, cores, bores, burins, pieces Neolithic potteries

6. Karo Jabal	Lat: 24 degree 43minutes E Long : 67 degree 28 minutes E	Bores , pieces of blades, cores, bores, burins, pieces Neolithic potteries
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SOURCES: Field excavations and Museum of Prehistoric Culture, Geography Department, Karachi University.

MALIR

The site is located in the interflaves of the Jorando River and the Malir River which is administratively located in Deh Amilano. It is a mound which is surrounded by cropland. Several artefacts were collected which confirm its Neolithic settlement. A large number of pieces of red burnished potteries and flint blades are scattered over the mound. The most important arte fact was collected under the loess deposit is a polished flaked flint hand axe. It is about 5.2 cm long and 3.5 cm wide. A grind stone was also unearthed from the site (Photos 2, 3, 4, 5, 6 & 7).



Photo-2: Polished hand axe



Photo-3: Pieces of flint blades



Photo-4: Wheat grinding stone



Photo-5: Pieces of Red burnished potteries



Photo-6: Pieces of potteries (source: Authors)



Photo-7: Broken flint blades

GORBAN HILL

Gorban hill is a small flat top ridge surrounded by loess deposited plain. It is located near Mol River about 2 km from the Super Highway. Several flint artefacts were collected from the top of ridge. The remnant of the settlement exists in form of large pieces of limestone rock scattered in the area. Several lunates, pieces of blades and potteries were collected from the settlement. A small polished hand axe was also collected from the surface (photos 8, 9, 10 & 11).



Photo-8



Photo-9



Photo-10 (Source of Photography: Authors)



Photo-11

KHADEJI

Along the eastern bank of the Khadeji River which is the main tributary of the Malir River, over the conglomerate terrace evidences of Neolithic settlement was explored. There are several small flint cores and pieces of scrapers and blades. Several pieces of red burnished potteries were collected from the area. The loess deposited surface and sandy soil of the dry bed of the river are still used for crop cultivation (Photos: 12, 13, &15)



Photo-12 (Source of Photos: Authors)



Photo-13

KOTHORE (MOL RIVER)

The Mol River is another tributary of Malir River. The loess deposited terrace near Kathor village is another site where artefacts of Neolithic culture like flint blades and pieces of potteries were collected (Photo 14).



Photo-14 (Source of Photos: Authors)



Photo-15: Khadeji River

JORANDO

At the confluence of Jorando River and the Malir River over the conglomerate terrace evidences of Neolithic settlement were collected. There are hundreds of broken flint blades, small scrapers, burin, cores and pieces of potteries were collected (Photos 16 & 17).



Photo-16 (Source of Photos: Authors)



Photo-17

KARO JABAL

In the lower part of the Konkar River over a small ridge locally known as Karo Jabal, remnants of semicircular stone wall exist where pieces of flint artefacts like small size scrapers and bores were collected. The pieces of red burnished pottery which is an important evidence of Neolithic culture in the Karachi region confirms that Karo Jabal or black hill originated as a Neolithic Settlement while the semicircular wall indicates its existence in the pre-Harappan or Amri period.

CONCLUSION

In the cultural evolution of human beings Neolithic culture is regarded a landmark because of spreading of crops farming and animals domestication which had already started in the Mesolithic period. The Paleolithic nomadic culture was replaced by Neolithic sedentary culture led the development of farming settlements. Neolithic culture flourished from 8000 B.C. to 4000 B.C. River valleys and loess deposited surface were the areas of flourishing Neolithic farming settlements. Like other parts of the world and Pakistan evidences of Neolithic farming settlements were explored in the Malir River Valley of Karachi. The flint artefacts of Neolithic culture like polished hand axe, different types of blades, bores , burins

and pieces of red burnished potteries confirm that the valleys of ephemeral streams and rain fed loess deposited plains were the areas in Kohistan region of Sindh where farming settlements originated.

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